EPA United States Environmental Protection Agency

Region 9 Enforcement and Compliance Assurance Division

COMPLIANCE EVALUATION INSPECTION REPORT

Inspection Date(s):	March 4, 2021	**Inspection Announced:** No	
Time:	**Entry:** approximately 11:20 PM	**Exit:** approximately 11:41 PM	
Media:	Safe Drinking Water Act		
Regulatory Program(s)	Underground Injection Control		
Company Name:	Jenny's Shrimp Truck		
Facility or Site Name:	Commercial Property (Jenny's Shrimp Truck, Island Fresh Takeout, former service station)		
Facility Location(s):	66-532 Kamehameha Highway, Haleiwa, HI 96712		
Mailing address:	Same as facility address		
(city, state, zip code)			
County:	County of Honolulu		
Facility/Site Contact(s):	QianYing Cao- Tenant (Jenny's Shrimp Truck) Duke Pontin- Property Manager (not present)		
Site Identifier:	Tax Map Key(s): 1-6-2-007-019		
Inspector(s):			
Connor Adams (author)	Signature: CONNOR ADAMS Digitally signed by CONNOR ADAMS Date: 2021.04.16 13:04:05 -10'00'		
	ECAD-3-2	Inspector	808-541-2752
Brandon Boatman	Signature: BRANDON BOATMAN Digitally signed by BRANDON BOATMAN Date: 2021.04.16 14:01:41 -10'00'		
	ECAD-2-3	Inspector	808-539-0540
Supervisor Review:			
Roberto Rodriguez	Signature: ROBERTO RODRIGUEZ Digitally signed by ROBERTO RODRIGUEZ Date: 2021.04.19 09:12:59 -07'00'		
	ECAD-3-3	Supervisor	415-972-3302

SECTION I – INTRODUCTION

Facility/Site Description

The "Commercial Property", located at 66-532 Kamehameha Highway in Haleiwa, HI is comprised of a central building (former service station) with the mobile Jennys Shrimp Truck to the north and mobile Island Fresh Takeout cart to the south. Two restrooms are located within the former service station. At the time of the inspection, I observed that the restooms were open to employees and customers.



Figure A- Google Maps Street View of the Commerical Property. Red arrows indicate approximate location of the two restrooms and waste clean-out. Island Fresh Cart not depticted in this image, but it's approximate location has been identified by the blue star..

Purpose of the Inspection

On March 4, 2021, Brandon Boatman and I conducted a Class V well compliance evaluation inspection ("CEI") of the Commerical Property. The primary purpose of the inspection was to investigate the type of wastewater system being operated on-site and to gather information on compliance with the Safe Drinking Water Act ("SDWA"), Underground Injection Control ("UIC") program's Class V Well regulations provided in the Code of Federal Regulations ("CFR"), Title 40, Parts 144-148. Specifically, we were investigating the subject property's compliance with EPA's ban on Large Capacity Cesspools ("LCCs"), pursuant to 40 CFR § 144.88(a)(1)(i).

On-Site Inspection Procedures

At approximately 11:20 pm, we approached the Commerical Property and identified ourselves to the Jenny's Shrimp Truck Operator, QianYang Cao. We explained to Cao why we were there,

showed our EPA inspector credentials, and provided Cao with the Notice of Inspection ("NOI") (Attachment 1). Cao explained that they are familiar with the restrooms on-site as well as the location of the wastewater collection system. Cao reviewed the NOI and agreed to sign it. The Island Fresh Take Out Cart was closed, however, the former service station appeared to be operating. The windows of the service station building were covered, security cameras encompassed the permiter of the building and no one answered our attempts to identify ourselves. Cao explained that the service station occupants would be unlikely to speak with us.

SECTION II – INSPECTION OBSERVATIONS

During the CEI, we observed that the subject property is comprised of a central building (former service station) with two mobile foods vendors on either side. Cao showed us the location of the two restrooms, which are located on the western side of the service station building. Cao explained that Jenny's Shrimp truck pays the property manager for access to the single restroom as well as space to park their food truck. When we arrived for the inspection, there were no other customers at the food truck. Cao estimated that up to ten individuals may use this restroom in a day. The adjacent restroom was unlocked by a patron of the former service station, who denied us any indentifiable information, but said we could take a photo of the second restroom. Cao said that they believe both restrooms discharge to a location immediately west of the restrooms which was covered by a steel plate. Cao was unsure of the construction of the waste collection system and suggested that the inspection team contact the Property Manager- Duke Pontin for more information. We briefly discussed EPA's regulation for UIC Class V wells in Hawaii, including EPA's ban of large capacity cesspools ("LCCs").

SECTION III – REGULATORY CONCERNS

An LCC is a cesspool that serves multiple dwellings, or for non-residential facilities, is a cesspool that has the capacity to serve 20 or more persons per day (See 40 C.F.R. § 144.81(2)). Pursuant to the UIC program regulations, all existing LCCs should have been closed by **April 5, 2005** (See 40 C.F.R. § 144.88). The UIC requirements do not apply to single family residential cesspools, nor to non-residential cesspools which receive solely sanitary waste and have the capacity to serve fewer than 20 persons a day 40 CFR § 144.81(2). Any cesspool that does not fit within one of the two exceptions is considered a Large Capacity Cesspool and should have been closed.

At the time of the inspection it appeared that the wastewater generated on-site was potentially being discharged to a LCC. Additional follow-up will be necessary.

SECTION IV – INSPECTION PHOTO LOG



IMG_1436.jpg- Overview of the two restrooms located on the west side of the former service station building.



IMG_1437.jpg – Inside the restroom that Jenny's Shrimp truck pays for access to. Door number 2 (see previous photo).



IMG_1438.jpg – Steel plate covering wastewater collection system for the two restrooms.



IMG_1439.jpg – Steel plate covering wastewater collection system for the two restrooms.



IMG_1440.jpg – Underneath the steel plate covering the restrooms wastewater collection system.

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IMG_1441.jpg – Overview of the closed Island Fresh Take-Out cart.



IMG_1442.jpg – Inside of the #1 restroom. (see first photo).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9
75 Hawthorne Street
San Francisco, CA 94105

Type of Inspection:
U.S. Safe Drinking Water Act

Date: 3/4/21

Hour: AM/PM 10:00AM

NOTICE OF INSPECTION

Facility Name Jenny's Shrimp Truck

Facility Address 66-532 Kam. Hwy Haleiwa, HI 96712

Inspector Name and Title Connor Adams Life Scientist

Inspector Signature

Notice of Inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. Section 300 f et seq.).

REASON FOR INSPECTION

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person or facility subject to an applicable underground injection control program has acted or is acting in compliance with the federal Safe Drinking Water Act and any applicable permit or rule.

Section 1445(b)(1) of the federal Safe Drinking Water Act (42 U.S.C. § 300j-4(b)(1)) provides:

(1) Except as provided in paragraph (2), the Administrator, or representatives of the Administrator duly designated by him, upon presenting appropriate credentials and a written notice to any supplier of water or other person subject to (A) a national primary drinking water regulation prescribed under [SDWA section 1412], (B) an applicable underground injection control program, or (C) any requirement to monitor an unregulated contaminant pursuant to subsection (a) of this section, or person in charge of any of the property of such supplier or other person referred to in clause (A), (B), or (C), is authorized to enter any establishment, facility, or other property of such supplier or other person in order to determine whether such supplier or other person has acted or is acting in compliance with this subchapter, including for this purpose, inspection at reasonable times, of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water system, including its raw water source. The Administrator or the Comptroller General (or any representative designated by either) shall have access for the purpose of audit and examination to any records, reports, or information of a grantee which are required to be maintained under subsection (a) or which are pertinent to any financial assistance under this title.

Section 1445(c) of the federal Safe Drinking Water Act and the Debt Collection Improvement Act provide that whoever fails to allow the Administrator, the Comptroller General, or representatives of either, to enter and conduct any audit or inspection authorized by SDWA section 1445(b) shall be subject to a civil penalty of not to exceed $32,500. (See 42 U.S.C. § 300j-4(c); 40 C.F.R. § 19.4)

Receipt of this Notice of Inspection is hereby acknowledged.

Name: QianYing Cao

Title: M. Tenant

Date: 03/04/21

Spirit Marine Kahuku, HI

Location Information			
Unverified Record			
Company Name	Spirit Marine	**Phone**	*Not Available*
Address	PO Box 717	**Fax**	*Not Available*
City, State, ZIP	Kahuku, HI 96731-0717	**Toll Free**	*Not Available*
County	Honolulu	**Website**	*Not Available*
Metro Area	Urbn Honolulu,HI		
Twitter	*Not Available*		
Facebook	*Not Available*		
LinkedIn	*Not Available*		

Industry Profile			
SIC Code	**SIC Description**	**NAICS Code**	**NAIC Description**
5551-13	Marine Equipment & Supplies	44122215	Boat Dealers
Franchise	**Description**		
No Franchise Codes Available			

Business Profile
No Business Profile Available

Business Demographics			
Location Employees	5-9	**Location Sales Volume**	$1,697,000.00
Corporate Employees	*Not Available*	**Corporate Sales Volume**	*Not Available*
Type of Business	Private	**Location Type**	Single Location
Affiliated Records	*Not Available*	**Affiliated Locations**	*Not Available*
Parent Company	*Not Available*	**Foreign Parent**	*Not Available*
EIN		**Fortune 1000 Ranking**	*Not Available*
Credit Cards Accepted	*Not Available*	**Last Updated On**	December, 2019
Years in Database	5	**Year Established**	Not Available
Square Footage	1,500 - 2,499	**Credit Rating**	Very Good
IUSA Number	747043557	**Home Business**	No
Latitude / Longitude	21.67823 / -157.9498	**Full Credit Report**	*Not Available*
Fleet Size	1 - 10	**Federal Contractor**	No

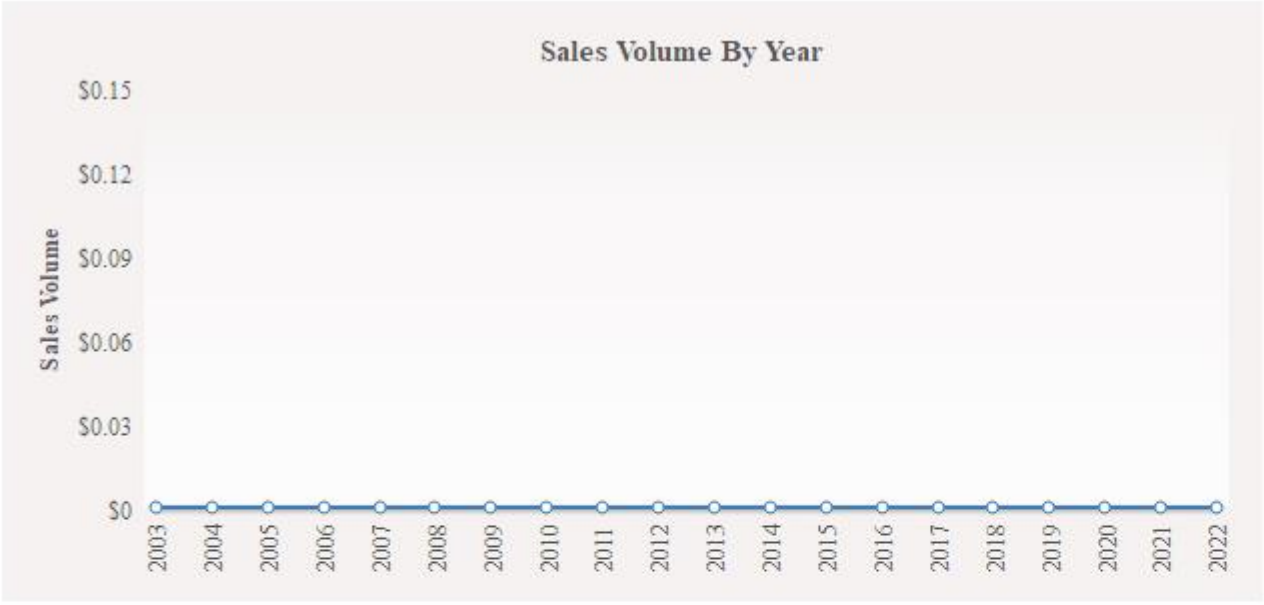
Hours of Operation

Mon	Tue	Wed	Thu	Fri	Sat	Sun
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available

Management Directory		
Name	**Executive Title**	**Gender**
Duke Pontin	Manager	Male

Stock Data			
Ticker Symbol	*Not Available*	**Stock Exchange**	*Not Available*

Business Expenditures			
Accounting	$500 to $1,000	**Advertising**	$10,000 to $20,000
Contract Labor	$1,000 to $10,000	**Insurance**	$2,500 to $5,000
Legal	$500 to $1,000	**Management / Administration**	Less than $2,500
Office Equipment & Supplies	Less than $5,000	**Package & Container**	Less than $500
Payroll & Benefits	$100,000 to $250,000	**Purchased Print Expenses**	Less than $500
Rent & Leasing	Less than $10,000	**Technology**	$2,500 to $5,000
Telecommunications	$2,000 to $5,000	**Utilities**	Less than $2,000





Business History

Year	Company Name	Address	City, State	Phone	Executive Name
Please subscribe to Historical Business module to view the history of this business.					

Filing Date	Expiration	Source Filing Id	State
No Ucc Filings Available			

Nearby Business

Name	Location	Phone	Primary Business
A Better Solution Corp	Kahuku, HI		Nonclassified Establishments
A K Investments LLC	Kahuku, HI		Investments
Aloha Rolls	Kahuku, HI	(808) 589-6200	Ice Cream Parlors

Nearby Business			
Name	**Location**	**Phone**	**Primary Business**
Aqua Pumping LLC	Kahuku, HI	(808) 232-0202	Septic Tanks/Systems-Cleaning/ Repairing
Aqua Septic Consultants LLC	Kahuku, HI		Septic Tanks Consultants
ATM	Kahuku, HI		Automated Teller Machines
Da Brazilian Braddahs	Kahuku, HI	(808) 388-1338	Mobile Food Services
Damate Momi Won-Hin	Kahuku, HI	(808) 931-0125	Marriage & Family Counselors
Estates At Turtle Bay	Kahuku, HI	(808) 293-0600	Vacation Rentals
Fiji Market	Kahuku, HI	(808) 293-7120	Grocers-Retail

Competitors Report		
Name	**Location**	**Phone**
Anela Kai Marine Svc LLC	Kaneohe, HI	(808) 239-2628
Bluewater Marine & Dock	Waialua, HI	(808) 237-4504
Hawaii Marine Mammal Alliance	Kailua, HI	
Kirby Inland Marine	Honolulu, HI	(713) 435-1000
Leeward Marine Inc	Wahiawa, HI	
M I Marine	Honolulu, HI	(808) 847-4704
Marine Chemist Hawaii LLC	Waipahu, HI	
Marine Specialties	Aiea, HI	(808) 484-4431
Ocean Marine Svc	Aiea, HI	(808) 488-8005
Parker Marine Worldwide Inc	Honolulu, HI	(808) 277-0772

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DMI 20
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Possible People Information

Person Overview

DUKE H PONTIN

56-970 KAMEHAMEHA HWY

KAHUKU, HI 96731-2305 | HONOLULU County

Phone Number(s):

305-923-5458

305-923-5458

305-942-3978

SSN:

265-06-XXXX - issued in FL in 1966

DOB:

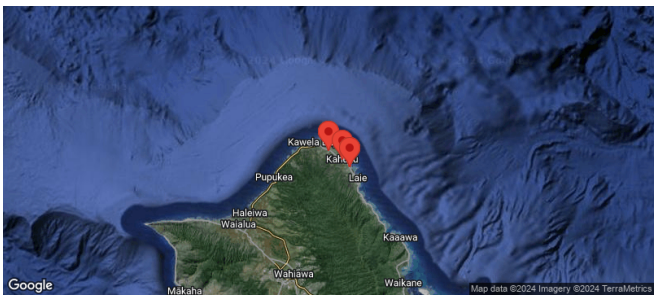
08/XX/1953 (Age: 70)

Entity ID:

P149972993

Spouse/Close Association:

BRANDY



Date of Birth Summary

Date of Birth	Source
08/XX/1953 (Age: 70)	Address Historical #1 | Address Historical #2 | Address Historical #3 | Bank Account Header Records | Driver License | Experian Credit Header | Experian Credit Header Real Time | People Find | People Historical | People Household #1 | People Household #2
08/1987	People Household

SSN Summary

SSN	Source
265-06-XXXX - issued in FL in 1966	Bank Account Header Records #1 | Bank Account Header Records #2 | Equifax Credit Header | Experian Credit Header | Experian Credit Header Real Time | People Find | People Historical

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Name Variations

Name	Source
DUKE PONTIN	Address Historical #1 | Address Historical #2 | Bank Account Header Records | Experian Credit Header | Experian Credit Header Real Time | People Find | People Household
DALE HANCOCK PONTIN	Criminal&Infraction | Driver License
DUKE HANCOCK PONTIN	Experian Credit Header | Experian Credit Header Real Time
DALE PONTIN	Experian Credit Header | Experian Credit Header Real Time | Motor Vehicle Service & Warranty Records | People Historical
MR DUKE PONTIN	People Household
DALE H PONTIN	Address Historical | Bank Account Header Records
DUKE DALE PONTIN	Experian Credit Header Real Time
DUKEDALE H PONTIN	Experian Credit Header Real Time
DUKEDALE PONTIN	Experian Credit Header Real Time
DUKE H PONTIN	Experian Credit Header Real Time

Addresses

Address	
56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	
Reported 07/14/2017 - 09/27/2023	
By People Find 09/27/2023 - 09/27/2023	People Find
By Experian Credit Header Real Time 07/14/2017 - 07/14/2017	Experian Credit Header Real Time
56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	
Reported 03/03/2008 - 08/08/2023	
By Experian Credit Header Real Time 03/03/2008 - 08/08/2023	Experian Credit Header Real Time
By People Find 04/23/2023 - 04/23/2023	People Find
By People Household 01/01/2017 - 09/30/2017	People Household
By Equifax Credit Header 12/01/2015 - 12/31/2015	Equifax Credit Header
By Experian Credit Header 08/01/2012 - 08/01/2012	Experian Credit Header
56-211 KAMEHAMEHA, KAHUKU, HI 96731	
Reported 03/03/2008 - 08/08/2023	
By Experian Credit Header Real Time 03/03/2008 - 08/08/2023	Experian Credit Header Real Time
PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	

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Reported 01/01/2001 - 03/31/2021

By People Household 01/01/2001 - 10/31/2012	People Household
By Experian Credit Header 07/16/2001 - 10/21/2009	Experian Credit Header
By Bank Account Header Records 10/12/2002 - 10/12/2002	Bank Account Header Records #1 | Bank Account Header Records #2
By Equifax Credit Header 01/01/2002 - 01/31/2002	Equifax Credit Header
By People Find 07/15/2001 - 07/15/2001	People Find
By Real Property Deeds	Real Property Deeds #1 | Real Property Deeds #2 | Real Property Deeds #3
By Real Property Tax Assessor	Real Property Tax Assessor #1 | Real Property Tax Assessor #2 | Real Property Tax Assessor #3

56211 KAM HIGH WAY, KAHUKU, HI 96731 | HONOLULU County

Reported 05/07/2009 - 07/09/2020

By Experian Credit Header 05/07/2009 - 05/07/2009	Experian Credit Header

911 W INDIES DR, SUMMRLND KEY, FL 33042-5455 | MONROE County

Reported 01/01/1995 - 01/18/2018

By Phone Records 01/18/2018 - 01/18/2018	Phone Records
By People Household 01/01/2001 - 08/31/2012	People Household
By Equifax Credit Header 04/01/2011 - 04/30/2011	Equifax Credit Header
By Bank Account Header Records 08/14/2006 - 08/14/2006	Bank Account Header Records #1 | Bank Account Header Records #2
By Experian Credit Header 03/18/1995 - 11/20/2000	Experian Credit Header
By Experian Credit Header Real Time 03/18/1995 - 11/20/2000	Experian Credit Header Real Time
By People Historical 01/01/1995 - 12/31/1995	People Historical
By People Find 03/01/1995 - 03/01/1995	People Find
By Address Historical	Address Historical #1 | Address Historical #2
By Real Property Deeds	Real Property Deeds #1 | Real Property Deeds #2 | Real Property Deeds #3 | Real Property Deeds #4 | Real Property Deeds #5 | Real Property Deeds #6 | Real Property Deeds #7 | Real Property Deeds #8 | Real Property Deeds #9 | Real Property Deeds #10

56-211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County

Reported 04/23/2012 - 09/14/2017

By Experian Credit Header Real Time 04/23/2012 - 09/14/2017	Experian Credit Header Real Time
By Experian Credit Header 04/23/2012 - 07/13/2012	Experian Credit Header

56-211 KAM HWY, KAHUKU, HI 96731-5455

Reported 04/23/2012 - 09/14/2017

By Experian Credit Header Real Time 04/23/2012 - 09/14/2017	Experian Credit Header Real Time

56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305

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Reported 07/14/2017 - 07/14/2017

By Experian Credit Header Real Time 07/14/2017 - 07/14/2017	Experian Credit Header Real Time

29404 LOUISE ST, BIG PINE KEY, FL 33043-6214 | MONROE County

Reported 05/24/2002 - 05/31/2017

By People Household 01/01/2017 - 05/31/2017	People Household
By Experian Credit Header 05/24/2002 - 05/24/2002	Experian Credit Header
By Experian Credit Header Real Time 05/24/2002 - 05/24/2002	Experian Credit Header Real Time

56-211 KAMEMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

Reported 08/01/2012 - 08/01/2012

By Experian Credit Header 08/01/2012 - 08/01/2012	Experian Credit Header

1234 KAM HWY, KAHUKU, HI 96731-2305

Reported 10/22/2001 - 04/30/2011

By Equifax Credit Header 04/01/2011 - 04/30/2011	Equifax Credit Header
By Experian Credit Header Real Time 10/22/2001 - 10/22/2001	Experian Credit Header Real Time

PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County

Reported 05/12/2009 - 05/12/2009

By Driver License 05/12/2009 - 05/12/2009	Driver License
By Motor Vehicle Service & Warranty Records	Motor Vehicle Service & Warranty Records

PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County

Reported 01/01/1987 - 11/01/2006

By Motor Vehicle 11/01/2006 - 11/01/2006	Motor Vehicle
By Experian Credit Header 09/11/2001 - 09/11/2001	Experian Credit Header
By People Historical 01/01/1987 - 12/31/1988	People Historical #1 | People Historical #2

1501 W INDIES DR, SUMMERLAND KEY, FL 33042 | MONROE County

Reported 01/01/1992 - 01/23/2003

By Experian Credit Header 07/28/1992 - 10/23/1994	Experian Credit Header
By Experian Credit Header Real Time 07/28/1992 - 10/23/1994	Experian Credit Header Real Time
By People Historical 01/01/1992 - 12/31/1992	People Historical
By People Find 07/01/1992 - 07/01/1992	People Find
By Address Historical	Address Historical
By Bank Account Header Records	Bank Account Header Records

PO BOX 244, SUMMERLAND KEY, FL 33042-0001 | MONROE County

Reported 11/13/2000 - 01/23/2003

By People Find 11/13/2000 - 11/13/2000	People Find
By Bank Account Header Records	Bank Account Header Records

29404 LOUISE ST, BIG PINE KEY, FL 33043-6214

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Reported 05/24/2002 - 05/24/2002

By Experian Credit Header Real Time 05/24/2002 - 05/24/2002 — Experian Credit Header Real Time

56-212 KAMEHAMEHA HWY, LAIE, HI 96762 | HONOLULU County

Reported 03/07/2002 - 03/07/2002

By Bank Account Header Records 03/07/2002 - 03/07/2002 — Bank Account Header Records

56 211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County

Reported 10/22/2001 - 10/22/2001

By Experian Credit Header 10/22/2001 - 10/22/2001 — Experian Credit Header

By Experian Credit Header Real Time 10/22/2001 - 10/22/2001 — Experian Credit Header Real Time

By Real Property Deeds — Real Property Deeds

56 211 KAM HWY, KAHUKU, HI 96731-2305

Reported 10/22/2001 - 10/22/2001

By Experian Credit Header Real Time 10/22/2001 - 10/22/2001 — Experian Credit Header Real Time

911 W INDIES DR, RAMROD KEY, FL 33042-5455

Reported 03/18/1995 - 11/20/2000

By Experian Credit Header Real Time 03/18/1995 - 11/20/2000 — Experian Credit Header Real Time

1501 W INDIES DR, SUMMERLAND KEY, FL 33042-5455

Reported 07/28/1992 - 10/23/1994

By Experian Credit Header Real Time 07/28/1992 - 10/23/1994 — Experian Credit Header Real Time

971 W INDIES DR, RAMROD KEY, FL 33042-5455 | MONROE County

Reported N/A

By Real Property Deeds — Real Property Deeds

By Real Property Tax Assessor — Real Property Tax Assessor

56 KAMEHAMEHA HWY # 211-211, KAHUKU, HI 96731-2218 | HONOLULU County

Reported N/A

By Real Property Deeds — Real Property Deeds #1 | Real Property Deeds #2

By Real Property Tax Assessor — Real Property Tax Assessor #1 | Real Property Tax Assessor #2

56 KAMEHAMEHA HWY # 970-970, KAHUKU, HI 96731-2305 | HONOLULU County

Reported N/A

By Real Property Deeds — Real Property Deeds

56 HUEHU ST, KAHUKU, HI 96731-2002 | HONOLULU County

Reported N/A

By Real Property Tax Assessor — Real Property Tax Assessor

56 211 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

Reported N/A

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By Real Property Deeds	Real Property Deeds #1 | Real Property Deeds #2
970 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County	
Reported N/A	
By Real Property Deeds	Real Property Deeds
56 56 211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County	
Reported N/A	
By Real Property Deeds	Real Property Deeds
211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County	
Reported N/A	
By Real Property Deeds	Real Property Deeds #1 | Real Property Deeds #2
56-0000000211 KAMEHAMEHA HWY, KAHUKU, HI 96731	
Reported N/A	
By Real Property Tax Assessor	Real Property Tax Assessor
N/AVAIL, BIG PINE KEY, FL 33043 | MONROE County	
Reported N/A	
By Real Property Deeds	Real Property Deeds
KAHUKU, HI 96731 | HONOLULU County	
Reported N/A	
By Real Property Deeds	Real Property Deeds
SUMMERLAND KEY, FL 33042 | MONROE County	
Reported N/A	
By Real Property Deeds	Real Property Deeds
KEY WEST, FL 33040 | MONROE County	
Reported N/A	
By Real Property Deeds	Real Property Deeds
BIG PINE KEY, FL 33043 | MONROE County	
Reported N/A	
By Real Property Deeds	Real Property Deeds #1 | Real Property Deeds #2 | Real Property Deeds #3 | Real Property Deeds #4

Email Addresses

Email	Source
DPONTIN@YAHOO.COM	People Email #1 | People Email #2 | People Email #3 | People Email #4 | People Email #5 | People Email #6 | People Email #7 | People Email #8 | People Email #9 | People Email #10 | People Email #11 | People Email #12 | People Email #13
DPONTIN@IX.NETCOM.COM	People Email #1 | People Email #2 | People Email #3 | People Email #4 | People Email #5 | People Email

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	#6 | People Email #7 | People Email #8 | People Email #9 | People Email #10 | People Email #11 | People Email #12 | People Email #13
dpontin@hawaii.rr	Business Profile
dpontin@spiritgroupinc.com	Business Profile
dpontin@hawaii.rr.com	Business Profile
DPONTIN@MAILCITY.COM	People Email

Marriage Records

Date of Marriage	State	Confidence Score	View Full Text
09/16/1984	FL	90%	Full-Text

Drivers Licenses

Issuing State	Issue Date	Expiration Date	Confidence Score	View Full Text
FL	05/12/2009	08/XX/2017	65%	Full-Text

Phone Numbers

Phone	Source
305-923-5458	D&B Market Identifiers (DMI) #1 | D&B Market Identifiers (DMI) #2 | Experian Credit Header Real Time
305-923-5458	Experian Credit Header Real Time
305-942-3978	People Find | Phone Records
305-872-2752	Bank Account Header Records #1 | Bank Account Header Records #2 | People Find
808-293-2458	Bank Account Header Records | People Find
305-872-2400	Bank Account Header Records #1 | Bank Account Header Records #2

Bank Account Header Records

City	State	Last Activity Date	Confidence Score	View Full Text
LAIE	HI	03/07/2002	78%	Full-Text
KAHUKU	HI	01/05/2009	99%	Full-Text
SUMMERLAND KEY	FL	06/30/2008	99%	Full-Text

Possible Asset Information

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Real Property Tax Assessor Records

Property Address	Assessed Total Value	Tax Year	Confidence Score	View Full Text
971 W INDIES DR RAMROD KEY, FL 33042-5455	$1,124,460.00	2023	95%	Full-Text
56 KAMEHAMEHA HWY KAHUKU, HI 96731-2305	$561,400.00	2023	99%	Full-Text
56 KAMEHAMEHA HWY KAHUKU, HI 96731-2218	$2,952,400.00	2023	99%	Full-Text
56 HUEHU ST KAHUKU, HI 96731-2002	$730,700.00	2023	81%	Full-Text
56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731		2011	99%	Full-Text

Real Property Transactions

Property Address	Sale Price	Mortgage Amount	Recording Date	Confidence Score	View Full Text
56-970 970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305			09/01/2023	99%	Full-Text
56-211 -211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218		$822,375.00	03/16/2022	98%	Full-Text
971 W INDIES DR RAMROD KEY, FL 33042-5455	$1,200,000.00		12/29/2017	95%	Full-Text
970 KAMEHAMEHA HWY KAHUKU, HI 96731	$1,050,000.00	$750,000.00	08/06/2009	99%	Full-Text

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Property Address	Sale Price	Mortgage Amount	Recording Date	Confidence Score	View Full Text
211 KAM HWY HI		$500,000.00	04/02/2008	87%	Full-Text
211 KAM HWY HI		$500,000.00	04/02/2008	99%	Full-Text
FL	$250,000.00		08/03/2004	85%	Full-Text
56 211 KAMEHAMEHA HWY KAHUKU, HI 96731		$249,000.00	07/09/2004	94%	Full-Text
HI	$360,000.00		07/21/2003	97%	Full-Text
56 211 KAMEHAMEHA HWY KAHUKU, HI 96731		$200,000.00	07/11/2003	94%	Full-Text
KAHUKU, HI 96731	$850,000.00	$600,000.00	10/30/2000	99%	Full-Text
FL	$369,000.00		03/03/2000	97%	Full-Text
FL	$31,100.00		03/03/2000	97%	Full-Text
FL	$31,100.00		03/03/2000	97%	Full-Text
FL	$369,000.00		03/03/2000	97%	Full-Text
FL	$15,000.00		10/13/1999	96%	Full-Text
FL	$37,500.00		11/03/1997	99%	Full-Text
FL	$100.00	$100.00	09/24/1997	85%	Full-Text
FL 33040	$140,000.00	$120,000.00	08/22/1995	93%	Full-Text
FL 33043	$85,000.00		12/09/1992	96%	Full-Text
FL 33043	$85,000.00	$60,000.00	12/09/1992	96%	Full-Text
	$85,000.00	$60,000.00	12/09/1992	96%	Full-Text
	$10,000.00			61%	Full-Text

Vehicle Registrations

Year	Make	Model	Registration Date	Confidence Score	View Full Text
Current Motor Vehicles					
1992	FORD	F700	10/30/2019	83%	Full-Text

Motor Vehicle Service & Warranty Records

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Year	Make	Model	Confidence Score	View Full Text
2003	BUICK	CENTURY	65%	Full-Text

Possible Adverse Information

Risk Flags Analysis

List of Possible Risk Flags

Risk Flags Name	Yes/No
Arrest Record	No
Criminal Record	Yes
OFAC Listing	No
World-Check Listing	No
Global Sanctions	No
Bankruptcy	No
Recorded as Deceased	No
Person Associated with Marijuana Related Business	No
Multiple SSNs	No
SSN Matches Multiple Individuals	No
Age Younger than SSN Issue Date	Yes
SSN Format is Invalid	No
SSN Is an ITIN	No
Address 1st Reported <90 Days	No
Residential Address Used as a Business Address	Yes
Prison Address on Record	No
P.O. Box Listed as Address	Yes
Telephone Number Inconsistent with Address	No
Associate or Relative With a Residential Address Used as a Business Address	Yes
Associate or Relative with a Prison Address on Record	No
Associate or Relative with P.O. Box Listed as Address	Yes

Risk Flag Details

Criminal Record
Full-Text
Age Younger than SSN Issue Date

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

DOB:
08/1987

Residential Address Used as a Business Address

Address:	Source:
911 W INDIES DR, SUMMERLAND KEY, FL 33042-5455 | MONROE County	Business Profile Corporate Filings - Secretary of State
25123 OVERSEAS HWY, SUMMERLAND KEY, FL 33042-4627 | MONROE County	D&B Market Identifiers (DMI)
PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	Business Profile
56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	D&B Market Identifiers (DMI)
25012 OVERSEAS HWY, SUMMERLAND KEY, FL 33042 | MONROE County	Corporate Filings - Secretary of State
PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	D&B Market Identifiers (DMI)
PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County	Corporate Filings - Secretary of State

P.O. Box Listed as Address

Address:	Source:
PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	People Find People Household Experian Credit Header Bank Account Header Records D&B Market Identifiers (DMI) Equifax Credit Header
PO BOX 244, SUMMERLAND KEY, FL 33042-0001 | MONROE County	People Find Bank Account Header Records People Historical Motor Vehicle
Address:	Source:

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	Driver License Business Profile Motor Vehicle Service & Warranty Records
Address:	**Source:**
PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County	Corporate Filings - Secretary of State Experian Credit Header FEIN People Historical Motor Vehicle

Associate or Relative With a Residential Address Used as a Business Address

Associate:	Address:	Source:
MCGREGOR GANTHIER	56-150 KAHANA ST, KAHUKU, HI 96731-2014 | HONOLULU County	D&B Market Identifiers (DMI)
	Address:	**Source:**
	56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	Corporate Filings - Secretary of State
	Address:	**Source:**
	PO BOX 737, KAHUKU, HI 96731-0737 | HONOLULU County	D&B Market Identifiers (DMI) Corporate Filings - Secretary of State
Associate:	**Address:**	**Source:**
CHRIS JACKSON	1649 MERRILL DR APT 6, SAN JOSE, CA 95124-5913 | SANTA CLARA County	Business Profile Corporate Filings - Secretary of State
Associate:	**Address:**	**Source:**
EVETTE M SMITH	2148 AUMAKUA ST, PEARL CITY, HI 96782-1356 | HONOLULU County	Corporate Filings - Secretary of State
Associate:	**Address:**	**Source:**
CHRISTOPHER S HUFFINE		Corporate Filings - Secretary of State
Associate:	**Address:**	**Source:**
KATHERINE E NEVILLE		Fictitious Business Name

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	111 S DE LACEY AVE UNIT 302, PASADENA, CA 91105-4144 | LOS ANGELES County
Relative:	**Address:**
BRANDI A PONTIN	25123 OVERSEAS HWY, SUMMERLAND KEY, FL 33042-4627 | MONROE County
	Address: PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
Relative:	**Address:**
KEAL PONTIN	56-645 LOALA ST UNIT A, KAHUKU, HI 96731 | HONOLULU County
	Address: 56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County
Relative:	**Address:**
COVE K PONTIN	56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County
	Address: 56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County
	Address: 56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County
Relative:	**Address:**
DALE PONTIN	951 W INDIES DR, SUMMERLAND KEY, FL 33042-5455 | MONROE County

Associate or Relative with P.O. Box Listed as Address

Associate:	**Address:**	**Source:**
RONALD L JACKSON	PO BOX 38011, SAN JUAN, PR 00937-1011 | SAN JUAN County	Experian Credit Header People Find Equifax Credit Header
	Address:	**Source:** People Find

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	Experian Credit Header Bank Account Header Records
	Address: PO BOX 42664, DETROIT, MI 48242-0664 | WAYNE County	**Source:** People Find Experian Credit Header Bank Account Header Records Equifax Credit Header
	Address: PO BOX 272, NEW BOSTON, MI 48164-0272 | WAYNE County	**Source:** People Household Phone Records People Find Experian Credit Header Equifax Credit Header
	Address: PO BOX 90784, RALEIGH, NC 27675-0784 | WAKE County	**Source:** Phone Records People Find Experian Credit Header Equifax Credit Header Motor Vehicle
Associate: MCGREGOR GANTHIER	**Address:** PO BOX 737, KAHUKU, HI 96731-0737 | HONOLULU County	**Source:** D&B Market Identifiers (DMI) People Household Professional License Equifax Credit Header Corporate Filings - Secretary of State
Associate: AKIKO B JACKSON	**Address:**	**Source:** People Find

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	Experian Credit Header
	Address: PO BOX 38011, SAN JUAN, PR 00937-1011 | SAN JUAN County	**Source:** Experian Credit Header
	Address: PO BOX 42664, DETROIT, MI 48242 | WAYNE County	**Source:** Experian Credit Header
Associate: JUNEKO C JACKSON	**Address:** PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	**Source:** People Find Experian Credit Header People Historical Equifax Credit Header
	Address: PO BOX 42664, DETROIT, MI 48242 | WAYNE County	**Source:** Experian Credit Header
Associate: ALENA M JOHNSON	**Address:** PO BOX 822, KAHUKU, HI 96731-0822 | HONOLULU County	**Source:** Experian Credit Header People Find New Movers Equifax Credit Header People Household
Associate: CHRIS JACKSON	**Address:** PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	**Source:** People Find People Historical
	Address: PO BOX 3584, SANTA CLARA, CA 95055-3584 | SANTA CLARA County	**Source:** People Find Experian Credit Header Equifax Credit Header
	Address: PO BOX 112631, CAMPBELL, CA 95011-2631 | SANTA CLARA County	**Source:** People Find People Household Equifax Credit Header

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

		Experian Credit Header
Associate:	**Address:**	**Source:**
ANNEKE BAILEY	PO BOX 700823, KAPOLEI, HI 96709-0823 | HONOLULU County	People Find New Movers Experian Credit Header Equifax Credit Header
Associate:	**Address:**	**Source:**
EVETTE M SMITH	PO BOX 110, KAHUKU, HI 96731-0110 | HONOLULU County	Experian Credit Header Equifax Credit Header
	Address:	**Source:**
	PO BOX 182, KAHUKU, HI 96731-0182 | HONOLULU County	People Historical People Find
	Address:	**Source:**
	PO BOX 84, KAAAWA, HI 96730-0084 | HONOLULU County	Experian Credit Header Equifax Credit Header People Find
	Address:	**Source:**
	PO BOX 626, KAHUKU, HI 96731-0626 | HONOLULU County	People Historical People Find
Associate:	**Address:**	**Source:**
KATHERINE E NEVILLE	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	Experian Credit Header
	Address:	**Source:**
	PO BOX 426, KAHUKU, HI 96731-0426 | HONOLULU County	Experian Credit Header People Household Equifax Credit Header People Find New Movers
Associate:	**Address:**	**Source:**
JOSHUA A SMITH	PO BOX 493, KAHUKU, HI 96731-0493 | HONOLULU County	Experian Credit Header People Household Equifax Credit Header

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Associate:	Address:	Source:
CHRISTOPHER S HUFFINE	PO BOX 822, KAHUKU, HI 96731-0822 | HONOLULU County	People Household Experian Credit Header Equifax Credit Header
Associate:	**Address:**	**Source:**
SUMIKO JACKSON	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	People Historical People Find Experian Credit Header
	Address:	**Source:**
	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	People Historical
	Address:	**Source:**
	PO BOX 38011, SAN JUAN, PR 00937-1011 | SAN JUAN County	Experian Credit Header
	Address:	**Source:**
	PO BOX 272, NEW BOSTON, MI 48164-0272 | WAYNE County	People Find Experian Credit Header Equifax Credit Header
	Address:	**Source:**
	PO BOX 90784, RALEIGH, NC 27675-0784 | WAKE County	Equifax Credit Header Experian Credit Header
	Address:	**Source:**
	PO BOX 42664, DETROIT, MI 48242 | WAYNE County	Equifax Credit Header Experian Credit Header

Relative:	Address:
DUKE PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
Relative:	**Address:**
DALE PONTIN	PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
Relative:	**Address:**
COVE KIRKWOOD PONTIN	PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County
	Address:
	PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
Relative:	**Address:**

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

DUKE PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
Relative:	**Address:**
KEAL PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
	Address:
	PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County
	Address:
	PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
Relative:	**Address:**
BRANDI A PONTIN	PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County
	Address:
	PO BOX 244, SUMMERLAND KEY, FL 33042-0001 | MONROE County
	Address:
	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
	Address:
	PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
Relative:	**Address:**
DUKE PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
Relative:	**Address:**
DUKE PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
Relative:	**Address:**
BRANDI A PONTIN	PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County
	Address:
	PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
	Address:
	PO BOX 244, SUMMERLAND KEY, FL 33042 | MONROE County
Relative:	**Address:**
COVE K PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
	Address:
	PO BOX 426, KAHUKU, HI 96731-0426 | HONOLULU County

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Criminal & Infraction Records

Offense Charged	Date of Offense or Charges Filed	Source State	Confidence Score	View Full Text
NO PROPER CLASS LICENSE	06/15/1999	FL	88%	Full-Text

Possible Business & Employment

Corporate Records & Business Registrations

Business Name	Business Address	Confidence Score	View Full Text
SEA TOW SERVICES FL KEYS	PO BOX 244 BIG PINE KEY, FL 33043	97%	Full-Text
SPIRIT MARINE	PO BOX 244 BIG PINE KEY, FL 33043	97%	Full-Text
SPIRIT TOWING	PO BOX 244 BIG PINE KEY, FL 33043	97%	Full-Text
SPIRIT MARINE	P.O. BOX 717 KAHUKU, HI 96731	65%	Full-Text
SPIRIT MARINE TOWING & ASSISTANCE	PO BOX 244 BIG PINE KEY, FL 33043	97%	Full-Text

DMI

Business Name	Business Address	Confidence Score	View Full Text
SPIRIT MARINE TOWING & ASSISTANCE	25123 OVERSEAS HWY SUMMERLAND KEY, FL 33042-4627	65%	Full-Text
DUKE PONTIN	56-970 KAM HWY KAHUKU, HI 96731	97%	Full-Text

FEIN

Business Name	Business Address	Confidence Score	View Full Text
PONTIN DUKE	PO BOX 244 BIG PINE KEY, FL 33043	99%	Full-Text

Business Profile

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Business Name	Business Address	Confidence Score	View Full Text
SPIRIT MARINE	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455	97%	Full-Text
SEA TOW FLORIDA KEYS	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455	97%	Full-Text

Full-Text Documents

All Full-Text Documents

Marriage Records (1)

To Summary

Marriage Record

Source Information

Information Current Through:	12/31/1999
Database Updated:	08/02/2005
Update Frequency:	Not Applicable
Current Date:	02/16/2024
Source:	FL Dept. of Health

Marriage Record Information

County of Marriage:	MONROE
State of Marriage:	FL
Date of Marriage:	09/16/1984

Name Information

Name:	DUKE HANCOCK PONTIN
Name:	BRANDI ANNE WILLER

End of Document

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Drivers Licenses (1)

To Summary

Driver License Record

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Source Information

Information Current Through:	02/09/2024
Database Last Updated:	02/12/2024
Update Frequency:	WEEKLY
Current Date:	02/16/2024
Source:	FL DEPT OF HIGHWAY SAFETY AND MOTOR VEHICLES

License Information

Issuing State:	FL
License Type:	CDL
Issue Date:	05/12/2009
License Expiration Date:	08/XX/2017
Original Issue Date:	09/01/1973

Other Information:

Drivers License Number:	P535168532XXX

Licensee Information

Name:	DALE HANCOCK PONTIN
County:	MONROE
Date of Birth:	08/XX/1953
Gender:	MALE
Mailing Address:	PO BOX 430244 BIG PINE KEY, FL 33043
Race:	WHITE
Height:	5'09"
File Acquired Date:	06/24/2010

End of Document

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Historical People Records (2)

To Summary

People Historical

Individual Information

Name:	PONTIN, DUKE H
SSN:	265-06-XXXX
Date of Birth:	08/XX/1953
On File Since:	11/01/1985

Historical Address Information

Address 1:	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Address Last Reported:	1995
Address Type:	STREET OR RESIDENTIAL ADDRESS
Address 2:	1501 W INDIES DR

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	SUMMERLAND KEY, FL 33042
Address Last Reported:	1992
Address 3:	POB 244 BIG PINE KEY, FL 33042
Address 4:	POB 244 BIG PINE KEY, FL 33043
Address Last Reported:	1987

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To Summary

People Historical

Individual Information

Name:	PONTIN, DALE
On File Since:	12/01/1988

Historical Address Information

Address 1:	POB 244 BIG PINE KEY, FL 33043
Address Last Reported:	1988

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Historical Address Records (3)

To Summary

Address Historical

Individual Information

Name:	PONTIN, DUKE
Date of Birth:	08/XX/1953

Historical Address Information

Address:	911 W INDIES DR BIG TORCH KEY, FL 33042-5455

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To Summary

Address Historical

Individual Information

Name:	PONTIN, DALE H
Date of Birth:	08/XX/1953

Historical Address Information

Address:	911 W INDIES DR

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

		SUMMERLAND KEY, FL 33042-5455

End of Document

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To Summary

Address Historical

Individual Information

Name:	PONTIN, DUKE
Date of Birth:	08/XX/1953

Historical Address Information

Address:	1501 W INDIES DR # 244 BIG TORCH KEY, FL 33042

End of Document

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People Find Records (2)

To Summary

People Finder - Historic Tracker Record

Source Information

Information Current Through:	01/31/2024
Database Last Updated:	02/13/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	TRANS UNION

Last Known Address Information

Current Address:	56-211 KAMEHAMEHA HW KAHUKU, HI 96731-2218
Phone Number 1:	808-293-2458
Phone Number 2:	305-942-3978
Address First Reported:	04/23/2023

Individual Information

Name:	PONTIN, DUKE H
Also Known As:	PONTIN, DUKE
SSN:	265-06-XXXX
Date of Birth:	08/XX/1953
On File Since:	11/01/1985

Other Address Information

Previous Address:	911 INDIES RD SUMMERLAND KEY, FL 33042-5404
Phone Number 1:	305-872-2752
Address First Reported:	06/19/2009
Previous Address:	PO BOX 717 KAHUKU, HI 96731-0717
Address First Reported:	07/15/2001
Previous Address:	PO BOX 244

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	SUMMERLAND KEY, FL 33042
Address First Reported:	11/13/2000
Previous Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Address First Reported:	03/01/1995
Previous Address:	1501 W INDIES DR SUMMERLAND KEY, FL 33042
Address First Reported:	07/01/1992

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To Summary

People Finder - Historic Tracker Record

Source Information

Information Current Through:	01/31/2024
Database Last Updated:	02/13/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	TRANS UNION

Last Known Address Information

Current Address:	56-970 KAMEHAMEHA HW KAHUKU, HI 96731-2305
Address First Reported:	09/27/2023

Individual Information

Name:	PONTIN, DUKE H
On File Since:	09/27/2023

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Email Address Records (27)

To Summary

People Email Record

Source Information

Individual Information

Name:	DALE PONTIN

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Information Current Through:	12/31/2023	**E-Mail:**	DPONTIN@YAHOO.COM
		IP Address:	75.88.127.64
Database Last Updated:	01/19/2024	**Address:**	911 W INDIES DR SUMMERLAND KEY, FL 33042
Update Frequency:	MONTHLY		
Current Date:	02/16/2024		
		Reported Date:	06/01/2021

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To Summary

People Email Record

Source Information

Individual Information

Information Current Through:	12/31/2023	**Name:**	DALE PONTIN
		E-Mail:	DPONTIN@YAHOO.COM
Database Last Updated:	01/19/2024	**IP Address:**	216.15.239.14
Update Frequency:	MONTHLY	**Address:**	911 W INDIES DR SUMMERLAND KEY, FL 33042
Current Date:	02/16/2024		
		Reported Date:	12/03/2021

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To Summary

People Email Record

Source Information

Individual Information

Information Current Through:	12/31/2023	**Name:**	DALE PONTIN
		E-Mail:	DPONTIN@IX.NETCOM.COM
Database Last Updated:	01/19/2024	**IP Address:**	195.238.32.208
Update Frequency:	MONTHLY	**Address:**	911 W INDIES DR SUMMERLAND KEY, FL 33042
Current Date:	02/16/2024		
		Reported Date:	02/26/2020

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To Summary

People Email Record

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Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@IX.NETCOM.COM
IP Address:	206.253.55.27
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	01/24/2021

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@IX.NETCOM.COM
IP Address:	216.15.241.172
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	07/12/2021

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@IX.NETCOM.COM
IP Address:	205.136.19.187
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	10/30/2022

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@IX.NETCOM.COM
IP Address:	192.122.209.7
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@YAHOO.COM
IP Address:	128.177.121.242
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	08/26/2019

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@IX.NETCOM.COM
IP Address:	61.14.31.172
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042

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Reported Date:	09/12/2018

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@YAHOO.COM
IP Address:	208.1.129.23
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	11/15/2022

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@IX.NETCOM.COM
IP Address:	65.208.166.9
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	06/04/2022

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@YAHOO.COM
IP Address:	63.241.89.254

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Update Frequency:	MONTHLY	**Address:**	911 W INDIES DR SUMMERLAND KEY, FL 33042
Current Date:	02/16/2024	**Reported Date:**	03/03/2019

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To Summary

People Email Record

Source Information

Individual Information

Information Current Through:	12/31/2023	**Name:**	DALE PONTIN
		E-Mail:	DPONTIN@YAHOO.COM
Database Last Updated:	01/19/2024	**IP Address:**	76.160.89.230
Update Frequency:	MONTHLY	**Address:**	911 W INDIES DR SUMMERLAND KEY, FL 33042
Current Date:	02/16/2024	**Reported Date:**	09/21/2022

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To Summary

People Email Record

Source Information

Individual Information

Information Current Through:	12/31/2023	**Name:**	DALE PONTIN
		E-Mail:	DPONTIN@YAHOO.COM
Database Last Updated:	01/19/2024	**IP Address:**	68.41.248.137
Update Frequency:	MONTHLY	**Address:**	911 W INDIES DR SUMMERLAND KEY, FL 33042
Current Date:	02/16/2024	**Reported Date:**	09/24/2023

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To Summary

People Email Record

Source Information

Individual Information

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Information Current Through:	12/31/2023	**Name:**	DALE PONTIN
		E-Mail:	DPONTIN@IX.NETCOM.COM
Database Last Updated:	01/19/2024	**IP Address:**	198.135.168.62
Update Frequency:	MONTHLY	**Address:**	911 W INDIES DR SUMMERLAND KEY, FL 33042
Current Date:	02/16/2024		
		Reported Date:	10/11/2023

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To Summary
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People Email Record

Source Information

Individual Information

Information Current Through:	12/31/2023	**Name:**	DALE PONTIN
		E-Mail:	DPONTIN@IX.NETCOM.COM
Database Last Updated:	01/19/2024	**IP Address:**	151.123.132.23
Update Frequency:	MONTHLY	**Address:**	911 W INDIES DR SUMMERLAND KEY, FL 33042
Current Date:	02/16/2024		
		Reported Date:	03/05/2018

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To Summary
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People Email Record

Source Information

Individual Information

Information Current Through:	12/31/2023	**Name:**	DALE PONTIN
		E-Mail:	DPONTIN@YAHOO.COM
Database Last Updated:	01/19/2024	**IP Address:**	192.65.177.127
Update Frequency:	MONTHLY	**Address:**	911 W INDIES DR SUMMERLAND KEY, FL 33042
Current Date:	02/16/2024		
		Reported Date:	01/05/2020

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People Email Record

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Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@IX.NETCOM.COM
IP Address:	72.32.108.31
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	03/02/2022

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DUKE PONTIN
E-Mail:	DPONTIN@MAILCITY.COM
Address:	29404 LOUISE ST BIG PINE KEY, FL 33043

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@YAHOO.COM
IP Address:	71.96.67.250
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	03/26/2023

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People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@IX.NETCOM.COM
IP Address:	64.39.24.252
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	01/28/2023

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@YAHOO.COM
IP Address:	192.188.239.244
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	07/09/2020

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@IX.NETCOM.COM
IP Address:	24.196.90.123
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042

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Reported Date:	09/14/2021

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@YAHOO.COM
IP Address:	72.3.147.197
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	02/20/2022

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@IX.NETCOM.COM
IP Address:	212.118.243.93
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	10/19/2019

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@YAHOO.COM
IP Address:	198.93.155.18

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Update Frequency:	MONTHLY	**Address:**	911 W INDIES DR SUMMERLAND KEY, FL 33042
Current Date:	02/16/2024	**Reported Date:**	12/06/2020

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To Summary

People Email Record

Source Information

Information Current Through:	12/31/2023
Database Last Updated:	01/19/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Individual Information

Name:	DALE PONTIN
E-Mail:	DPONTIN@YAHOO.COM
IP Address:	216.89.58.181
Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042
Reported Date:	06/14/2018

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Experian Credit Header Records (1)

To Summary

CREDIT HEADER

Source Information

Information Current Through:	01/01/2024
Database Last Updated:	01/26/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	EXPERIAN CREDIT HEADER

Individual Information

Name:	PONTIN, DUKE H
Also Known As:	PONTIN, DUKE
Also Known As:	PONTIN, DALE
Other Name(s):	BRANDY
Best SSN:	265-06-XXXX
Date of Birth:	08/XX/1953
Gender:	MALE

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

On File Since:	03/01/1987

Last Known Address Information

1 Address:	56-211 KAMEHAMEHA KAHUKU, HI 96731
Address First Reported:	03/03/2008
Address Last Reported:	08/08/2023

Other Address Information

2 Previous Address:	PO BOX 717 KAHUKU, HI 96731-0717
Address First Reported:	07/16/2001
Address Last Reported:	10/11/2017
3 Previous Address:	PO BOX 244 BIG PINE KEY, FL 33043
Address First Reported:	01/01/0001
Address Last Reported:	09/11/2001
4 Previous Address:	911 INDIES DR W RAMROD KEY, FL 33042-5455
Address First Reported:	03/18/1995
Address Last Reported:	11/20/2000
5 Previous Address:	1501 INDIES DR W SUMMERLAND KEY, FL 33042
Address First Reported:	07/28/1992
Address Last Reported:	10/23/1994
6 Previous Address:	56211 KAM HIGH WAY KAHUKU, HI 96731
Address First Reported:	05/07/2009
Address Last Reported:	07/09/2020
7 Previous Address:	56-211 KAM HWY KAHUKU, HI 96731
Address First Reported:	04/23/2012
Address Last Reported:	09/14/2017
8 Previous Address:	56-211 KAMEMEHA HWY KAHUKU, HI 96731
Address First Reported:	08/01/2012
Address Last Reported:	08/01/2012
9 Previous Address:	56 211 KAM HWY KAHUKU, HI 96731

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Address First Reported:	10/22/2001
Address Last Reported:	10/22/2001
10 Previous Address:	29404 LOUISE ST BIG PINE KEY, FL 33043-6214
Address First Reported:	05/24/2002
Address Last Reported:	05/24/2002

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Experian Credit Header Real Time (1)

To Summary

CREDIT HEADER REAL TIME

Fraud Alert Information

SSN Alerts	
Inquiry SSN Has Not Been Issued	No
Inquiry SSN Recorded As Deceased	No
Inquiry Age Younger than SSN Issue Date	No
High Probability SSN Belongs to Another	No
Inquiry SSN Format Is Invalid	No
Best Onfile SSN Recorded as Deceased	No
Best Onfile SSN Not Issued as of:	No
SSN Reported more Frequently for Another	No
Other SSN(s)	No
Address Alerts	
Inquiry/Online Current Address Conflict	No
Inquiry Address 1ST Reported <90 Days	No
Inquiry Current Address Not Onfile	No

Individual Information

Best Name:	DUKE H PONTIN
Spouse Name:	BRANDY
Other Name(s):	DUKE HANCOCK PONTIN
	DUKE PONTIN
	DUKE DALE PONTIN
	DUKEDALE H PONTIN
	DALE PONTIN
	DUKEDALE PONTIN
Best SSN:	265-06-XXXX
Times Reported:	8
Date of Birth:	08/XX/1953
Telephone Number(s):	305-923-5458 Type: Cellular

Best Address Information

Best Address:	56-211 KAMEHAMEHA KAHUKU, HI 96731
	Reported 2 Times
Address First Reported:	03/03/2008
Address Last Reported:	08/08/2023

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Inquiry Address: Alert	No
Inquiry Address: Non-Residential	No
Inquiry Address: Cautious	No
Best Address: Alert	No
Best Address: Non-Residential	No
Best Address: Cautious	No
Inquiry Telephone Number Inconsistent with Address	No

Source Information

Current Date:	02/16/2024
Source:	Experian Credit Header

Other Address Information

Other Address:	56-211 KAM HWY KAHUKU, HI 96731
	Reported 0 Times
Address First Reported:	04/23/2012
Address Last Reported:	09/14/2017
Other Address:	56-970 KAMEHAMEHA HWY KAHUKU, HI 96731
	Reported 0 Times
Address First Reported:	07/14/2017
Address Last Reported:	07/14/2017
Other Address:	29404 LOUISE ST BIG PINE KEY, FL 33043
	Reported 0 Times
Address First Reported:	05/24/2002
Address Last Reported:	05/24/2002
Other Address:	1234 KAM HWY KAHUKU, HI 96731
	Reported 0 Times
Address First Reported:	10/22/2001
Address First Reported:	04/01/2011
Address Last Reported:	10/22/2001
Address Last Reported:	04/30/2011
Other Address:	56 211 KAM HWY KAHUKU, HI 96731
	Reported 0 Times
Address First Reported:	10/22/2001
Address Last Reported:	10/22/2001
Other Address:	911 W INDIES DR RAMROD KEY, FL 33042
	Reported 0 Times
Address First Reported:	03/18/1995
Address Last Reported:	11/20/2000
Other Address:	1501 W INDIES DR

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	SUMMERLAND KEY, FL 33042
	Reported 0 Times
Address First Reported:	07/28/1992
Address Last Reported:	10/23/1994

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Equifax Credit Header Records (1)

To Summary

CREDIT HEADER

Source Information

Information Current Through:	02/14/2024
Database Last Updated:	02/14/2024
Update Frequency:	WEEKLY
Current Date:	02/16/2024
Source:	EQUIFAX CREDIT HEADER

Individual Information

Name:	PONTIN, DUKE H
SSN:	265-06-XXXX
SSN Status	CONFIRMED
Date of Birth:	08/XX/1953

Last Known Address Information

Current Address:	56-211 KAMEHAMEHA HWY KAHUKU, HI 96731
Address On File Since:	12/2015

Other Address Information

Previous Address:	PO BOX 717 KAHUKU, HI 96731
Address On File Since:	01/2002
Previous Address:	911 W INDIES DR RAMROD KEY, FL 33042
Address On File Since:	04/2011
Previous Address:	1234 KAM DR KAHUKU, HI 96731
Address On File Since:	04/2011

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Bank Account Header Records (3)

To Summary

Bank Account Header Record

Source Information:

Information Current Through:	02/06/2024
Database Last Updated:	02/09/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	BANK ACCOUNT HEADER RECORDS
Record Last Updated:	03/07/2002

Individual Information:

Name:	PONTIN, DUKE
Last Reported:	03/07/2002

Address Information:

Current Address:	56-212 KAMEHAMEHA HWY LAIE, HI 96762
Last Reported:	03/07/2002

Phone Numbers:

Current Phone Number:	808-293-2458
Last Reported:	03/07/2002

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To Summary

Bank Account Header Record

Source Information:

Information Current Through:	02/06/2024
Database Last Updated:	02/09/2024
Update Frequency:	MONTHLY

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Current Date:	02/16/2024
Source:	BANK ACCOUNT HEADER RECORDS
Record Last Updated:	01/05/2009

Individual Information:

Name:	PONTIN, DUKE H
Last Reported:	01/05/2009

Social Security/Individual Taxpayer Identification Number:

Most Recent SSN/ITIN:	265-06-XXXX
Last Reported:	01/05/2009

Address Information:

Current Address:	PO BOX 717 KAHUKU, HI 96731-0717
Last Reported:	10/12/2002
Previous Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Last Reported:	04/06/2001
Previous Address:	POB 244 SUMMERLAND KEY, FL 33042
Last Reported:	11/13/2000
Previous Address:	PO BOX 244 SUMMERLAND KEY, FL 33042-0001
Last Reported:	11/13/2000
Previous Address:	1501 W INDIES DR SUMMERLAND KEY, FL 33042
Last Reported:	07/01/1992

Phone Numbers:

Current Phone Number:	305-872-2400
Last Reported:	08/14/2001

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Previous Phone Number:	305-872-2752
Last Reported:	04/06/2001

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To Summary

Bank Account Header Record

Source Information:

Information Current Through:	02/06/2024
Database Last Updated:	02/09/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	BANK ACCOUNT HEADER RECORDS
Record Last Updated:	06/30/2008

Individual Information:

Name:	PONTIN, DALE H
Last Reported:	08/14/2006

Social Security/Individual Taxpayer Identification Number:

Most Recent SSN/ITIN:	265-06-XXXX
Last Reported:	08/14/2006

Date of Birth Information:

Date of Birth:	08/XX/1953
Last Reported:	04/06/2001

Driver's License Information:

Driver's License:	P53516853XXX
Issue State:	FL
Last Reported:	06/30/2008
Previous Driver's License:	P535168532XXX
Issue State:	FL

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Last Reported:	08/14/2006

Address Information:

Current Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Last Reported:	08/14/2006
Previous Address:	PO BOX 717 KAHUKU, HI 96731-0717
Last Reported:	10/12/2002

Phone Numbers:

Current Phone Number:	305-872-2752
Last Reported:	06/30/2008
Previous Phone Number:	305-872-2400
Last Reported:	04/06/2001

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Phone Records (1)

To Summary

Person Phone Record

Source Information

Information Current Through:	01/15/2024
Database Last Updated:	02/02/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Phone Information

Phone Number:	305-942-3978
Phone Type:	WIRELESS

Address Information

Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455
County:	MONROE
Address Type:	STREET OR RESIDENTIAL ADDRESS
Mail Deliverable:	YES
Address Validation Date:	01/18/2018

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Record Type:	RESIDENTIAL
First Reported:	08/12/2007
Last Reported:	05/13/2017
Original Service Provider:	SPRINT SPECTRUM LP
Name:	DUKE PONTIN
Telephone Confidence Description:	PRIVATE NUMBER VALIDATED WITHIN PAST 12-18 MONTHS

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Real Property Tax Assessor Records (5)

To Summary

Real Property Tax Assessor Record

Source Information

Tax Roll Certification Date:	09/29/2023
Owner Information Current Through:	01/18/2024
County Last Updated:	02/13/2024
Current Date:	02/16/2024
Source:	TAX ASSESSOR

Owner Information

Owner(s):	WALTER GERT
	WALTER DEBBIE
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	28606 SICILY LOOP BONITA SPRINGS, FL 34135-8985

Property Information

County:	MONROE
Assessor's Parcel Number:	00206670-000000
Property Type:	SINGLE FAMILY RESIDENCE
Land Use:	SINGLE FAMILY RESIDENCE
Zoning:	IS
Lot Size:	9200
Lot Acreage:	0.2112
Location Attributes:	WATERFRONT

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Municipality:	RAMROD KEY
Subdivision:	BREEZESWEPT BEACH ESTATES
Plat Recording:	BOOK 4, PAGE 143
Legal Description:	BK 19 LT 81 AND ELY PT LT 82 BREEZESWEPT BEACH ESTATES RAMROD KEY PB4-143 OR318-70 OR934-2188/89 OR1136-2154 OR1301-767/68 OR1313-61/62 OR1620-2034 OR2885-766/67 OR2978-1727
Block Number:	19
Lot Number:	81
Range:	29E
Township:	66S
Section:	32

Tax Assessment Information

Tax Year:	2023
Calculated Land Value:	$1,370,040.00
Calculated Improvement Value:	$407,495.00
Calculated Total Value:	$1,777,535.00
Assessed Total Value:	$1,124,460.00
Market Land Value:	$1,370,040.00
Market Improvement Value:	$407,495.00
Market Total Value:	$1,777,535.00
Valuation Method:	MARKET
Tax Amount:	$12,172.93
Tax Code Area:	100H

Building/Improvement Characteristics

Building Type:	RESIDENTIAL
Number of Buildings:	1
Year Built:	20000000
Living Square Feet:	1920
Number of Bedrooms:	3
Number of Bathrooms:	1
Full Baths:	1
Garage Type:	CARPORT
Number of Stories:	2.00
Number of Units:	1
Improvement Type:	TYPE UNKNOWN

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Construction Quality:	TYPE UNKNOWN
Exterior Wall Type:	CONCRETE BLOCK
Roof Type:	GABLE/HIP
Foundation Type:	CONCRETE
Heat:	FORCED AIR
A/C Type:	TYPE UNKNOWN

Last Market Sale Information

Sale Date:	12/29/2017
Seller Name:	PONTIN DUKE & BRANDI
Sale Price:	$1,200,000.00
Deed Type:	DEED
Type of Sale:	RESALE
Multiple Parcel Sale:	MULTIPLE PARCELS IN THE SALE ? SUBSEQUENT APNS LISTED ON THE DOCUMENT
Recording Date:	12/29/2017
Document Number:	2149286
Recording Book/Page:	BOOK 2885, PAGE 766

Previous Transaction Information

Sale Date:	02/24/2000
Sale Price:	$369,000.00
Type of Sale:	RESALE
Recording Date:	03/03/2000
Recording Book/Page:	BOOK 1620, PAGE 2034

Historical Tax Assessor Information

Historical Tax Assessor Record: 1.	
Tax Year:	2022
Calculated Land Value:	$1,161,232.00
Calculated Improvement Value:	$410,338.00
Calculated Total Value:	$1,571,570.00
Assessed Total Value:	$1,020,199.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	28606 SICILY LOOP BONITA SPRINGS, FL 34135-8985

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Historical Tax Assessor Record: 2.	
Tax Year:	2022
Calculated Land Value:	$1,161,232.00
Calculated Improvement Value:	$410,338.00
Calculated Total Value:	$1,571,570.00
Assessed Total Value:	$1,020,199.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Owner:	WALTER GERT, WALTER DEBBIE
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	28606 SICILY LOOP BONITA SPRINGS, FL 34135-8985
Historical Tax Assessor Record: 3.	
Tax Year:	2021
Calculated Land Value:	$892,763.00
Calculated Improvement Value:	$366,578.00
Calculated Total Value:	$1,259,341.00
Assessed Total Value:	$927,454.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	OWNER OCCUPIED
Owner:	WALTER GERT, WALTER DEBBIE
Property Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Mailing Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Historical Tax Assessor Record: 4.	
Tax Year:	2019
Calculated Land Value:	$504,976.00
Calculated Improvement Value:	$361,912.00
Calculated Total Value:	$866,888.00
Assessed Total Value:	$866,888.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Owner:	WALTER GERT, WALTER DEBBIE
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	30 BAYVIEW BLVD

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	FORT MYERS BEACH, FL 33931-4506
Historical Tax Assessor Record: 5.	
Tax Year:	2019
Calculated Land Value:	$485,800.00
Calculated Improvement Value:	$357,340.00
Calculated Total Value:	$843,140.00
Assessed Total Value:	$843,140.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	OWNER OCCUPIED
Owner:	WALTER GERT, WALTER DEBBIE
Property Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Mailing Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Historical Tax Assessor Record: 6.	
Tax Year:	2018
Calculated Land Value:	$560,374.00
Calculated Improvement Value:	$362,180.00
Calculated Total Value:	$922,554.00
Assessed Total Value:	$922,554.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Owner:	WALTER FAMILY JOINT
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	30 BAYVIEW BLVD FORT MYERS BEACH, FL 33931-4506
Historical Tax Assessor Record: 7.	
Tax Year:	2017
Calculated Land Value:	$488,796.00
Calculated Improvement Value:	$290,590.00
Calculated Total Value:	$779,386.00
Assessed Total Value:	$779,386.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 8.	
Tax Year:	2017
Calculated Land Value:	$488,796.00
Calculated Improvement Value:	$290,590.00
Calculated Total Value:	$779,386.00
Assessed Total Value:	$779,386.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	SITUS FROM SALE (ABSENTEE)
Owner:	WALTER FAMILY TRUST
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	30 BAYVIEW BLVD FORT MYERS BEACH, FL 33931-4506
Historical Tax Assessor Record: 9.	
Tax Year:	2015
Calculated Land Value:	$295,475.00
Calculated Improvement Value:	$259,890.00
Calculated Total Value:	$555,365.00
Assessed Total Value:	$555,365.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 10.	
Tax Year:	2015
Calculated Land Value:	$560,691.00
Calculated Improvement Value:	$264,474.00
Calculated Total Value:	$825,165.00
Assessed Total Value:	$825,165.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

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Historical Tax Assessor Record: 11.	
Tax Year:	2014
Calculated Land Value:	$373,794.00
Calculated Improvement Value:	$261,035.00
Calculated Total Value:	$634,829.00
Assessed Total Value:	$580,858.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 12.	
Tax Year:	2013
Calculated Land Value:	$311,495.00
Calculated Improvement Value:	$264,229.00
Calculated Total Value:	$575,724.00
Assessed Total Value:	$528,053.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 13.	
Tax Year:	2012
Calculated Land Value:	$210,036.00
Calculated Improvement Value:	$270,013.00
Calculated Total Value:	$480,049.00
Assessed Total Value:	$480,049.00
Assessor's Parcel Number:	00206670-000000
Owner:	DUKE PONTIN, DUKE BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 14.	
Tax Year:	2011

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Calculated Land Value:	$235,235.00
Calculated Improvement Value:	$267,141.00
Calculated Total Value:	$502,376.00
Assessed Total Value:	$494,276.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Mailing Address:	PO BOX 244 BIG PINE KEY, FL 33043
Historical Tax Assessor Record: 15.	
Tax Year:	2010
Calculated Land Value:	$175,946.00
Calculated Improvement Value:	$273,396.00
Calculated Total Value:	$449,342.00
Assessed Total Value:	$449,342.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 244 BIG PINE KEY, FL 33043
Historical Tax Assessor Record: 16.	
Tax Year:	2009
Calculated Land Value:	$479,854.00
Calculated Improvement Value:	$306,205.00
Calculated Total Value:	$786,059.00
Assessed Total Value:	$786,059.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 244 BIG PINE KEY, FL 33043
Historical Tax Assessor Record: 17.	
Tax Year:	2008
Calculated Land Value:	$598,000.00
Calculated Improvement Value:	$255,424.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Calculated Total Value:	$853,424.00
Assessed Total Value:	$853,424.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 244 BIG PINE KEY, FL 33043
Historical Tax Assessor Record: 18.	
Tax Year:	2006
Calculated Land Value:	$552,000.00
Calculated Improvement Value:	$309,116.00
Calculated Total Value:	$861,116.00
Assessed Total Value:	$861,116.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 244 BIG PINE KEY, FL 33043
Historical Tax Assessor Record: 19.	
Tax Year:	2001
Calculated Land Value:	$78,200.00
Calculated Improvement Value:	$183,552.00
Calculated Total Value:	$261,752.00
Assessed Total Value:	$261,752.00
Assessor's Parcel Number:	206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Mailing Address:	33043
Historical Tax Assessor Record: 20.	
Tax Year:	2000
Calculated Land Value:	$62,560.00
Calculated Total Value:	$62,560.00
Assessed Total Value:	$62,560.00
Assessor's Parcel Number:	206670-000000
Owner:	MESSENGER JANET M

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Mailing Address:	4312 NE 23RD AVE FORT LAUDERDALE, FL 33308-5632
Historical Tax Assessor Record: 21.	
Tax Year:	2000
Calculated Land Value:	$62,560.00
Calculated Total Value:	$62,560.00
Assessed Total Value:	$62,560.00
Assessor's Parcel Number:	206670-000000
Owner:	MESSENGER JANET M
Mailing Address:	4312 NE 23RD AVE FORT LAUDERDALE, FL 33308-5632

ADDITIONAL PROPERTIES POSSIBLY CONNECTED TO OWNER may have been located. The owner's mailing address is associated with other properties as indicated by tax assessor records. Additional charges may apply.
TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

End of Document

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To Summary

Real Property Tax Assessor Record

Source Information

Tax Roll Certification Date:	02/01/2023
Owner Information Current Through:	01/25/2024
County Last Updated:	02/13/2024
Current Date:	02/16/2024
Source:	TAX ASSESSOR

Owner Information

Owner(s):	PONTIN DUKE H & BRANDI A, ETAL
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	TENANTS IN COMMON
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Property Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6-005-005-0000

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Property Type:	WAREHOUSE
Land Use:	WAREHOUSE
Zoning:	A/52/50
Lot Size:	1553350
Lot Acreage:	35.6600
Municipality:	OAHU
Legal Description:	LOT 20 MAP 6 LCAPP 1095 35.660 AC TOG W/ESMT SUBJ/GRANT OF ESMT
Lot Number:	20

Tax Assessment Information

Tax Year:	2023
Calculated Land Value:	$8,600.00
Calculated Improvement Value:	$552,800.00
Calculated Total Value:	$561,400.00
Assessed Land Value:	$8,600.00
Assessed Improvement Value:	$552,800.00
Assessed Total Value:	$561,400.00
Market Land Value:	$8,600.00
Market Improvement Value:	$552,800.00
Market Total Value:	$561,400.00
Valuation Method:	MARKET
Tax Amount:	$3,199.98
Tax Code Area:	5

Building/Improvement Characteristics

Building Type:	WAREHOUSE
Number of Buildings:	1
Year Built:	20130000
Living Square Feet:	50750
Construction Quality:	LOW

Last Market Sale Information

Sale Date:	07/30/2009
Seller Name:	CONTINENTAL PACIFIC LLC
Sale Price:	$1,050,000.00
Deed Type:	DEED
Type of Sale:	RESALE
Mortgage Amount:	$750,000.00

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Mortgage Loan Type:	CONVENTIONAL
Mortgage Deed Type:	MORTGAGE
Lender Name:	CONTINENTAL PACIFIC LLC
Recording Date:	08/06/2009
Document Number:	3886123
Title Company:	TITLE GUARANTY & ESCROW SVCS

Previous Transaction Information

Previous Document Number:	127617
Sale Date:	07/11/2002
Sale Price:	$18,844,400.00
Type of Sale:	RESALE
Multiple Parcel Sale:	MULTIPLE PARCELS IN THE SALE ? FIRST APN LISTED ON THE DOCUMENT
Recording Date:	07/23/2002

Historical Tax Assessor Information

Historical Tax Assessor Record: 1.	
Tax Year:	2022
Calculated Land Value:	$8,600.00
Calculated Improvement Value:	$552,800.00
Calculated Total Value:	$561,400.00
Assessed Total Value:	$561,400.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 2.	
Tax Year:	2021
Calculated Land Value:	$8,600.00
Calculated Improvement Value:	$503,100.00
Calculated Total Value:	$511,700.00
Assessed Total Value:	$511,700.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 3.	
Tax Year:	2020
Calculated Land Value:	$855,800.00
Calculated Total Value:	$855,800.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 4.	
Tax Year:	2019
Calculated Land Value:	$855,800.00
Calculated Total Value:	$855,800.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 5.	
Tax Year:	2018
Calculated Land Value:	$855,800.00
Calculated Total Value:	$855,800.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 6.	
Tax Year:	2017
Calculated Land Value:	$855,800.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Calculated Total Value:	$855,800.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 7.	
Tax Year:	2016
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$8,400.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 8.	
Tax Year:	2015
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$8,000.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 9.	
Tax Year:	2014
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$8,700.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	970 KAMEHAMEHA HWY

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 10.	
Tax Year:	2013
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$7,500.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 11.	
Tax Year:	2012
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$6,900.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 12.	
Tax Year:	2011
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$1,283,800.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 13.	
Tax Year:	2011

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 14.	
Tax Year:	2010
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	970 KAMEHAMEHA HWY HAUULA, HI 96717
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 15.	
Tax Year:	2010
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	970 KAMEHAMEHA HWY HAUULA, HI 96717
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 16.	
Tax Year:	2009
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A, PONTIN COVE K

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Property Address:	KAM HWY HAUULA, HI 96717
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 17.	
Tax Year:	2009
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	970 KAMEHAMEHA HWY HAUULA, HI 96717
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 18.	
Tax Year:	2009
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A, PONTIN COVE K
Property Address:	KAM HWY HAUULA, HI 96717
Mailing Address:	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350
Historical Tax Assessor Record: 19.	
Tax Year:	2008
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	CONTINENTAL PACIFIC LLC
Property Address:	KAM HWY HAUULA, HI 96717
Mailing Address:	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Historical Tax Assessor Record: 20.	
Tax Year:	2007
Calculated Land Value:	$7,100.00
Calculated Total Value:	$7,100.00
Assessed Total Value:	$7,100.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	CONTINENTAL PACIFIC LLC
Property Address:	KAM HWY HAUULA, HI 96717
Mailing Address:	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350
Historical Tax Assessor Record: 21.	
Tax Year:	2006
Calculated Land Value:	$7,100.00
Calculated Total Value:	$7,100.00
Assessed Total Value:	$7,100.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	CONTINENTAL PACIFIC LLC
Property Address:	KAM HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350
Historical Tax Assessor Record: 22.	
Tax Year:	2002
Calculated Land Value:	$9,200.00
Calculated Total Value:	$9,200.00
Assessed Total Value:	$9,200.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	AINA NUI CORP
Property Address:	KAM HWY
Mailing Address:	1001 KAMOKILA BLVD 255 KAPOLEI, HI 96707-2014
Historical Tax Assessor Record: 23.	
Tax Year:	2001
Calculated Land Value:	$9,200.00
Calculated Total Value:	$9,200.00
Assessed Total Value:	$9,200.00
Assessor's Parcel Number:	1-5-6- 5- 5

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner:	JAMES CAMPBELL TRUST ESTATE
Mailing Address:	KAPOLEI, HI 96707
Historical Tax Assessor Record: 24.	
Tax Year:	2000
Calculated Land Value:	$9,200.00
Calculated Total Value:	$9,200.00
Assessed Total Value:	$9,200.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	JAMES CAMPBELL TRUST ESTATE
Mailing Address:	KAPOLEI, HI 96707

ADDITIONAL PROPERTIES POSSIBLY CONNECTED TO OWNER may have been located. The owner's mailing address is associated with other properties as indicated by tax assessor records. Additional charges may apply.
TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

End of Document

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To Summary

Real Property Tax Assessor Record

Source Information

Tax Roll Certification Date:	02/01/2023
Owner Information Current Through:	01/25/2024
County Last Updated:	02/13/2024
Current Date:	02/16/2024
Source:	TAX ASSESSOR

Owner Information

Owner(s):	PONTIN DUKE H & BRANDI A
Ownership Rights:	TENANTS BY ENTIRETY
Absentee Owner:	OWNER OCCUPIED
Property Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6-001-081-0000
Property Type:	SINGLE FAMILY RESIDENCE
Land Use:	SINGLE FAMILY RESIDENCE

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Zoning:	U/05/00
Homestead Exempt:	HOMEOWNER EXEMPTION
Lot Size:	39422
Lot Acreage:	0.9050
Municipality:	OAHU
Legal Description:	LOT 1258 0.905 AC MAP 177 LCAPP 1095
Lot Number:	1258

Tax Assessment Information

Tax Year:	2023
Calculated Land Value:	$2,533,100.00
Calculated Improvement Value:	$419,300.00
Calculated Total Value:	$2,952,400.00
Assessed Land Value:	$2,533,100.00
Assessed Improvement Value:	$419,300.00
Assessed Total Value:	$2,952,400.00
Market Land Value:	$2,533,100.00
Market Improvement Value:	$419,300.00
Market Total Value:	$2,952,400.00
Valuation Method:	MARKET
Tax Amount:	$9,493.40
Tax Code Area:	2

Building/Improvement Characteristics

Building Type:	RESIDENTIAL
Number of Buildings:	1
Year Built:	19560000
Living Square Feet:	1254
Total Number of Rooms:	3
Number of Bedrooms:	2
Number of Bathrooms:	2
Full Baths:	2
Garage Type:	WOOD FRAME GARAGE
Number of Stories:	1.00
Style/Shape:	CONTEMPORARY
Improvement Type:	SINGLE FAMILY
Construction Quality:	FAIR
Exterior Wall Type:	WOOD
Roof Type:	GABLE

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Foundation Type:	CONCRETE
A/C Type:	NONE

Last Market Sale Information

Sale Date:	10/25/2000
Seller Name:	GRAY JAMES S
Sale Price:	$850,000.00
Deed Type:	DEED
Type of Sale:	RESALE
Mortgage Amount:	$600,000.00
Mortgage Loan Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	MORTGAGE
Lender Name:	AMERICAN SVGS BK FSB
Recording Date:	10/30/2000
Document Number:	2660755

Previous Transaction Information

Previous Document Number:	1303470
Sale Date:	06/05/1985
Sale Price:	$300,000.00
Type of Sale:	RESALE
Mortgage Amount:	$140,786.00
Recording Date:	06/01/1985

Historical Tax Assessor Information

Historical Tax Assessor Record: 1.	
Tax Year:	2022
Calculated Land Value:	$2,533,100.00
Calculated Improvement Value:	$419,300.00
Calculated Total Value:	$2,952,400.00
Assessed Total Value:	$2,952,400.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 2.	
Tax Year:	2021
Calculated Land Value:	$1,999,800.00
Calculated Improvement Value:	$561,700.00
Calculated Total Value:	$2,561,500.00
Assessed Total Value:	$2,561,500.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 3.	
Tax Year:	2020
Calculated Land Value:	$1,999,800.00
Calculated Improvement Value:	$92,100.00
Calculated Total Value:	$2,091,900.00
Assessed Total Value:	$2,091,900.00
Assessor's Parcel Number:	1-5-6- 1- 81
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 4.	
Tax Year:	2019
Calculated Land Value:	$1,999,800.00
Calculated Improvement Value:	$157,800.00
Calculated Total Value:	$2,157,600.00
Assessed Total Value:	$2,157,600.00
Assessor's Parcel Number:	1-5-6- 1- 81
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 5.	
Tax Year:	2018
Calculated Land Value:	$1,999,800.00
Calculated Improvement Value:	$236,400.00
Calculated Total Value:	$2,236,200.00
Assessed Total Value:	$2,236,200.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 6.	
Tax Year:	2017
Calculated Land Value:	$1,866,500.00
Calculated Improvement Value:	$62,900.00
Calculated Total Value:	$1,929,400.00
Assessed Total Value:	$1,929,400.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 7.	
Tax Year:	2016
Calculated Land Value:	$1,566,500.00
Calculated Improvement Value:	$116,300.00
Calculated Total Value:	$1,682,800.00
Assessed Total Value:	$1,682,800.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 8.	
Tax Year:	2015
Calculated Land Value:	$1,466,600.00
Calculated Improvement Value:	$102,700.00
Calculated Total Value:	$1,569,300.00
Assessed Total Value:	$1,569,300.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 9.	
Tax Year:	2014
Calculated Land Value:	$1,327,000.00
Calculated Improvement Value:	$200,200.00
Calculated Total Value:	$1,527,200.00
Assessed Total Value:	$1,527,200.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 10.	
Tax Year:	2013
Calculated Land Value:	$1,327,000.00
Calculated Improvement Value:	$216,800.00
Calculated Total Value:	$1,543,800.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Assessed Total Value:	$1,543,800.00
Assessor's Parcel Number:	1-5-6- 1- 81
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 11.	
Tax Year:	2012
Calculated Land Value:	$1,270,500.00
Calculated Improvement Value:	$108,600.00
Calculated Total Value:	$1,379,100.00
Assessed Total Value:	$1,379,100.00
Assessor's Parcel Number:	1-5-6- 1- 81
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731

ADDITIONAL PROPERTIES POSSIBLY CONNECTED TO OWNER may have been located. The owner's mailing address is associated with other properties as indicated by tax assessor records. Additional charges may apply.
TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

End of Document

To Summary

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Real Property Tax Assessor Record

Source Information

Tax Roll Certification Date:	02/01/2023
Owner Information Current Through:	01/25/2024
County Last Updated:	02/13/2024
Current Date:	02/16/2024
Source:	TAX ASSESSOR

Owner Information

Owner(s):	SIMONDS PATRICK
Absentee Owner:	OWNER OCCUPIED
Property Address:	56 HUEHU ST

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6-009-034-0000
Property Type:	SINGLE FAMILY RESIDENCE
Land Use:	SINGLE FAMILY RESIDENCE
Zoning:	U/05/00
Lot Size:	4000
Lot Acreage:	0.0918
Municipality:	OAHU
Legal Description:	LOT 729 LCAPP 1095 MAP 95 4,000 SF
Lot Number:	729

Tax Assessment Information

Tax Year:	2023
Calculated Land Value:	$379,300.00
Calculated Improvement Value:	$351,400.00
Calculated Total Value:	$730,700.00
Assessed Land Value:	$379,300.00
Assessed Improvement Value:	$351,400.00
Assessed Total Value:	$730,700.00
Market Land Value:	$379,300.00
Market Improvement Value:	$351,400.00
Market Total Value:	$730,700.00
Valuation Method:	MARKET
Tax Amount:	$2,557.45
Tax Code Area:	2

Building/Improvement Characteristics

Building Type:	RESIDENTIAL
Number of Buildings:	1
Year Built:	19820000
Living Square Feet:	1080
Total Number of Rooms:	5
Number of Bedrooms:	4
Number of Bathrooms:	2

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Full Baths:	2
Garage Type:	CARPORT
Number of Stories:	1.00
Style/Shape:	CONTEMPORARY
Improvement Type:	SINGLE FAMILY
Construction Quality:	AVERAGE
Exterior Wall Type:	MASONITE
Roof Type:	GABLE
Foundation Type:	PIER
A/C Type:	NONE

Last Market Sale Information

Sale Date:	12/19/2016
Seller Name:	PONTIN DUKE H
Sale Price:	$412,000.00
Consideration:	ORIGINAL
Deed Type:	DEED
Type of Sale:	RESALE
Mortgage Amount:	$399,640.00
Mortgage Loan Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	MORTGAGE
Lender Name:	QUICKEN LNS INC
Recording Date:	12/22/2016
Document Number:	T9852071
Title Company:	FIRST HAWAII TITLE CORP

Previous Transaction Information

Previous Document Number:	T9459051
Sale Date:	11/20/2015
Sale Price:	$321,000.00
Consideration:	ORIGINAL
Type of Sale:	RESALE
Recording Date:	11/25/2015

Historical Tax Assessor Information

Historical Tax Assessor Record: 1.	
Tax Year:	2022
Calculated Land Value:	$379,300.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Calculated Improvement Value:	$351,400.00
Calculated Total Value:	$730,700.00
Assessed Total Value:	$730,700.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	SIMONDS PATRICK
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 2.	
Tax Year:	2021
Calculated Land Value:	$361,600.00
Calculated Improvement Value:	$208,200.00
Calculated Total Value:	$569,800.00
Assessed Total Value:	$569,800.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	SIMONDS PATRICK
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 3.	
Tax Year:	2020
Calculated Land Value:	$361,600.00
Calculated Improvement Value:	$219,100.00
Calculated Total Value:	$580,700.00
Assessed Total Value:	$580,700.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	SIMONDS PATRICK
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 4.	
Tax Year:	2019

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Calculated Land Value:	$361,600.00
Calculated Improvement Value:	$228,800.00
Calculated Total Value:	$590,400.00
Assessed Total Value:	$590,400.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	SIMONDS PATRICK
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 5.	
Tax Year:	2018
Calculated Land Value:	$374,900.00
Calculated Improvement Value:	$208,600.00
Calculated Total Value:	$583,500.00
Assessed Total Value:	$583,500.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	SIMONDS PATRICK
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 6.	
Tax Year:	2017
Calculated Land Value:	$299,900.00
Calculated Improvement Value:	$197,600.00
Calculated Total Value:	$497,500.00
Assessed Total Value:	$497,500.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	SIMONDS PATRICK
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Historical Tax Assessor Record: 7.	
Tax Year:	2016
Calculated Land Value:	$211,700.00
Calculated Improvement Value:	$190,500.00
Calculated Total Value:	$402,200.00
Assessed Total Value:	$402,200.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	SITUS FROM SALE (OCCUPIED)
Owner:	SIMONDS PATRICK
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56-277 -277 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 8.	
Tax Year:	2016
Calculated Land Value:	$238,100.00
Calculated Improvement Value:	$193,000.00
Calculated Total Value:	$431,100.00
Assessed Total Value:	$431,100.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	SITUS FROM SALE (OCCUPIED)
Owner:	SIMONDS PATRICK
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 -277 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 9.	
Tax Year:	2015
Calculated Land Value:	$211,700.00
Calculated Improvement Value:	$160,500.00
Calculated Total Value:	$372,200.00
Assessed Total Value:	$372,200.00
Assessor's Parcel Number:	1-5-6- 9- 34
Owner:	PONTIN DUKE H
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Historical Tax Assessor Record: 10.	
Tax Year:	2015
Calculated Land Value:	$211,700.00
Calculated Improvement Value:	$190,500.00
Calculated Total Value:	$402,200.00
Assessed Total Value:	$402,200.00
Assessor's Parcel Number:	1-5-6- 9- 34
Owner:	PONTIN DUKE H
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 11.	
Tax Year:	2014
Calculated Land Value:	$211,700.00
Calculated Improvement Value:	$160,500.00
Calculated Total Value:	$372,200.00
Assessed Total Value:	$372,200.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	SITUS FROM SALE (ABSENTEE)
Owner:	FEDERAL NATL MTG ASSN
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	14221 DALLAS PKWY 11201 DALLAS, TX 75254-2957
Historical Tax Assessor Record: 12.	
Tax Year:	2013
Calculated Land Value:	$202,900.00
Calculated Improvement Value:	$140,500.00
Calculated Total Value:	$343,400.00
Assessed Total Value:	$343,400.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Owner:	KALAMAU SONNIEJAY K & FRANCIS, !K
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	91 OWAKALENA ST KAPOLEI, HI 96707-2949

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Historical Tax Assessor Record: 13.	
Tax Year:	2012
Calculated Land Value:	$194,000.00
Calculated Improvement Value:	$136,100.00
Calculated Total Value:	$330,100.00
Assessed Total Value:	$330,100.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	SITUS FROM SALE (ABSENTEE)
Owner:	KALAMAU SONNIEJAY K, KALAMAU FRANCIS K
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	91 -1004 OWAKALENA ST KAPOLEI, HI 96707-2949
Historical Tax Assessor Record: 14.	
Tax Year:	2012
Calculated Land Value:	$194,000.00
Calculated Improvement Value:	$136,100.00
Calculated Total Value:	$330,100.00
Assessed Total Value:	$330,100.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	SITUS FROM SALE (ABSENTEE)
Owner:	KALAMAU SONNIEJAY K, KALAMAU FRANCIS K
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	91-1004 -1004 OWAKALENA ST KAPOLEI, HI 96707-2949
Historical Tax Assessor Record: 15.	
Tax Year:	2011
Calculated Land Value:	$185,200.00
Calculated Improvement Value:	$151,500.00
Calculated Total Value:	$336,700.00
Assessed Total Value:	$336,700.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	SITUS FROM SALE (ABSENTEE)
Owner:	KALAMAU SONNIEJAY K, KALAMAU FRANCIS K
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	91 -1004 OWAKALENA ST

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	KAPOLEI, HI 96707
Historical Tax Assessor Record: 16.	
Tax Year:	2011
Calculated Land Value:	$185,200.00
Calculated Improvement Value:	$151,500.00
Calculated Total Value:	$336,700.00
Assessed Total Value:	$336,700.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	SITUS FROM SALE (ABSENTEE)
Owner:	KALAMAU SONNIEJAY K, KALAMAU FRANCIS K
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	91-1004 -1004 OWAKALENA ST KAPOLEI, HI 96707-2949
Historical Tax Assessor Record: 17.	
Tax Year:	2011
Calculated Land Value:	$185,200.00
Calculated Improvement Value:	$151,500.00
Calculated Total Value:	$336,700.00
Assessed Total Value:	$336,700.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	KAHAIALII MCGUIRE K & LORNA L
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 18.	
Tax Year:	2010
Calculated Land Value:	$209,500.00
Calculated Improvement Value:	$121,400.00
Calculated Total Value:	$330,900.00
Assessed Total Value:	$330,900.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	KAHAIALII MCGUIRE K & LORNA L
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 19.	
Tax Year:	2009
Calculated Land Value:	$232,800.00
Calculated Improvement Value:	$153,800.00
Calculated Total Value:	$386,600.00
Assessed Total Value:	$386,600.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	KAHAIALII MCGUIRE K, KAHAIALII LORNA L
Property Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 20.	
Tax Year:	2009
Calculated Land Value:	$279,300.00
Calculated Improvement Value:	$132,100.00
Calculated Total Value:	$411,400.00
Assessed Total Value:	$411,400.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	KAHAIALII MCGUIRE K, KAHAIALII LORNA L
Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 21.	
Tax Year:	2009
Calculated Land Value:	$279,300.00
Calculated Improvement Value:	$132,100.00
Calculated Total Value:	$411,400.00
Assessed Total Value:	$411,400.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	KAHAIALII MCGUIRE K, KAHAIALII LORNA L
Property Address:	56 HUEHU ST

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 22.	
Tax Year:	2008
Calculated Land Value:	$279,300.00
Calculated Improvement Value:	$132,100.00
Calculated Total Value:	$411,400.00
Assessed Total Value:	$411,400.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	KAHAIALII MCGUIRE K, KAHAIALII LORNA L
Property Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 23.	
Tax Year:	2007
Calculated Land Value:	$297,900.00
Calculated Improvement Value:	$124,200.00
Calculated Total Value:	$422,100.00
Assessed Total Value:	$422,100.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	KAHAIALII MCGUIRE K, KAHAIALII LORNA L
Property Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 24.	
Tax Year:	2006
Calculated Land Value:	$316,500.00
Calculated Improvement Value:	$121,800.00
Calculated Total Value:	$438,300.00
Assessed Total Value:	$438,300.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	OWNER OCCUPIED
Owner:	KAHAIALII MCGUIRE K, KAHAIALII LORNA L

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Property Address:	56 0000000277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	56 277 HUEHU ST KAHUKU, HI 96731-2002
Historical Tax Assessor Record: 25.	
Tax Year:	2002
Calculated Land Value:	$83,800.00
Calculated Improvement Value:	$60,400.00
Calculated Total Value:	$144,200.00
Assessed Total Value:	$144,200.00
Assessor's Parcel Number:	1-5-6- 9- 34
Owner:	KAHAIALII MCGUIRE K, KAHAIALII LORNA L
Property Address:	56 277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	KAHUKU, HI 96731
Historical Tax Assessor Record: 26.	
Tax Year:	2001
Calculated Land Value:	$83,800.00
Calculated Improvement Value:	$74,000.00
Calculated Total Value:	$157,800.00
Assessed Total Value:	$157,800.00
Assessor's Parcel Number:	1-5-6- 9- 34
Owner:	KAHAIALII MCGUIRE K, KAHAIALII LORNA L
Property Address:	00056 277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	KAHUKU, HI 96731
Historical Tax Assessor Record: 27.	
Tax Year:	2000
Calculated Land Value:	$93,100.00
Calculated Improvement Value:	$71,800.00
Calculated Total Value:	$164,900.00
Assessed Total Value:	$164,900.00
Assessor's Parcel Number:	1-5-6- 9- 34
Absentee Owner:	YES
Owner:	KAHAIALII MCGUIRE K, KAHAIALII LORNA L
Property Address:	56 277 HUEHU ST KAHUKU, HI 96731-2002
Mailing Address:	KAHUKU, HI 96731

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ADDITIONAL PROPERTIES POSSIBLY CONNECTED TO OWNER may have been located. The owner's mailing address is associated with other properties as indicated by tax assessor records. Additional charges may apply.
TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Tax Assessor Record

Source Information

Tax Roll Certification Date:	02/01/2023
Owner Information Current Through:	01/25/2024
County Last Updated:	02/13/2024
Current Date:	02/16/2024
Source:	TAX ASSESSOR

Owner Information

Owner(s):	PONTIN DUKE H & BRANDI A
Ownership Rights:	TENANTS BY ENTIRETY
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 39
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Zoning:	U/05/00
Lot Size:	36586
Lot Acreage:	0.8399
Subdivision:	MAP 22
Legal Description:	SELLER-NAGY RONALD S & BEVERLY C
Lot Number:	249

Tax Assessment Information

Tax Year:	2011
Valuation Method:	ASSESSED
Tax Amount:	$4,622.10

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Tax Code Area:	1

Building/Improvement Characteristics

Building Type:	RESIDENTIAL
Number of Buildings:	1
Year Built:	19560000
Total Area:	9000036586IMPROVED RESIDENTIAL
Living Square Feet:	1254
Total Number of Rooms:	3
Number of Bedrooms:	2
Number of Bathrooms:	2.00
Full Baths:	2
Garage Type:	WOOD FRAME GARAGE
Number of Stories:	1.00
Style/Shape:	CONTEMPORARY
Improvement Type:	SINGLE FAMILY
Exterior Wall Type:	MASONRY
Roof Type:	GABLE
Foundation Type:	CONCRETE
A/C Type:	NONE

Last Market Sale Information

Sale Date:	10/25/2000
Seller Name:	GRAY JAMES S
Sale Price:	$850,000.00
Deed Type:	GRANT DEED
Type of Sale:	RESALE
Mortgage Amount:	$600,000.00
Mortgage Loan Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	MORTGAGE DEED
Lender Name:	AMERICAN SVGS BK FSB
Recording Date:	10/30/2000
Document Number:	2660755
Title Company:	TITLE GUARANTY

Previous Transaction Information

Previous Document Number:	1303470
Sale Date:	06/05/1985

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Sale Price:	$300,000.00
Mortgage Amount:	$140,786.00
Recording Date:	06/1985

Historical Tax Assessor Information

Historical Tax Assessor Record: 1.	
Tax Year:	2011
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 2.	
Tax Year:	2010
Calculated Land Value:	$1,224,600.00
Calculated Improvement Value:	$96,000.00
Calculated Total Value:	$1,320,600.00
Assessed Total Value:	$1,320,600.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KUUKAMA ST KAILUA, HI 96734
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 3.	
Tax Year:	2009
Calculated Land Value:	$1,700,800.00
Calculated Improvement Value:	$128,400.00
Calculated Total Value:	$1,829,200.00
Assessed Total Value:	$1,829,200.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 KUUKAMA ST KAILUA, HI 96734
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 4.	
Tax Year:	2009

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Calculated Land Value:	$1,496,700.00
Calculated Improvement Value:	$153,700.00
Calculated Total Value:	$1,650,400.00
Assessed Total Value:	$1,650,400.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 KUUKAMA ST KAILUA, HI 96734
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 5.	
Tax Year:	2009
Calculated Land Value:	$1,700,800.00
Calculated Improvement Value:	$128,400.00
Calculated Total Value:	$1,829,200.00
Assessed Total Value:	$1,829,200.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 0000000211 KUUKAMA ST KAILUA, HI 96734
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 6.	
Tax Year:	2008
Calculated Land Value:	$1,700,800.00
Calculated Improvement Value:	$128,400.00
Calculated Total Value:	$1,829,200.00
Assessed Total Value:	$1,829,200.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 KUUKAMA ST KAILUA, HI 96734
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 7.	
Tax Year:	2007
Calculated Land Value:	$1,768,900.00
Calculated Improvement Value:	$111,000.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Calculated Total Value:	$1,879,900.00
Assessed Total Value:	$1,879,900.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 KUUKAMA ST KAILUA, HI 96734-2948
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 8.	
Tax Year:	2006
Calculated Land Value:	$2,645,700.00
Calculated Improvement Value:	$91,200.00
Calculated Total Value:	$2,736,900.00
Assessed Total Value:	$2,736,900.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 0000000211 KAM HWY HI
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 9.	
Tax Year:	2002
Calculated Land Value:	$680,400.00
Calculated Improvement Value:	$48,700.00
Calculated Total Value:	$729,100.00
Assessed Total Value:	$729,100.00
Assessor's Parcel Number:	1-5-6- 1- 39
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	211 KAM HWY
Mailing Address:	911 W INDIES DR RAMROD KEY, FL 33042-5455
Historical Tax Assessor Record: 10.	
Tax Year:	2001
Calculated Land Value:	$536,800.00
Calculated Improvement Value:	$50,800.00
Calculated Total Value:	$587,600.00
Assessed Total Value:	$587,600.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Assessor's Parcel Number:	1-5-6- 1- 39
Absentee Owner:	YES
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 211 KAM HWY HAUULA, HI 96717
Mailing Address:	911 W INDIES DR RAMROD KEY, FL 33042-5455
Historical Tax Assessor Record: 11.	
Tax Year:	2000
Calculated Land Value:	$529,200.00
Calculated Improvement Value:	$50,400.00
Calculated Total Value:	$579,600.00
Assessed Total Value:	$579,600.00
Assessor's Parcel Number:	1-5-6- 1- 39
Absentee Owner:	YES
Owner:	GRAY JAMES S
Property Address:	56 211 KAM HWY HAUULA, HI 96717
Mailing Address:	HONOLULU, HI 96815

ADDITIONAL PROPERTIES POSSIBLY CONNECTED TO OWNER may have been located. The owner's mailing address is associated with other properties as indicated by tax assessor records. Additional charges may apply.
TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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Real Property Transactions (23)

To Summary

Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	BUREAU OF CONVEYANCES

Transaction Information

Transaction Date:	08/25/2023
Seller Name:	PONTIN DUKE H & BRANDI A
Deed Type:	QUIT CLAIM DEED
Document Type:	QUIT CLAIM DEED
Type of Transaction:	NOMINAL
Recording Date:	09/01/2023

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Ownership Rights:	TENANTS IN COMMON
Property Address:	56-970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Document Number:	T12296141
	ATTORNEY ONLY
Construction Type:	SALE IS A RE-SALE
InterFamily Transaction:	RELEASE OF DEED OF TRUST/MTG

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 5- 5
Property Type:	WAREHOUSE
Land Use:	WAREHOUSE
Building Square Feet:	50750

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	BUREAU OF CONVEYANCES

Transaction Information

Transaction Date:	05/12/2021
Deed Type:	TRUST DEED/ MORTGAGE
Document Type:	MORTGAGE
Type of Transaction:	REFINANCE
Mortgage Amount:	$822,375.00
Mortgage Type:	CONVENTIONAL

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Ownership Rights:	TENANTS BY ENTIRITY
Absentee Owner:	SITUS FROM SALE (OCCUPIED)
Property Address:	56-211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	56-211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218

Mortgage Term:	15 YEARS
Mortgage Deed Type:	MORTGAGE DEED
Mortgage Date:	05/12/2021
Mortgage Due Date:	06/01/2036
Lender Name:	AMERISAVE MTG CORPAMERISAVE MTG CORP
Address:	ATLANTA, GA 30305
Recording Date:	03/16/2022
Document Number:	T11762374
	TITLE ORDER NBR ONLY
Refinance Loan:	LOAN TO VALUE IS MORE THAN 50%

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 81
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1254

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024

Transaction Information

Transaction Date:	07/02/2004

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	BUREAU OF CONVEYANCES

Deed Type:	DEED OF TRUST
Type of Transaction:	REFINANCE
Mortgage Amount:	$249,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Deed Type:	MORTGAGE DEED
Mortgage Date:	07/02/2004
Interest Rate:	ADJUSTABLE
Lender Name:	BANK OF HI
Address:	HONOLULU, HI 96803
Recording Date:	07/09/2004
Document Number:	3134032
Title Company:	TITLE GUARANTY
Equity Loan:	SECOND

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN DUKE H
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN BRANDI A
Property Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 39
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1254

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

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Real Property Transaction Record

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Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	PONTIN DUKE H & BRANDI A
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	TENANTS BY ENTIRETY
Additional Owner:	PONTIN DUKE H & BRANDI A
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	TENANTS BY ENTIRETY
Property Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731

Transaction Information

Transaction Date:	07/07/2003
Deed Type:	DEED OF TRUST
Type of Transaction:	REFINANCE
Mortgage Amount:	$200,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	MORTGAGE DEED
Mortgage Date:	07/07/2003
Mortgage Due Date:	07/01/2033
Interest Rate:	ADJUSTABLE
Lender Name:	HORIZON NAT'L BK
Address:	OVERLAND PARK, KS 66211
Recording Date:	07/11/2003
Document Number:	2955430
Title Company:	TITLE GUARANTY
Refinance Loan:	LOAN TO VALUE IS LESS THAN 50%

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 39
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1254

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	DUKE & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Ownership Rights:	TENANTS BY ENTIRITY
Property Address:	211 KAM HWY HI
Mailing Address:	56-211 KAM HWY KAHUKU, HI 96731

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 81
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1254

Transaction Information

Transaction Date:	02/06/2008
Deed Type:	TRUST DEED/ MORTGAGE
Document Type:	EQUITY OR CREDIT LINE
Type of Transaction:	REFINANCE
Mortgage Amount:	$500,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	EQUITY OR CREDIT LINE
Mortgage Date:	02/06/2008
Mortgage Due Date:	04/06/2038
Interest Rate:	ADJUSTABLE INT RATE LOAN
Lender Name:	CITIBANK NA
Address:	LAS VEGAS, NV 89109
Recording Date:	04/02/2008
Document Number:	3729370
	FIDELITY NATIONAL TITLE INSURA
Equity Loan:	SECOND

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Ownership Rights:	JOINT TENANTS
Property Address:	970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 5- 5
Property Type:	AGRICULTURAL
Land Use:	AGRICULTURAL (NEC)

Transaction Information

Transaction Date:	07/30/2009
Seller Name:	CONTINENTAL PACIFIC LLC
Sale Price:	$1,050,000.00
Deed Type:	GRANT DEED
Document Type:	LIMITED WARRANTY DEED
Type of Transaction:	RESALE
Mortgage Amount:	$750,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Deed Type:	MORTGAGE DEED
Mortgage Date:	08/06/2009
Lender Name:	CONTINENTAL PACIFIC LLC
Address:	SANTA ROSA BEACH, FL 32459
Recording Date:	08/06/2009
Document Number:	3886123
	TITLE GUARANTY & ESCROW SVCS
Seller Carryback:	YES
Construction Type:	SALE IS A RE-SALE
Purchase Payment:	MORTGAGE
Foreclosure Sale:	REO SALE - SALE FROM GOVERNMENT TO PRIVATE PARTY

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Ownership Rights:	TENANTS BY ENTIRITY
Additional Owner #1:	PONTIN DUKE H
Owner Relationship:	HUSBAND/WIFE
Owner Rights:	TENANTS BY ENTIRITY
Additional Owner #2:	PONTIN BRANDI A
Property Address:	211 KAM HWY HI
Mailing Address:	211 KAM HWY KAHUKU, HI 96731

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 39

Transaction Information

Transaction Date:	02/06/2008
Deed Type:	TRUST DEED/ MORTGAGE
Document Type:	EQUITY OR CREDIT LINE
Type of Transaction:	REFINANCE
Mortgage Amount:	$500,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	EQUITY OR CREDIT LINE
Mortgage Date:	02/06/2008
Mortgage Due Date:	04/06/2038
Interest Rate:	ADJUSTABLE INT RATE LOAN
Lender Name:	CITIBANK NA
Address:	LAS VEGAS, NV 89109
Recording Date:	04/02/2008
Document Number:	3729370
	FIDELITY NATIONAL TITLE INSURA
Equity Loan:	SECOND

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Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1254

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	BUREAU OF CONVEYANCES

Transaction Information

Transaction Date:	07/10/2003
Seller Name:	MURAKAMI LESLENE L
Sale Price:	$360,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	07/21/2003
Document Number:	148389
Title Company:	FHTC
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	PONTIN DUKE & BRANDI
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	TENANTS BY ENTIRETY
Additional Owner:	PONTIN DUKE & BRANDI
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	TENANTS BY ENTIRETY
Property Address:	HI
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Property Information

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County:	HONOLULU
Assessor's Parcel Number:	1-5-5- 2- 31
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	864

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	DUKE H PONTIN
Ownership Rights:	TENANTS BY ENTIRETY
Ownership Rights:	TENANTS BY ENTIRETY
Property Address:	KAHUKU, HI 96731
Mailing Address:	911 INDIES DR RAMROD KEY, FL 33042-5455

Property Information

Transaction Information

Transaction Date:	10/25/2000
Seller Name:	GRAY JAMES S
Sale Price:	$850,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Mortgage Amount:	$600,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	MORTGAGE DEED
Mortgage Date:	10/23/2000
Mortgage Due Date:	11/01/2030
Interest Rate:	ADJUSTABLE
Lender Name:	AMERICAN SVGS BK FSB
Address:	HONOLULU, HI 96804-2300
Recording Date:	10/30/2000
Document Number:	2660755
Title Company:	TITLE GUARANTY
Construction Type:	RESALE

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County:	HONOLULU	**Purchase Payment:**	MORTGAGE
Assessor's Parcel Number:	1-5-6- 1- 39		
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE		
Land Use:	SINGLE FAMILY RESIDENCE		
Building Square Feet:	1254		

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Owner Information

Owner(s):	WALTER FAMILY TRUST
Ownership Rights:	REVOCABLE TRUST
Corporate Owner:	CORPORATE OWNER
Absentee Owner:	SITUS FROM SALE (ABSENTEE)
Property Address:	971 INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	30 BAYVIEW BLVD

Transaction Information

Transaction Date:	12/29/2017
Seller Name:	PONTIN DUKE & BRANDI
Sale Price:	$1,200,000.00
Deed Type:	GRANT DEED
Document Type:	WARRANTY DEED
Type of Transaction:	RESALE
Recording Date:	12/29/2017
Document Number:	2149286
Recording Book/Page:	BOOK 2885, PAGE 766
	ATTORNEY ONLY
Construction Type:	SALE IS A RE-SALE
Purchase Payment:	CASH
Multiple Parcel Sale:	MULTIPLE PARCEL SALE

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	FORT MYERS BEACH, FL 33931-4506

Property Information

County:	MONROE
Assessor's Parcel Number:	1270008
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1920

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Transaction Date:	07/21/2004
Seller Name:	THOMPSON MICHAEL & GRACE E
Sale Price:	$250,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	08/03/2004
Document Number:	1461245
Recording Book/Page:	BOOK 2031, PAGE 1428
Title Company:	TRUETITLE AGENCY INC
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE H & BRANDY A PONTIN
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN DUKE H
Owner Relationship:	HUSBAND/WIFE

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Additional Owner:	PONTIN BRANDY A
Property Address:	FL
Mailing Address:	N/AVAIL BIG PINE KEY, FL 33043

Property Information

County:	MONROE
Assessor's Parcel Number:	1256421
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	MOBILE HOME PP
Building Square Feet:	564

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Transaction Date:	09/27/1999
Seller Name:	JACKSON MARK D & DARLENE
Sale Price:	$15,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	10/13/1999
Recording Book/Page:	BOOK 1600, PAGE 516
Title Company:	FIRST AMERICAN TITLE INSURANCE
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE H PONTIN
Property Address:	FL
Mailing Address:	SUMMERLAND KEY, FL 33042

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Property Information

County:	MONROE
Assessor's Parcel Number:	1380032
Property Type:	VACANT
Land Use:	RESIDENTIAL LOT

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Transaction Date:	08/17/1995
Seller Name:	PONTIN DUKE H
Sale Price:	$140,000.00
Consideration:	SALE PRICE (FULL)
Deed Type:	GRANT DEED
Type of Transaction:	SELLER CARRYBACK
Mortgage Amount:	$120,000.00
Mortgage Type:	PRIVATE PARTY LENDER
Lender Name:	PONTINDUKE H & BRANDI A
Address:	
Recording Date:	08/22/1995
Recording Book/Page:	BOOK 1366, PAGE 943
Seller Carryback:	YES
Private Party Lender:	YES
Construction Type:	RESALE
Purchase Payment:	MORTGAGE

Owner Information

Owner(s):	JIMMIE P LEGER
Owner Relationship:	HUSBAND/WIFE
Property Address:	FL 33040
Mailing Address:	KEY WEST, FL 33040-6115

Property Information

County:	MONROE
Assessor's Parcel Number:	00291790000000

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Real Property Transaction Record

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Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Seller Name:	FRANCHINA NICHOLAS
Sale Price:	$37,500.00
Consideration:	SALE PRICE (FULL)
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	11/03/1997
Recording Book/Page:	BOOK 1483, PAGE 33
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE H PONTIN
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	HUSBAND/WIFE
Property Address:	FL
Mailing Address:	911 INDIES DR RAMROD KEY, FL 33042-5455

Property Information

County:	MONROE
Assessor's Parcel Number:	00205310000000
Property Type:	MISCELLANEOUS

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Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Transaction Date:	02/24/2000
Seller Name:	MESSENGER JANET M
Sale Price:	$369,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	03/03/2000
Recording Book/Page:	BOOK 1620, PAGE 2034
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE & BRANDI PONTIN
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN DUKE
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN BRANDI
Property Address:	FL
Mailing Address:	911 INDIES DR RAMROD KEY, FL 33042-5455

Property Information

County:	MONROE
Assessor's Parcel Number:	00206670 326629
Property Type:	MISCELLANEOUS

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Transaction Date:	02/24/2000
Seller Name:	GALLINATTI JOHN B
Sale Price:	$31,100.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	03/03/2000
Recording Book/Page:	BOOK 1620, PAGE 2031
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE & BRANDI PONTIN
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN DUKE
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN BRANDI
Property Address:	FL
Mailing Address:	911 INDIES DR RAMROD KEY, FL 33042-5455

Property Information

County:	MONROE
Assessor's Parcel Number:	00206680 326629
Property Type:	MISCELLANEOUS

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Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Transaction Date:	02/24/2000
Seller Name:	GALLINATTI JOHN B
Sale Price:	$31,100.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	03/03/2000
Recording Book/Page:	BOOK 1620, PAGE 2031
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE PONTIN
Owner Relationship:	HUSBAND/WIFE
Property Address:	FL
Mailing Address:	911 INDIES DR RAMROD KEY, FL 33042-5455

Property Information

County:	MONROE
Property Type:	MISCELLANEOUS

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024

Transaction Information

Transaction Date:	02/24/2000
Seller Name:	MESSENGER JANET M
Sale Price:	$369,000.00
Deed Type:	GRANT DEED

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Source:	CLERK OF THE CIRCUIT CT

Type of Transaction:	RESALE
Recording Date:	03/03/2000
Recording Book/Page:	BOOK 1620, PAGE 2034
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE PONTIN
Owner Relationship:	HUSBAND/WIFE
Property Address:	FL
Mailing Address:	911 INDIES DR RAMROD KEY, FL 33042-5455

Property Information

County:	MONROE
Property Type:	MISCELLANEOUS

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

End of Document

To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Transaction Date:	03/1985
Seller Name:	AYVAZIAN PATRICE K
Sale Price:	$10,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Book/Page:	BOOK 938, PAGE 1657
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE H PONTIN
Mailing Address:	DIG PINE KEY FL

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Property Information

County:	MONROE
Assessor's Parcel Number:	00291790000000
Property Type:	MISCELLANEOUS

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Seller Name:	WILLIAMS GEORGE J
Sale Price:	$85,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	12/09/1992
Document Number:	762579
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE H PONTIN
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	HUSBAND/WIFE
Property Address:	FL 33043
Mailing Address:	BIG PINE KEY, FL 33043

Property Information

County:	MONROE
Property Type:	MISCELLANEOUS

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

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To Summary

Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Seller Name:	WILLIAMS GEORGE J
Sale Price:	$85,000.00
Deed Type:	DEED OF TRUST
Type of Transaction:	REFINANCE
Mortgage Amount:	$60,000.00
Mortgage Type:	PRIVATE PARTY LENDER
Lender Name:	WILLIAMSGEORGE J
Address:	WARREN, NJ 07059-5411
Recording Date:	12/09/1992
Document Number:	762580
Private Party Lender:	YES
Refinance Loan:	YES

Owner Information

Owner(s):	DUKE H PONTIN
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	HUSBAND/WIFE
Property Address:	FL 33043
Mailing Address:	BIG PINE KEY, FL 33043

Property Information

County:	MONROE

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.
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To Summary

Real Property Transaction Record

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Transaction Date:	12/04/1992
Seller Name:	WILLIAMS GEORGE J
Sale Price:	$85,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Mortgage Amount:	$60,000.00
Mortgage Type:	PRIVATE PARTY LENDER
Lender Name:	GEORGEJ WILLIAMS
Recording Date:	12/09/1992
Recording Book/Page:	BOOK 1236, PAGE 2075
Private Party Lender:	YES
Construction Type:	RESALE
Purchase Payment:	MORTGAGE

Owner Information

Owner(s):	DUKE H PONTIN
Mailing Address:	BIG PINE KEY FL, 33043

Property Information

County:	MONROE

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

End of Document

To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/16/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Seller Name:	CLERK CIRCUIT COURT
Sale Price:	$100.00
Consideration:	SALE PRICE (FULL)
Deed Type:	FORECLOSURE
Type of Transaction:	NOMINAL
Mortgage Amount:	$100.00
Mortgage Type:	CONVENTIONAL
Recording Date:	09/24/1997

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner Information

Owner(s):	DUKE PONTIN
Property Address:	FL

Recording Book/Page:	BOOK 1476, PAGE 2324
Construction Type:	RESALE
Purchase Payment:	MORTGAGE
Foreclosure Sale:	YES

Property Information

County:	MONROE

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

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Vehicle Registrations (1)

To Summary

Motor Vehicle Record

Source Information

Coverage Begin Date:	01/01/2001
Information Current Through:	02/06/2024
Database Last Updated:	02/10/2024
Update Frequency:	2X MONTHLY
Current Date:	02/16/2024
Source:	DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES

Vehicle Information

VIN:	1FDXK74P2NVA18675
Vehicle Type:	HEAVY TRUCK
Model Year:	1992
Make:	FORD
Body Style:	CONVENTI
Model/Series:	F700 F SERIES
Primary Color:	WHITE

Registration Information

License Plate Number:	P0431D

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Decal Number:	20634584
Issuing State:	FL
Plate Type:	COMMERCIAL
Previous Plate Number:	N3973Z
Previous Plate State:	FL
Registration Renewal Date:	10/30/2019
Expiration Date:	12/31/2019
Registrant(s) Since:	10/30/2019
Name:	DEMOLITION & REMOVAL SERVICES CORP.
Interest:	REGISTRANT
Mailing Address:	7262 NW 3RD ST MIAMI, FL 33126-4210
County:	MIAMI DADE
Registration Renewal Date:	10/30/2019
Expiration Date:	12/31/2019
Registrant(s) Since:	10/30/2019
Name:	ALEXEI CRUZ HERNANDEZ
Interest:	REGISTRANT
Mailing Address:	7262 NW 3RD ST MIAMI, FL 33126-4210
County:	MIAMI DADE
Registration Renewal Date:	10/30/2019
Expiration Date:	12/31/2019
Registrant(s) Since:	10/30/2019
Name:	ALEXEI CRUZ HERNANDEZ
Interest:	REGISTRANT
Mailing Address:	7262 NW 3RD ST MIAMI, FL 33126-4210
County:	MIAMI DADE

Title Information:

Original Title Date:	04/15/1992
Title Number:	0063192975
Name:	J & Y LANDSCAPING & LAW MAINTENANCE
Interest:	OWNER
Title Transaction Date:	04/12/2021
Mailing Address:	22015 SW 167TH AVE MIAMI, FL 33170-3805
County:	MIAMI DADE

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Name:	JOEL I. GRAMAJO PEREZ
Interest:	OWNER
Title Transaction Date:	04/12/2021
Mailing Address:	1281 NW 14TH ST HOMESTEAD, FL 33030-3970
County:	MIAMI DADE

Historical DMV Record 1

Title Transfer Date:	10/31/2019
Name:	DEMOLITION & REMOVAL SERVICES CORP.
Interest:	OWNER
Mailing Address:	7262 NW 3RD ST MIAMI, FL 33126-4210
County:	MIAMI DADE
Title Transfer Date:	10/31/2019
Name:	ALEXEI CRUZ HERNANDEZ
Interest:	OWNER
Mailing Address:	7262 NW 3RD ST MIAMI, FL 33126-4210
County:	MIAMI DADE

Historical DMV Record 2

Registration Renewal Date:	09/25/2017
Expiration Date:	12/31/2017
License Plate Number:	N3973Z
Issuing State:	FL
Plate Type:	COMMERCIAL
Previous Plate Number:	N6193Q
Previous Plate State:	FL
Name:	KEVIN HARVEY FREESTONE
Approximate Date of Birth:	03/XX/1966
Interest:	REGISTRANT
Mailing Address:	143 W CAHILL CT BIG PINE KEY, FL 33043-3302
County:	MONROE
Title Transfer Date:	09/25/2017
Name:	KEVIN HARVEY FREESTONE
Approximate Date of Birth:	03/XX/1966
Interest:	OWNER

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Mailing Address:	143 W CAHILL CT BIG PINE KEY, FL 33043-3302
County:	MONROE

Historical DMV Record 3

Registration Renewal Date:	12/29/2014
Expiration Date:	12/31/2015
License Plate Number:	N6193Q
Issuing State:	FL
Plate Type:	COMMERCIAL
Previous Plate Number:	N6193Q
Previous Plate State:	FL
Name:	HAVLICEK STUMP GRINDING INC.
Interest:	REGISTRANT
Mailing Address:	431 W INDIES DR SUMMERLAND KEY, FL 33042-5460
County:	MONROE
Registration Renewal Date:	12/29/2014
Expiration Date:	12/31/2015
Name:	RADIM HAVLICEK
Approximate Date of Birth:	08/XX/1962
Interest:	REGISTRANT
Mailing Address:	431 INDIES RD SUMMERLAND KEY, FL 33042-5403
County:	MONROE

Historical DMV Record 4

Registration Renewal Date:	12/04/2013
Expiration Date:	12/31/2014
License Plate Number:	N6193Q
Issuing State:	FL
Plate Type:	COMMERCIAL
Previous Plate Number:	N6193Q
Previous Plate State:	FL
Name:	HAVLICEK STUMP GRINDING INC.
Interest:	REGISTRANT
Mailing Address:	431 W INDIES DR SUMMERLAND KEY, FL 33042-5460
County:	MONROE

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Registration Renewal Date:	12/04/2013
Expiration Date:	12/31/2014
Name:	RADIM HAVLICEK
Approximate Date of Birth:	08/XX/1962
Interest:	REGISTRANT
Mailing Address:	431 INDIES RD SUMMERLAND KEY, FL 33042-5403
County:	MONROE

Historical DMV Record 5

Registration Renewal Date:	11/29/2012
Expiration Date:	12/31/2013
License Plate Number:	N6193Q
Issuing State:	FL
Plate Type:	COMMERCIAL
Previous Plate Number:	N6193Q
Previous Plate State:	FL
Name:	HAVLICEK STUMP GRINDING INC.
Interest:	REGISTRANT
Mailing Address:	431 W INDIES DR SUMMERLAND KEY, FL 33042-5460
County:	MONROE
Registration Renewal Date:	11/29/2012
Expiration Date:	12/31/2013
Name:	RADIM HAVLICEK
Approximate Date of Birth:	08/XX/1962
Interest:	REGISTRANT
Mailing Address:	431 INDIES RD SUMMERLAND KEY, FL 33042-5403
County:	MONROE

Historical DMV Record 6

Registration Renewal Date:	11/22/2011
Expiration Date:	12/31/2012
License Plate Number:	N6193Q
Issuing State:	FL
Plate Type:	COMMERCIAL
Previous Plate Number:	N6193Q
Previous Plate State:	FL

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Name:	HAVLICEK STUMP GRINDING INC.
Interest:	REGISTRANT
Mailing Address:	431 W INDIES DR SUMMERLAND KEY, FL 33042-5460
County:	MONROE
Registration Renewal Date:	11/22/2011
Expiration Date:	12/31/2012
Name:	RADIM HAVLICEK
Approximate Date of Birth:	08/XX/1962
Interest:	REGISTRANT
Mailing Address:	PO BOX 1163 1163 SUMMERLAND KEY, FL 33042
County:	MONROE

Historical DMV Record 7

Registration Renewal Date:	12/15/2010
Expiration Date:	12/31/2011
License Plate Number:	N6193Q
Issuing State:	FL
Plate Type:	COMMERCIAL
Previous Plate Number:	N6193Q
Previous Plate State:	FL
Name:	HAVLICEK STUMP GRINDING INC.
Interest:	REGISTRANT
Mailing Address:	431 W INDIES DR SUMMERLAND KEY, FL 33042-5460
County:	MONROE
Registration Renewal Date:	12/15/2010
Expiration Date:	12/31/2011
Name:	RADIM HAVLICEK
Approximate Date of Birth:	08/XX/1962
Interest:	REGISTRANT
Mailing Address:	PO BOX 1163 1163 SUMMERLAND KEY, FL 33042
County:	MONROE

Historical DMV Record 8

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Registration Renewal Date:	10/22/2009
Expiration Date:	12/31/2010
License Plate Number:	N6193Q
Issuing State:	FL
Plate Type:	COMMERCIAL
Previous Plate Number:	428NAV
Previous Plate State:	FL
Name:	HAVLICEK STUMP GRINDING INC.
Interest:	REGISTRANT
Mailing Address:	431 W INDIES DR SUMMERLAND KEY, FL 33042-5460
County:	MONROE
Registration Renewal Date:	09/21/2009
Expiration Date:	12/31/2010
License Plate Number:	428NAV
Issuing State:	FL
Plate Type:	PRIVATE
Previous Plate Number:	A679LG
Previous Plate State:	FL
Name:	HAVLICEK STUMP GRINDING INC.
Interest:	REGISTRANT
Mailing Address:	431 W INDIES DR SUMMERLAND KEY, FL 33042-5460
County:	MONROE
Registration Renewal Date:	09/21/2009
Expiration Date:	12/31/2010
Name:	RADIM HAVLICEK
Approximate Date of Birth:	08/XX/1962
Interest:	REGISTRANT
Mailing Address:	PO BOX 1163 1163 SUMMERLAND KEY, FL 33042
County:	MONROE
Title Transfer Date:	09/21/2009
Name:	RADIM HAVLICEK
Approximate Date of Birth:	08/XX/1962
Interest:	OWNER
Mailing Address:	PO BOX 1163

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	1163 SUMMERLAND KEY, FL 33042
County:	MONROE
Title Transfer Date:	09/21/2009
Name:	RADIM HAVLICEK
Approximate Date of Birth:	08/XX/1962
Interest:	OWNER
Mailing Address:	431 INDIES RD SUMMERLAND KEY, FL 33042-5403
County:	MONROE
Title Transfer Date:	09/21/2009
Name:	HAVLICEK STUMP GRINDING INC.
Interest:	OWNER
Mailing Address:	431 W INDIES DR SUMMERLAND KEY, FL 33042-5460
County:	MONROE

Historical DMV Record 9

Registration Renewal Date:	11/01/2006
Expiration Date:	12/31/2007
License Plate Number:	A679LG
Issuing State:	FL
Plate Type:	PRIVATE
Previous Plate Number:	A679LG
Previous Plate State:	FL
Name:	SPIRIT MARINE
Interest:	REGISTRANT
Mailing Address:	PO BOX 430244 430244 BIG PINE KEY, FL 33043-0244
County:	MONROE
Registration Renewal Date:	11/01/2006
Expiration Date:	12/31/2007
Name:	DALE HANCOCK PONTIN
Approximate Date of Birth:	08/XX/1953
Interest:	REGISTRANT
Mailing Address:	PO BOX 244 244 BIG PINE KEY, FL 33043

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County:	MONROE

Historical DMV Record 10

Registration Renewal Date:	11/17/2005
Expiration Date:	12/31/2006
License Plate Number:	A679LG
Issuing State:	FL
Name:	SPIRIT MARINE
Interest:	REGISTRANT
Mailing Address:	PO BOX 430244 430244 BIG PINE KEY, FL 33043-0244
County:	MONROE
Physical Address:	430244
Registration Renewal Date:	11/17/2005
Expiration Date:	12/31/2006
Name:	DALE HANCOCK PONTIN
Approximate Date of Birth:	08/XX/1953
Interest:	REGISTRANT
Mailing Address:	PO BOX 244 244 BIG PINE KEY, FL 33043
County:	MONROE
Physical Address:	244

Historical DMV Record 11

Title Transfer Date:	03/16/2004
Name:	SPIRIT MARINE
Interest:	OWNER
Mailing Address:	PO BOX 430244 430244 BIG PINE KEY, FL 33043-0244
County:	MONROE
Title Transfer Date:	03/16/2004
Name:	PONTIN DALE HANCOCK
Interest:	OWNER
Mailing Address:	PO BOX 244 244 BIG PINE KEY, FL 33043

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County:	MONROE

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Motor Vehicle Service & Warranty Records (1)

To Summary

Motor Vehicle Service & Warranty Record

Source Information

Database Last Updated:	02/12/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	MOTOR VEHICLE SERVICE & WARRANTY RECORDS

Vehicle Information

VIN:	2G4WS52J931175293
Model Year:	2003
Make:	BUICK
Body Style:	4DR SEDAN
Model/Series:	CENTURY BASE

Associated Person Information

Name:	DALE PONTIN
Address:	PO BOX 430244 BIG PINE KEY, FL 33043-0244
Address Type:	PO BOX RECORD
Deliverable Address:	Y
County:	MONROE

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Criminal & Infraction Records (1)

To Summary

Administrative Office of the Courts Record

Source Information

Coverage Begin Date:	01/01/1991

Offense 1

Offense Number:	1
Case Number:	MMP990030550A

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Information Current Through:	12/31/2023
Database Last Updated:	12/31/2023
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	FL MONROE CLERK OF COURTS

Defendant Information

Offender Name:	PONTIN, DALE HANCOCK
Date of Birth:	08/XX/1953

Charges Filed Date:	07/14/1999
Statute Violated:	322.54
Offense Charged:	NO PROPER CLASS LICENSE
Date of Offense:	06/15/1999
Case Type or Category:	DRIVER'S LICENSE OFFENSE
Disposition:	ADJ WITHHELD
Disposition Date:	07/14/1999
Court:	CIRCUIT
Jurisdiction County:	MONROE

Offense 2

Offense Number:	2
Case Number:	MMP9930550
Case Comment:	UNIFORM CASE NUMBER: 441999MM030550000APK
Charges Filed Date:	07/14/1999
Statute Violated:	322.54
Offense Charged:	NO PROPER CLASS LICENSE
Date of Offense:	06/15/1999
Case Type or Category:	DRIVER'S LICENSE OFFENSE
Disposition:	DEF SENT/GUILTY - NON JURY TRIAL/ADJ WH
Disposition Date:	07/14/1999
Court:	CIRCUIT
Jurisdiction County:	MONROE

Order Documents

Call Westlaw CourtExpress at 1-877-DOC-RETR (1-877-362-7387) for on-site manual retrieval of documents related to this or other matters. Additional charges apply.

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Corporate Records & Business Registrations (5)

To Summary

Corporate Records & Business Registrations

Source Information

Information Current Through:	01/12/2024
Database Last Updated:	02/06/2024
Update Frequency:	QUARTERLY
Current Date:	02/16/2024
Source:	AS REPORTED BY THE SECRETARY OF STATE OR OTHER OFFICIAL SOURCE

Company Information

Name:	SEA TOW SERVICES FL KEYS
Address:	PO BOX 244 BIG PINE KEY, FL 33043

Filing Information

Identification Number:	G06227900368
Filing Date:	08/15/2006
Expiration Date:	12/31/2011
Status:	ACTIVE
Business Type:	FICTITIOUS NAME
Address Type:	MAILING
Where Filed:	FICTITIOUS NAME DIVISION
	409 E GAINES ST TALLAHASSEE, FL 32301

Principal Information

Name:	DUKE PONTIN
Title:	FICTITIOUS NAME OWNER
Address:	PO BOX 244 BIG PINE KEY, FL 33043

Additional Detail Information

Additional Details:	COUNTY IN WHICH FILING RESIDES: MONROE

The preceding public record data is for information purposes only and is not the official record. Certified copies can only be obtained from the official source.

The public record items reported above may have been paid, terminated, vacated or released prior to today's date.

Order Documents

Call Westlaw CourtExpress at 1-877-DOC-RETR (1-877-362-7387) for on-site manual retrieval of documents related to this or other matters. Additional charges apply.

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To Summary

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Corporate Records & Business Registrations

Source Information

Information Current Through:	01/12/2024
Database Last Updated:	02/06/2024
Update Frequency:	QUARTERLY
Current Date:	02/16/2024
Source:	AS REPORTED BY THE SECRETARY OF STATE OR OTHER OFFICIAL SOURCE

Company Information

Name:	SPIRIT MARINE
Address:	PO BOX 244 BIG PINE KEY, FL 33043

Filing Information

Identification Number:	G06227900371
Filing Date:	08/15/2006
Expiration Date:	12/31/2011
Status:	ACTIVE
Business Type:	FICTITIOUS NAME
Address Type:	MAILING
Where Filed:	FICTITIOUS NAME DIVISION
	409 E GAINES ST TALLAHASSEE, FL 32301

Principal Information

Name:	DUKE PONTIN
Title:	FICTITIOUS NAME OWNER
Address:	PO BOX 244 BIG PINE KEY, FL 33043

Additional Detail Information

Additional Details:	COUNTY IN WHICH FILING RESIDES: MONROE

The preceding public record data is for information purposes only and is not the official record. Certified copies can only be obtained from the official source.

The public record items reported above may have been paid, terminated, vacated or released prior to today's date.

Order Documents

Call Westlaw CourtExpress at 1-877-DOC-RETR (1-877-362-7387) for on-site manual retrieval of documents related to this or other matters. Additional charges apply.

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Corporate Records & Business Registrations

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Source Information

Information Current Through:	01/12/2024
Database Last Updated:	02/06/2024
Update Frequency:	QUARTERLY
Current Date:	02/16/2024
Source:	AS REPORTED BY THE SECRETARY OF STATE OR OTHER OFFICIAL SOURCE

Principal Information

Name:	DUKE PONTIN
Title:	FICTITIOUS NAME OWNER
Address:	PO BOX 244 BIG PINE KEY, FL 33043

Company Information

Name:	SPIRIT TOWING
Address:	PO BOX 244 BIG PINE KEY, FL 33043

Additional Detail Information

Additional Details:	COUNTY IN WHICH FILING RESIDES: MONROE

The preceding public record data is for information purposes only and is not the official record. Certified copies can only be obtained from the official source.

The public record items reported above may have been paid, terminated, vacated or released prior to today's date.

Filing Information

Identification Number:	G06227900382
Filing Date:	08/15/2006
Expiration Date:	12/31/2011
Status:	ACTIVE
Business Type:	FICTITIOUS NAME
Address Type:	MAILING
Where Filed:	FICTITIOUS NAME DIVISION
	409 E GAINES ST TALLAHASSEE, FL 32301

Order Documents

Call Westlaw CourtExpress at 1-877-DOC-RETR (1-877-362-7387) for on-site manual retrieval of documents related to this or other matters. Additional charges apply.

End of Document

To Summary

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Corporate Records & Business Registrations

Source Information

Principal Information

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Information Current Through:	01/12/2024
Database Last Updated:	02/06/2024
Update Frequency:	QUARTERLY
Current Date:	02/16/2024
Source:	AS REPORTED BY THE SECRETARY OF STATE OR OTHER OFFICIAL SOURCE

Name:	PONTIN, DUKE
Title:	FICTITIOUS NAME OWNER
Address:	25 012 OVERSEAS HIGHWAY SUMMERLAND KEY, FL 33043

Company Information

Name:	SPIRIT MARINE
Address:	P.O. BOX 717 KAHUKU, HI 96731

Additional Detail Information

Additional Details:	COUNTY IN WHICH FILING RESIDES: MONROE

The preceding public record data is for information purposes only and is not the official record. Certified copies can only be obtained from the official source.

The public record items reported above may have been paid, terminated, vacated or released prior to today's date.

Filing Information

Identification Number:	G19000118498
Filing Date:	11/03/2019
Expiration Date:	12/31/2024
Status:	ACTIVE
Business Type:	FICTITIOUS NAME
Address Type:	MAILING
Where Filed:	FICTITIOUS NAME DIVISION
	409 E GAINES ST TALLAHASSEE, FL 32301

Order Documents

Call Westlaw CourtExpress at 1-877-DOC-RETR (1-877-362-7387) for on-site manual retrieval of documents related to this or other matters. Additional charges apply.

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Corporate Records & Business Registrations

Source Information

Information Current Through:	01/12/2024
Database Last Updated:	02/06/2024
Update Frequency:	QUARTERLY

Principal Information

Name:	BRANDY PONTIN
Title:	FICTITIOUS NAME OWNER
Address:	PO BOX 244

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Current Date:	02/16/2024
Source:	AS REPORTED BY THE SECRETARY OF STATE OR OTHER OFFICIAL SOURCE

	BIG PINE KEY, FL 33043
Name:	DUKE PONTIN
Title:	FICTITIOUS NAME OWNER
Address:	PO BOX 244 BIG PINE KEY, FL 33043

Company Information

Name:	SPIRIT MARINE TOWING & ASSISTANCE
Address:	PO BOX 244 BIG PINE KEY, FL 33043

Filing Information

Identification Number:	G96323000182
Filing Date:	11/18/1996
Expiration Date:	12/31/2011
Status:	ACTIVE
Business Type:	FICTITIOUS NAME
Address Type:	MAILING
Where Filed:	FICTITIOUS NAME DIVISION
	409 E GAINES ST TALLAHASSEE, FL 32301

Additional Detail Information

Additional Details:	COUNTY IN WHICH FILING RESIDES: MONROE

The preceding public record data is for information purposes only and is not the official record. Certified copies can only be obtained from the official source.

The public record items reported above may have been paid, terminated, vacated or released prior to today's date.

Order Documents

Call Westlaw CourtExpress at 1-877-DOC-RETR (1-877-362-7387) for on-site manual retrieval of documents related to this or other matters. Additional charges apply.

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DMI (2)

To Summary

Decide with Confidence

D&B Market Identifiers

Source Information

D&B Completed Analysis:	01/24/2024

Sales Information:

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Information Current Through:	01/24/2024	**Annual Sales Revision Date:**	06/03/2023
Database Last Updated:	01/24/2024	**Annual Sales (US):**	$140,000 -ESTIMATED
Update Frequency:	MONTHLY	**1-Yr-Ago:**	$ NOT AVAILABLE
Current Date:	02/16/2024	**3-Yr-Ago:**	$ NOT AVAILABLE
Source:	Copyright © 2024 by Dun & Bradstreet, Inc.	**Sales Territory:**	LOCAL

Company Information

DUNS:	61-274-4607
Name:	SPIRIT MARINE TOWING & ASSISTANCE
Address:	25123 OVERSEAS HWY SUMMERLAND KEY, FL 33042-4627
County:	MONROE
Telephone:	305-923-5458
Year Started:	1985

Executive(s) Information

1.	**Executive Name:**	BRANDY PONTIN
	Executive Title:	PARTNER
2.	**Executive Name:**	DUKE PONTIN
	Executive Title:	PARTNER

Business Description:

Line of Business:	TOWING/TUGBOAT SERVICES WATER TRANSPORT SERVICES
Industry Group:	TRANSPORATION, COMMUNICATION, ELECTRIC, GAS, AND SANITARY SERVICES

Employee Information

Employees Total:	3
1-Yr-Ago:	3
3-Yr-Ago:	3
Employees Here:	3 -ACTUAL

Company History/Operations/Relationships & Other Information

This Company's Specifics:	
DUNS:	61-274-4607
Business Is A:	SINGLE LOCATION SMALL BUSINESS PARTNERSHIP
Establishment Is:	US OWNED
Latest Update to Record:	12/17/2023
	

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Primary SIC:	4492 TOWING AND TUGBOAT SERVICE 4492 9902 MARINE TOWING SERVICES
Secondary SIC(s):	4499 WATER TRANSPORTATION SERVICES, NEC, NSK 4499 0101 MARINE SALVAGING

End of Document

To Summary

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Decide with Confidence

D&B Market Identifiers

Source Information

D&B Completed Analysis:	01/24/2024
Information Current Through:	01/24/2024
Database Last Updated:	01/24/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	Copyright © 2024 by Dun & Bradstreet, Inc.

Company Information

DUNS:	07-889-3137
Name:	DUKE PONTIN
Address:	56-970 KAM HWY KAHUKU, HI 96731
County:	HONOLULU
Telephone:	305-923-5458
Year Started:	2010

Sales Information:

Annual Sales Revision Date:	06/03/2023
Annual Sales (US):	$47,179 -ESTIMATED
1-Yr-Ago:	$ NOT AVAILABLE
3-Yr-Ago:	$ NOT AVAILABLE

Employee Information

Employees Total:	1
1-Yr-Ago:	1
3-Yr-Ago:	1
Employees Here:	1 -ACTUAL

Company History/Operations/Relationships & Other Information

This Company's Specifics:	
DUNS:	07-889-3137

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Executive(s) Information

1.	**Executive Name:**	DUKE PONTIN
	Executive Title:	OWNER

Business Description:

Line of Business:	COMBINATION UTILITIES
Industry Group:	TRANSPORATION, COMMUNICATION, ELECTRIC, GAS, AND SANITARY SERVICES
Primary SIC:	4939 COMBINATION UTILITIES, NEC 4939 0000 COMBINATION UTILITIES, NEC

MSA Code:	3320
MSA Name:	HONOLULU, HI
Business Is A:	SINGLE LOCATION SMALL BUSINESS PROPRIETORSHIP
Establishment Is:	US OWNED
Latest Update to Record:	11/04/2018

Decide with Confidence

End of Document

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FEIN (1)

To Summary

FEIN Record

Source Information

Database Last Updated:	01/27/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	Experian

Business Information

Company Name:	PONTIN DUKE
Address:	PO BOX 244 BIG PINE KEY, FL 33043
FEIN Number:	26-5065443

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Business Profile (2)

To Summary

Business Profile Record

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Source Information

Information Current Through:	02/13/2024
Database Last Updated:	02/13/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Business Information

Business Name:	SPIRIT MARINE
Legal Business Name:	SPIRIT MARINE TOWING & ASSISTANCE
Primary Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455
County:	MONROE
Country:	USA
Secondary Address:	PO BOX 430244 BIG PINE KEY, FL 33043-0244
Country:	USA
Business Phone:	305-872-2752
Business Fax:	305-872-2752
E-Mail:	dpontin@spiritgroupinc.com
Web Address:	spiritgroupinc.com
Year Established:	1994
Employees at Location (Year):	3
Sales from Location (Year):	$150,000 (2010)

Business Description:

Primary SIC Code:	8611 BUSINESS ASSOCIATIONS
Secondary SIC Code 1:	7549 AUTOMOTIVE SERVICES, NEC
Secondary SIC Code 2:	8999 SERVICES, NEC
Secondary SIC Code 3:	3432 PLUMBING FIXTURE FITTINGS AND TRIM
Primary NAICS Code:	332913 PLUMBING FIXTURE FITTING AND TRIM MANUFACTURING
Secondary NAICS Code 2:	562112 HAZARDOUS WASTE COLLECTION
Secondary NAICS Code 3:	237990 OTHER HEAVY AND CIVIL ENGINEERING CONSTRUCTION
Secondary NAICS Code 4:	813910 BUSINESS ASSOCIATIONS
Business Legal Status:	INDIVIDUAL/SOLE PROPRIETOR

Executive Information

Contact:	DUKE PONTIN
Contact's Title:	OWNER

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Business Profile Record

Source Information

Information Current Through:	02/13/2024
Database Last Updated:	02/13/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024

Business Description:

Primary SIC Code:	4492 TOWING AND TUGBOAT SERVICE
Secondary SIC Code 1:	8999 SERVICES, NEC
Primary NAICS Code:	562112 HAZARDOUS WASTE COLLECTION
Suspected to be Out of Business:	YES

Business Information

Business Name:	SEA TOW FLORIDA KEYS
Legal Business Name:	SPIRIT MARINE TOWING & ASSISTANCE
Primary Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455
County:	MONROE
Country:	USA
Secondary Address:	PO BOX 430244 BIG PINE KEY, FL 33043-0244
Country:	USA
Business Phone:	305-872-0904
Year Established:	1985
Sales from Location (Year):	$250,000 (2002)

Executive Information

Contact:	DUKE PONTIN

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Household Records (4)

To Summary

People Finder Household-Centric Record

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Source Information

Information Current Through:	12/21/2023
Database Last Updated:	02/10/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	Data by Data Axle, Copyright © 2024, All Rights Reserved.

Household Information:

Address:	911 W INDIES DR SUMMRLND KEY, FL 33042-5455
County:	MONROE
Latitude/Longitude:	24.650746/-81.403373
Residence Type:	SINGLE FAMILY DWELLING
Address First Reported:	2001

Head of Household Information

Head of Household:	MR DALE H PONTIN
Gender:	MALE
Date of Birth:	08/XX/1953
Name/Address Confirmed:	01/2011
Marital Status:	MARRIED

Additional Individuals In This Household

Name:	MS BRANDY A PONTIN (Spouse)
Gender:	FEMALE
Date of Birth:	01/XX/1956
Name/Address Confirmed:	03/2012
Marital Status:	MARRIED
Name:	MR KEAL T PONTIN
Gender:	MALE
Date of Birth:	07/XX/1990
Name/Address Confirmed:	02/2012
Name:	MR DUKE PONTIN
Gender:	MALE
Name/Address Confirmed:	08/2012

End of Document
To Summary
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People Finder Household-Centric Record

Source Information

Information Current Through:	12/21/2023
Database Last Updated:	02/10/2024
Update Frequency:	MONTHLY

Household Information:

Address:	29404 LOUISE ST BIG PINE KEY, FL 33043-6214
County:	MONROE

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Current Date:	02/16/2024	**Latitude/Longitude:**	-81.374131/24.71007
Source:	Data by Data Axle, Copyright © 2024, All Rights Reserved.	**Residence Type:**	SINGLE FAMILY DWELLING
		Address First Reported:	2017

Head of Household Information

Head of Household:	MR DUKE PONTIN
Gender:	MALE
Date of Birth:	08/XX/1987
Name/Address Confirmed:	05/2017
Marital Status:	SINGLE

End of Document

To Summary

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People Finder Household-Centric Record

Source Information

Information Current Through:	12/21/2023
Database Last Updated:	02/10/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	Data by Data Axle, Copyright © 2024, All Rights Reserved.

Household Information:

Address:	56-211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
County:	HONOLULU
Latitude/Longitude:	-157.935913/21.665009
Residence Type:	SINGLE FAMILY DWELLING
Address First Reported:	2017

Head of Household Information

Head of Household:	MR DUKE H PONTIN
Gender:	MALE
Date of Birth:	08/XX/1953
Name/Address Confirmed:	03/2022
Marital Status:	MARRIED

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To Summary

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People Finder Household-Centric Record

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Source Information

Information Current Through:	12/21/2023
Database Last Updated:	02/10/2024
Update Frequency:	MONTHLY
Current Date:	02/16/2024
Source:	Data by Data Axle, Copyright © 2024, All Rights Reserved.

Household Information:

Address:	PO BOX 717 KAHUKU, HI 96731-0717
County:	HONOLULU
Latitude/Longitude:	-157.949827/21.678227
Address First Reported:	2001

Head of Household Information

Head of Household:	MR DUKE H PONTIN
Gender:	MALE
Date of Birth:	08/XX/1953
Name/Address Confirmed:	03/2021
Marital Status:	SINGLE

Additional Individuals In This Household

Name:	KEAL PONTIN
Date of Birth:	07/XX/1990
Name/Address Confirmed:	05/2021

End of Document

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Associate Analytics

Associate Analytics Chart

Association	Possible OFAC?	Possible Global Sanctions?	Possible Arrest Records?	Possible Criminal Records?	Possible Bankruptcy?
Possible Relatives					
PONTIN, DALE H	No	No	No	No	No
PONTIN, KEAL	No	No	No	Yes	No
PONTIN, COVE K	No	No	No	Yes	No
PONTIN, BRANDI A	No	No	No	Yes	No
PONTIN, COVE K	No	No	No	No	No
PONTIN, DALE	No	No	No	No	No

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PONTIN, KEAL	No	No	No	No	No
PONTIN, BRANDI A	No	No	No	No	No
Possible Associates					
JACKSON, SUMIKO	No	No	No	No	No
SMITH, EVETTE M	No	No	No	No	No
SMITH, JOSHUA A	No	No	No	No	Yes
JACKSON, JUNEKO C	No	No	No	No	No

Possible Relatives & Household Members

Household Records

911 W INDIES DR SUMMRLND KEY, FL 33042-5455 | Full-Text

Address First Reported:	2001	**Confidence Score:**	97
Name	**Role**	**Date of Birth**	**Name/Address Confirmed:**
MR DALE H PONTIN	Head of Household	08/XX/1953	01/2011
MS BRANDY A PONTIN	Spouse	01/XX/1956	03/2012
MR KEAL T PONTIN	Other	07/XX/1990	02/2012
MR DUKE PONTIN	Other	N/A	08/2012

29404 LOUISE ST BIG PINE KEY, FL 33043-6214 | Full-Text

Address First Reported:	2017	**Confidence Score:**	65
Name	**Role**	**Date of Birth**	**Name/Address Confirmed:**
MR DUKE PONTIN	Head of Household	08/XX/1987	05/2017

56-211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218 | Full-Text

Address First Reported:	2017	**Confidence Score:**	99
Name	**Role**	**Date of Birth**	**Name/Address Confirmed:**
MR DUKE H PONTIN	Head of Household	08/XX/1953	03/2022

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

PO BOX 717 KAHUKU, HI 96731-0717 | Full-Text

Address First Reported:	2001	Confidence Score:	99
Name	**Role**	**Date of Birth**	**Name/Address Confirmed:**
MR DUKE H PONTIN	Head of Household	08/XX/1953	03/2021
KEAL PONTIN	Other	07/XX/1990	05/2021

Relatives Analysis

DUKE H PONTIN

Relative of:	DUKE H PONTIN	Degree of Separation:	1

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 01/20/2016 - 01/20/2016	56-277 HUEHU ST, KAHUKU, HI 96731-2002 | HONOLULU County	N/A

DUKE H PONTIN

Relative of:	DUKE H PONTIN	Degree of Separation:	1

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 01/01/2015 - 11/30/2015	56-277 HUEHU ST, KAHUKU, HI 96731-2002 | HONOLULU County	N/A

DALE H PONTIN

Relative of:	DUKE H PONTIN	Degree of Separation:	1
SSN:		DOB:	08/XX/1953 (Age: 70)

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported N/A	1501 W INDIES DR # 244, SUMMERLAND KEY, FL 33042 | MONROE County	N/A

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

KEAL PONTIN

Relative of:	DUKE H PONTIN	Degree of Separation:	1
SSN:	589-02-XXXX - issued in FL in 1990	DOB:	07/1990 (Age: 33)

Possible AKA	SSN	DOB
KEAL THOMAS PONTIN		07/XX/1990
KEAL T PONTIN	589-02-XXXX	07/XX/1990
MR KEAL T PONTIN		07/1990
PONTIN KEAL		

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 08/24/2019 - 08/19/2022	* 56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	808-375-8605
Reported 01/01/2001 - 05/31/2021	* PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	N/A
Reported 01/01/2005 - 10/31/2020	25081 OVERSEAS HWY, SUMMRLND KEY, FL 33042-4626 | MONROE County	N/A
Reported 01/01/2001 - 05/30/2014	* 911 W INDIES DR, RAMROD KEY, FL 33042-5455 | MONROE County	305-872-2752
Reported 12/01/2008 - 12/31/2008	* PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	N/A

COVE K PONTIN

Relative of:	DUKE H PONTIN	Degree of Separation:	1
SSN:	589-48-XXXX - issued in FL in 1987	DOB:	03/XX/1987 (Age: 36)

Possible AKA	SSN	DOB
COVE PONTIN		
K PON COVE		
K PONTIN COVE		

* Match with one of the subject's addresses

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Date Range	Address	Phone
Reported 09/21/2023 - 09/21/2023	2424 W CAITHNESS PL APT 425, DENVER, CO 80211-3783 | DENVER County	N/A
Reported 01/11/2023 - 03/31/2023	1919 MILE HIGH STADIUM CIR APT 425, DENVER, CO 80204-2759 | DENVER County	N/A
Reported 07/01/2021 - 02/06/2023	2424 W CAITHNESS PL APT 320, DENVER, CO 80211-3779 | DENVER County	N/A
Reported 07/01/2021 - 07/31/2021	2424 W CAITHNESS PL APT 107, DENVER, CO 80211-3775 | DENVER County	N/A
Reported 11/01/2009 - 01/16/2020	PO BOX 426, KAHUKU, HI 96731-0426 | HONOLULU County	N/A
Reported 11/30/2015 - 11/16/2019	* 56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	305-923-5458
Reported 10/24/2019 - 10/28/2019	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
Reported 05/20/2016 - 05/20/2016	* 56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	N/A
Reported 07/09/2009 - 12/22/2015	* PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	N/A
Reported 03/01/2011 - 03/31/2011	13109 LITTLE BLUFF DR, VANCLEAVE, MS 39565-6513 | JACKSON County	N/A
Reported 08/28/2010 - 09/30/2010	4200 AUDUBON WAY, MOSS POINT, MS 39563-2723 | JACKSON County	N/A
Reported 02/26/2010 - 03/31/2010	2049 CURLEW RD, PALM HARBOR, FL 34683-6820 | PINELLAS County	N/A
Reported 07/09/2009 - 11/03/2009	717, KAHUKU, HI 96731-0717 | HONOLULU County	N/A
Reported 07/20/2005 - 04/06/2007	* 911 W INDIES DR, RAMROD KEY, FL 33042-5455 | MONROE County	N/A

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Date Range	Address	Phone
Reported 06/02/2005 - 02/13/2007	951 W INDIES DR, SUMMERLAND KEY, FL 33042-5455 | MONROE County	N/A

BRANDI A PONTIN

Relative of:	DUKE H PONTIN	Degree of Separation:	1
SSN:	357-50-XXXX - issued in IL in 1970-1971	DOB:	01/XX/1956 (Age: 68)

Possible AKA	SSN	DOB
BRANDY K PONTIN	357-50-XXXX	01/XX/1956
MS BRANDY A PONTIN		01/1956
BRANDY ANNE PONTIN		01/XX/1956
BRANDI PONTIN	357-50-XXXX	01/XX/1956
BRANDY A PONTIN		01/XX/1956
PONTIN BRANDY		
BRANDI A PONTIN	357-50-XXXX	01/XX/1956
BRANDI ANN PONTIN		

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 03/03/2008 - 02/14/2023	* 56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	808-293-2458
Reported 01/01/2001 - 05/31/2015	* PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	305-872-2752
Reported 01/01/1995 - 06/10/2014	911 W INDIES DR, SUMMERLAND KEY, FL 33042-5455 | MONROE County	872-2752
Reported 08/01/2012 - 08/01/2012	* 56-211 KAMEMEHA HWY, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 04/23/2012 - 07/13/2012	* 56-211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 05/07/2009 - 05/07/2009	* 56211 KAM HIGH WAY, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 05/21/2003 - 04/06/2009	56211 KAM, KAHUKU, HI 96731 | HONOLULU County	N/A

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Date Range	Address	Phone
Reported 11/13/2000 - 01/08/2004	* PO BOX 244, SUMMERLAND KEY, FL 33042-0001 | MONROE County	872-2752
Reported 10/01/2001 - 10/31/2001	56 211KAM HY, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 10/22/2001 - 10/22/2001	* 56 211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 11/01/1988 - 09/11/2001	* PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County	N/A
Reported 11/01/1988 - 09/11/2001	244, BIG PINE KEY, FL 33043 | MONROE County	N/A
Reported 02/01/1996 - 11/30/1999	* PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	872-2752

COVE KIRKWOOD PONTIN

Relative of:	DUKE H PONTIN	Degree of Separation:	1
SSN:		DOB:	03/XX/1987 (Age: 36)

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 03/18/2010 - 10/21/2011	* PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	N/A

DALE PONTIN

Relative of:	DUKE H PONTIN	Degree of Separation:	1
SSN:		DOB:	08/1953 (Age: 70)

Possible AKA	SSN	DOB
MR DALE H PONTIN		08/1953

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 01/01/2001 - 05/30/2014	911 W INDIES DR, SUMMERLAND KEY, FL 33042-5455 | MONROE County	305-872-2752

KEAL PONTIN

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Relative of:	DUKE H PONTIN	**Degree of Separation:**	1
SSN:	589-02-XXXX - issued in FL in 1990	**DOB:**	07/XX/1990 (Age: 33)

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 10/08/2010 - 10/08/2010	* 56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	808-375-8605

BRANDI A PONTIN

Relative of:	DUKE H PONTIN	**Degree of Separation:**	1
SSN:	257-50-XXXX - issued in GA in 1934-1951	**DOB:**	01/XX/1956 (Age: 68)

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 01/01/1996 - 04/06/2001	* PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	N/A
Reported 01/01/1987 - 12/31/1987	* PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County	N/A
Reported 01/01/1987 - 12/31/1987	* PO BOX 244, SUMMERLAND KEY, FL 33042 | MONROE County	N/A

Other Address Associations

56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

JARED D WILCOX

SSN:	618-52-XXXX - issued in CA in 1992	**DOB:**	08/XX/1991 (Age: 32)

Date Range	Address	Phone
Reported 08/27/2022 - 05/17/2023	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	714-982-6222
Reported 08/13/2022 - 08/13/2022	54-025 HAUULA HOMESTEAD RD, HAUULA, HI 96717-9641 | HONOLULU County	N/A

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Date Range	Address	Phone
Reported 07/19/2022 - 07/19/2022	55 475 B PALEKANA ST, LAIE, HI 96762 | HONOLULU County	N/A
Reported 02/26/2018 - 07/19/2022	55-475 PALEKANA ST, LAIE, HI 96762-1146 | HONOLULU County	714-642-5248
Reported 04/12/2018 - 04/12/2018	14891 RIDGEVIEW CI, HUNTINGTON BEACH, CA 92647-2322 | ORANGE County	N/A
Reported 01/01/1992 - 10/02/2015	6131 CAMPHOR AVE, WESTMINSTER, CA 92683-3590 | ORANGE County	714-892-4596
Reported 01/14/2015 - 01/14/2015	14891 RIDGEVIEW CIR, HUNTINGTON BEACH, CA 92647-2322 | ORANGE County	714-982-6222

CHRISTOPHER S HUFFINE

SSN:	642-07-XXXX - issued in TX in 1989-1990	DOB:	10/XX/1988 (Age: 35)

Date Range	Address	Phone
Reported 06/29/2019 - 10/31/2019	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	808-782-4657
Reported 02/01/2014 - 01/31/2019	PO BOX 822, KAHUKU, HI 96731-0822 | HONOLULU County	N/A
Reported 06/28/2016 - 07/31/2018	520 NICHOLSON ST APT 1, JOLIET, IL 60435-6958 | WILL County	N/A
Reported 01/01/2007 - 04/30/2014	920 DOUBLE TROUBLE DR, MACKS CREEK, MO 65786-8188 | CAMDEN County	N/A
Reported 08/01/2012 - 07/06/2013	59-157 KE NUI RD APT A, HALEIWA, HI 96712-8758 | HONOLULU County	N/A
Reported 01/23/2009 - 07/31/2012	1200 BLUFF DR, OSAGE BEACH, MO 65065-2008 | CAMDEN County	573-363-9851
Reported 07/01/2011 - 09/30/2011	2767 ARIZONA RD, HONOLULU, HI 96818-6235 | HONOLULU County	N/A
Reported 07/01/2011 - 07/31/2011	2873 HAPUE LOOP APT A, AIEA, HI 96701-3609 | HONOLULU County	N/A

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Date Range	Address	Phone
Reported 10/01/2009 - 10/31/2009	1016 DOUBLE TROUBLE DR, MACKS CREEK, MO 65786-8189 | CAMDEN County	N/A
Reported 07/01/2009 - 07/01/2009	60 REDDINGTON CT, LAKE OZARK, MO 65049-5010 | CAMDEN County	N/A

KATHERINE NOLAN

SSN:	215-13-XXXX - issued in MD in 1987	DOB:	10/XX/1986 (Age: 37)

Date Range	Address	Phone
Reported 01/01/2023 - 11/02/2023	1919 MILE HIGH STADIUM CIR APT 425, DENVER, CO 80204-2759 | DENVER County	N/A
Reported 08/16/2023 - 08/16/2023	1919 MILE HIGH STADIUM WEST CIR, DENVER, CO 80204-2759 | DENVER County	301-362-1635
Reported 01/01/2023 - 01/31/2023	1919 MILE HIGH STADIUM CIR APT 4, DENVER, CO 80204-2757 | DENVER County	N/A
Reported 01/01/2023 - 01/31/2023	1919 MILE HIGH STADIUM CIR APT 1027, DENVER, CO 80204-2771 | DENVER County	N/A
Reported 01/01/2023 - 01/31/2023	1919 MILE HIGH STADIUM CIR APT 1, DENVER, CO 80204-2757 | DENVER County	N/A
Reported 07/01/2021 - 10/13/2022	2424 W CAITHNESS PL APT 320, DENVER, CO 80211-3779 | DENVER County	N/A
Reported 07/01/2005 - 10/18/2021	9551 HALLHURST RD, NOTTINGHAM, MD 21236-4820 | BALTIMORE County	410-256-4376
Reported 08/26/2021 - 08/26/2021	2424 W CAITHNESS PL APT 107, DENVER, CO 80211-3775 | DENVER County	N/A
Reported 06/26/2020 - 08/01/2020	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	N/A

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Date Range	Address	Phone
Reported 01/01/2018 - 09/26/2018	900 E FORT AVE APT 745, BALTIMORE, MD 21230-5509 | BALTIMORE CITY County	301-362-1635
Reported 01/01/2013 - 07/06/2018	4601 LINCOLN DR, HALETHORPE, MD 21227-4412 | BALTIMORE County	301-362-1635
Reported 01/01/2010 - 11/30/2012	9135 THAMESMEADE RD APT E, LAUREL, MD 20723-5815 | HOWARD County	301-362-1635
Reported 01/16/2011 - 01/16/2011	9135 THAMESMEADE RD APT B, LAUREL, MD 20723-5815 | HOWARD County	301-362-1635
Reported 01/01/1994 - 12/31/1994	4518 RIDGE RD, NOTTINGHAM, MD 21236-3829 | BALTIMORE County	N/A

ALENA M JOHNSON

SSN:	576-47-XXXX - issued in HI in 1989-1990	DOB:	08/XX/1989 (Age: 34)

Date Range	Address	Phone
Reported 01/01/2019 - 03/31/2022	PO BOX 822, KAHUKU, HI 96731-0822 | HONOLULU County	N/A
Reported 03/01/2022 - 03/31/2022	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	N/A
Reported 01/01/2016 - 02/16/2022	417 KEANIANI ST APT D, KAILUA, HI 96734-2497 | HONOLULU County	808-258-8030
Reported 02/05/2021 - 01/11/2022	# 56, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 01/01/2010 - 12/31/2018	1319 KERRVILLE DR, ALLEN, TX 75013-5350 | COLLIN County	N/A
Reported 08/22/2007 - 08/22/2016	203 KUUKAMA ST, KAILUA, HI 96734-2948 | HONOLULU County	808-262-8737
Reported 01/01/2016 - 07/13/2016	325 S JUPITER RD APT 836, ALLEN, TX 75002-3066 | COLLIN County	N/A
Reported 01/01/2014 - 07/31/2014	631 SPRING VALLEY RD, ALLEN, TX 75002-4794 | COLLIN County	N/A

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Date Range	Address	Phone
Reported 01/01/2012 - 07/12/2014	940 WALNUT ST APT 28, CHICO, CA 95928-6441 | BUTTE County	N/A
Reported 10/02/2008 - 03/30/2010	1001 W SACRAMENTO AVE APT 25, CHICO, CA 95926-4381 | BUTTE County	N/A

56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

EVETTE M SMITH

SSN:	576-82-XXXX - issued in HI in 1977-1979	DOB:	08/XX/1969 (Age: 54)

Date Range	Address	Phone
Reported 09/01/2011 - 04/15/2023	2148 AUMAKUA ST, PEARL CITY, HI 96782-1356 | HONOLULU County	N/A
Reported 12/18/2021 - 01/31/2022	91-1305 KEKAHILI ST, KAPOLEI, HI 96707-4130 | HONOLULU County	N/A
Reported 06/16/2015 - 05/24/2017	242 KAIULANI AVE APT 8, HONOLULU, HI 96815-3052 | HONOLULU County	N/A
Reported 01/29/2006 - 03/09/2017	61-104 IKUWAI PL, HALEIWA, HI 96712-1319 | HONOLULU County	N/A
Reported 04/01/2013 - 10/28/2013	1650 PIIKOI ST APT 602, HONOLULU, HI 96822-2714 | HONOLULU County	293-8160
Reported 03/21/2013 - 03/21/2013	51-006 LAU PL, KAAAWA, HI 96730-9817 | HONOLULU County	N/A
Reported 10/01/2012 - 03/04/2013	PO BOX 84, KAAAWA, HI 96730-0084 | HONOLULU County	293-8160
Reported 12/01/2007 - 11/02/2010	PO BOX 110, KAHUKU, HI 96731-0110 | HONOLULU County	N/A
Reported 09/03/2009 - 04/28/2010	56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	N/A
Reported 04/05/2006 - 09/20/2006	5710 BRENTWOOD MEADOWS CIR, BRENTWOOD, TN 37027-4416 | DAVIDSON County	N/A

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Date Range	Address	Phone
Reported 03/24/2006 - 06/10/2006	5710 BRENTWOOD TRCE, BRENTWOOD, TN 37027-4608 | DAVIDSON County	N/A
Reported 12/29/2005 - 12/29/2005	61 104 IKUWAI, ALEPPO IWA, HI 96712 | HONOLULU County	N/A
Reported 01/01/1996 - 01/30/2004	56-111 KEAWEMAUHILI PL, KAHUKU, HI 96731-2015 | HONOLULU County	293-8160
Reported 01/05/2004 - 01/05/2004	56 KEAWEMAUHILI PL 116, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 01/01/1996 - 01/23/2003	PO BOX 182, KAHUKU, HI 96731-0182 | HONOLULU County	293-8160
Reported 01/23/2003 - 01/23/2003	PO BOX 626, KAHUKU, HI 96731-0626 | HONOLULU County	293-8160
Reported 02/01/1999 - 02/01/1999	111, KAHUKU, HI 96731 | HONOLULU County	293-8160
Reported 01/01/1991 - 12/31/1991	27 LIN B DR, EGLIN AFB, FL 32542 | OKALOOSA County	N/A
Reported N/A	220 REYNOLDS AVE, NICEVILLE, FL 32578-2582 | OKALOOSA County	N/A
Reported N/A	20 WRIGHT, EGLIN, FL 32542 | OKALOOSA County	N/A

JOSHUA A SMITH

SSN:	576-33-XXXX - issued in HI in 1986-1987	DOB:	04/XX/1986 (Age: 37)

Date Range	Address	Phone
Reported 05/08/2023 - 07/13/2023	1311 ALA KAPUNA ST APT 106, HONOLULU, HI 96819-1307 | HONOLULU County	808-780-6532
Reported 03/21/2021 - 02/26/2022	3161 ALA ILIMA ST APT 1616, HONOLULU, HI 96818-3014 | HONOLULU County	N/A
Reported 12/04/2018 - 12/04/2018	95 KAHELA ST, MILILANI, HI 96789 | HONOLULU County	N/A
Reported 01/01/2018 - 11/30/2018	95-158 KAHELA ST, MILILANI, HI 96789-1012 | HONOLULU County	N/A

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Date Range	Address	Phone
Reported 01/01/2016 - 07/15/2017	1321 LOKO DR APT B, WAHIAWA, HI 96786-2379 | HONOLULU County	808-780-6532
Reported 01/01/2006 - 10/31/2015	PO BOX 493, KAHUKU, HI 96731-0493 | HONOLULU County	N/A
Reported 10/24/2012 - 08/31/2015	56-149 KAHANA ST, KAHUKU, HI 96731-2014 | HONOLULU County	808-780-6532
Reported 08/06/2010 - 08/06/2010	56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	N/A
Reported 09/11/2007 - 01/19/2009	493, KAHUKU, HI 96731-0493 | HONOLULU County	N/A
Reported 02/01/2008 - 02/29/2008	1112 STREAMDALE PT E, ANTIOCH, TN 37013-4265 | DAVIDSON County	N/A
Reported 03/10/2007 - 10/31/2007	53-356 KAMEHAMEHA HWY APT G, HAUULA, HI 96717-8704 | HONOLULU County	N/A
Reported 05/06/2005 - 02/11/2007	608 SEASCAPE AVE, ORLANDO, FL 32828-8458 | ORANGE County	N/A
Reported 12/12/2006 - 12/12/2006	4763 N GOLDENROD RD APT 4 APT 4, WINTER PARK, FL 32792-9096 | ORANGE County	N/A
Reported 05/17/2006 - 11/02/2006	231 LEWFIELD CIR, WINTER PARK, FL 32792-1148 | SEMINOLE County	N/A
Reported 06/01/2005 - 05/10/2006	4763 N GOLDENROD RD APT H, WINTER PARK, FL 32792-9096 | ORANGE County	N/A
Reported 04/29/2005 - 05/06/2005	1 WESTGRILL PL, PALM COAST, FL 32164-7764 | FLAGLER County	N/A
Reported 10/01/2004 - 02/21/2005	56-111 KEAWEMAUHILI PL, KAHUKU, HI 96731-2015 | HONOLULU County	N/A

Possible Neighbors

Neighbors of Current & Previous Addresses

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56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

Name	Address	Phone
MAILEFIHI NIUTUPUIVAHA JR	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2307 | HONOLULU County	N/A
HENRY K FONG	56-1079 KAMEHAMEHA HWY # H, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
JAYDEN B TUTTLE	56-1080 KAMEHAMEHA HWY UNIT 3, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
MS CATHERINE BRUNS	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
MR ADNEY HARRIS	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
RAHUL PRAKASH	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
CASSIDY A YAKE	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
RAHUL P HEFFERNAN	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
NATE AGUINALDO APANA	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	808-259-3485
ROMULO F AGUINALDO	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	808-293-5448
THERESA AGUINALDO	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	808-232-2202
JOSEPH APANA	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	808-484-9319

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Name	Address	Phone
KAYLENE K AGUINALDO	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	808-232-2202
NONA M MANECLANG	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
RUSTY ARNESON	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
NADINE M MANECLANG	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
JC CALULOT	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
MR JOSEPH APANA	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
MS ULUAMU K NIUTUPUIVAHA	56-1080 KAMEHAMEHA HWY # D, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
MAILEFIHI NIUTUPUIVAHA JR	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
RYAN T JAUSSI	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
REBECCA A JAUSSI	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
MS ULUAMU K NIUTUPUIVAHA	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
DEL I BARNES	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
TALALUPELELE POLLARD	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Name	Address	Phone
LISITA L NIUTUPUIVAHA	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
JAYDEN B TUTTLE	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
SETH THOMAS BIRCHALL	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
LAUREN L TUTTLE	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
LINDA M SCORESBY	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
BRADEN CAMPBELL	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
MARIA CAMPBELL	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
TANGITEINA A NIUTUPUIVAHA	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	808-293-0055
ULUAMU NIUTUPUIVAHA	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
NOAH JAUSSI	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
PRISCILLA MAILE VI	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
MAILEFIHI NIUTUPUIVAHA	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
TAIMANI NIUTUPUIVAHA	56-1080 KAMEHAMEHA HWY, KAHUKU, HI 96731-2306 | HONOLULU County	N/A

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Name	Address	Phone
RYAN T JAUSSI	56-1080 KAMEHAMEHA HWY UNIT 3, KAHUKU, HI 96731-2307 | HONOLULU County	N/A
MR WAYNE C CHUN	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
DIANE U HUDDY	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
HENRY K FONG	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
GEMMA V PASION	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
NOEL GARVIDA	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
CHINA K FONG	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
KAWEHIOKAHILI M PASCUAL	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
MR KUULEIALOHA JENKS	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
JULIE I KELIIHOOMALU	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
IRENE L PRIMACIO	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
RYAN T JAUSSI	56-1080 KAMEHAMEHA HWY APT 3, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
MAILEFIHI NIUTUPUIVAHA JR	56-1080 KAMEHAMEHA HWY # 4, KAHUKU, HI 96731-2306 | HONOLULU County	N/A

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Name	Address	Phone
TUIHALAFATAI NIUTUPUIVAHA	56-1080 KAMEHAMEHA HWY # 4, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
RYAN T JAUSSI	56-1080 KAMEHAMEHA HWY # 3, KAHUKU, HI 96731-2306 | HONOLULU County	N/A
PAUL A WROBLEWSKI	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
SAU L CHAN	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	808-691-9244
BOB M TAHAURI	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
SITANILEI TONE	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
SAU L CHAN	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	808-691-9244
TALALUPELELE POLLARD	56-1080 KAMEHAMEHA HWY UNIT 4, KAHUKU, HI 96731-2307 | HONOLULU County	N/A
DEBORAH L LUM	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
KYLIE T MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
MELVIN K MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	808-638-7522
CAROLINE L MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
JUDAH LUM	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A

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Name	Address	Phone
BAILEY JADA HIILANI LUM	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
DEBORAH LUM	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
KEVIN COYLE	56-1207 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
AMANDA MOODY	56-1207 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
THOMAS L NAYLOR	56-1207 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A

56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

Name	Address	Phone
FUATINO S KOAHOU	56-350 KAMEHAMEHA HWY, KAHUKU, HI 96731-2213 | HONOLULU County	N/A
DONG MIN LI	56-350 KAMEHAMEHA HWY, KAHUKU, HI 96731-2213 | HONOLULU County	N/A
ANASTACIO R POSTRANO	56-350 KAMEHAMEHA HWY, KAHUKU, HI 96731-2213 | HONOLULU County	808-293-5026
ALBERTA N AU	56-350 KAMEHAMEHA HWY, KAHUKU, HI 96731-2213 | HONOLULU County	N/A
WYATT CHING	56-666 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
PATRICIA Y BRUBAKER	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A

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Name	Address	Phone
CHARLOTTE R LEITUPO	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
SARAH L ARNOLD	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	808-293-7555
HEPERONA MATATUMUA	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
AARON M SCHWEITZER	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	808-293-7196
SIERRA SANTIAGO	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
MR KEVIN W YUNG	56-460 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
CONCHITA S WATERS	56-460 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
HASSAN F JUBRAN	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
SAU L CHAN	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
ROSEMARY TONE	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
JOSEPH LEAL	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
SITANILEI TONE	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
DIANE U HUDDY	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A

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Name	Address	Phone
RUTH N PATOC	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
SAMUEL A KELIIHOOMALU	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
HENRY K FONG	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
GEMMA V PASION	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
HANA LOPES	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
TRENT KELIIHOOMALU	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
NOEL GARVIDA	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
CHINA K FONG	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
KAWEHIO M PASCUAL	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
KUULEIALOHA JENKS	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
CHANTAL KELIIHOOMALU	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
JULIE I KELIIHOOMALU	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
KATHY L SMITH	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A

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Name	Address	Phone
NOENOE KEKAUOKALANI	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
ROWENA P REID	56-485 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
JEROME B TABELISMA JR	56-485 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
AIRDEE SYBOUNMY	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
CINDY STINE	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
CHOMPHANH HONGPHAO	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
MICHAEL L STINE	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
MACNOY SYBOUNMY	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
TOUY SYBOUNMY	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	808-293-9446
NORA N SISOUNTHONE	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
CAROLYN PIASOURAPANYA	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
PHONEXAY OULAYRACK	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
SOMSAK KHAEPHUTCHA	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A

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Name	Address	Phone
PHEN KHAEPHUTCHA	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
MR DONALD PIASOURAPANYA	56-665 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County	N/A
SURIWONG CHAIYACHET	56-665 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County	N/A
TANIELA MAPU	56-565 KAMEHAMEHA HWY APT A1, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
ELAINE VINCENT	56-669 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County	N/A
MR ANTONIO ESQUIVIA	56-565 KAMEHAMEHA HWY UNIT 167, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
GREGORY S LOPEZ	56-470 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
CHANNING P HAWKINS	56-470 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
NATE AGUINALDO APANA	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
ROMULO F AGUINALDO	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
THERESA L AGUINALDO	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
HELSHAM DESIREA AGUINALDO	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
JOSEPH APANA	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A

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Name	Address	Phone
KAYLENE AGUINALDO ARNESON	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
GIOVANI D MANECLANG	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
PETER PAUL HELSHAM	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
VALENTINO M VASQUEZ	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
JC CALULOT	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
MR JOSEPH APANA	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
MR JUDAH LUM	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
KYLIE T MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
MELVIN K MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
TORIE MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
CAROLINE L MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
JUDAH LUM	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
MS KALYN MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A

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Name	Address	Phone
SALETILI PONGI	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
SIAOSI VAIFOOU	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
FRANCIS A MAEDONOCHI	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
KALINA PONGI	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
TEVITA POUTELE VAIFOOU	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
SIMIONE MAPU	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
SAMIUELA HAEANE	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
DAVID MAEDONOCHI	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
VILIAMI S VAIFOOU	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
CHARLOTTE R LEITUPO	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
ELEANOR L LAMADORA	56-576 KAMEHAMEHA HWY, KAHUKU, HI 96731-2211 | HONOLULU County	N/A
MS LEONE SAAGA	56-449 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
ARONA T TUFAGA	56-335 KAMEHAMEHA HWY, KAHUKU, HI 96731-2212 | HONOLULU County	N/A

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Name	Address	Phone
EURICA CALIFORRNIAA	56-335 KAMEHAMEHA HWY, KAHUKU, HI 96731-2212 | HONOLULU County	N/A
EURICA CALIFORRNIAA	56-335 KAMEHAMEHA HWY, KAHUKU, HI 96731-2212 | HONOLULU County	N/A
LONNIE SANDERS	56-1207 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
NORA N SISOUNTHONE	56-664 KAMEHAMEHA HWY # A, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
HELSHAM DESIREA AGUINALDO	56781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
COVE PONTIN	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	N/A
KATHERINE NEVILLE	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	N/A
ETUINI AKINA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
RON DARLINGTON	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
LEILA A EVANGELISTA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
AARON B CAMPBELL	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
SARIAH HOWARD	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
JOSHUA T SCHATZ	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A

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Name	Address	Phone
MICHAEL VILLANUEVA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
MANUEL ANDRICKSON BORDONADA II	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
AUSTIN HITE	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
JUDAH KEKUA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
ELIAS GARRIGAN	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
TAYLOR VOLLRATH	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
KEUMA JAMESON FAFARD	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
KEANU IKAIKA KEALOHA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
CHLOE GOUVEIA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
LINDY BEE SOUKHASEUM	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
KEVIN HO XU	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
RICHARDI RAMSEYER	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
JESSE B MAIAVA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A

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Name	Address	Phone
LARRY J AU	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
KEES J ANDERSON	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
AARON T WATENE	56-505 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
JAMES P HIX	56-505 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
BOUATHONG KHEMMANIVONG	56-505 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
CHRIS D MOODY	56-1211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
RUSSEL L JENKS	56-1211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
JAMIE L MOODY	56-1211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
BEAU MOODY	56-1211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
TIA HAWORTH	56-1211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
ANA L TUPOU	56-565 KAMEHAMEHA HWY APT C, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
MS LEONE SAAGA	56-449B KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
ALFRED S LOSBANOS JR	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	808-293-9885

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Name	Address	Phone
NITIN SINGH	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
KALINE TAUFA	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
MICHAEL D VINCENT	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
SHUUJIN VANCHIG	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
ANA L TUPOU	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
OLA M FALE	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
VALERIE D BARLEY	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
SIPUELI FALE	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
RANDY L BOTT	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
JASON B BENNETT	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
RENE TAKEMOTO	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
JAMES T TAKEMOTO SR	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
NOELANI P TAIPIN	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A

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Name	Address	Phone
JAMES A BARLEY	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
MARIAM MAPU	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
TANIELA MAPU	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
ERICMASA TACHIBANA	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
SARA K NAKAYAMA	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
HELLEN K FALE	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
VAOKAKALA FALE	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
KALOLAINE P TUPOU	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A

56-211 KAMEHAMEHA, KAHUKU, HI 96731

Name	Address	Phone
MARILYN RADZAT	57-435 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	293-5859
GARY RADZAT	57-435 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-5859
HUGH B SHOWE	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A

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Name	Address	Phone
STEVEN G DUFFY	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
JOSEPH P SULLIVAN	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
BRYNN THURSTON	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	626-1551
ROBERT W THURSTON	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
MS SUSAN I WHALEN	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	637-0534
JAMES M MCDERMOTT	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
RUSSELL H WHALEN	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
JOSEPH P SULLIVAN	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
WYATT THURSTON	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
CHRIS GODWIN	57-451 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-9087
DEBRA R GODWIN	57-451 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-9087
LANCE M BLAISDELL	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
ROCHELLE HAGEDORN	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A

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Name	Address	Phone
MARY E WILLIAMS	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
MIRIAM SCHAEFER	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
GARY L PINKSTON	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
LOUIS D LEBEAU	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
LISA M LEBEAU	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
JANICE C PINKSTON	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
SEAN T MAKRA	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
CINDY L CASTRO	57-360 PAHIPAHIALUA ST, KAHUKU, HI 96731-2112 | HONOLULU County	293-5947
SCOTT BLUM	57-445 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
MARILYN RADZAT	57-435 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-5859
GARY L PINKSTON	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
JANAY WYSS	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
GARY L. PINKSTON	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A

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Name	Address	Phone
SEAN T MAKRA	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
RICHARD JESS SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-293-4255
OLGA GILLILAND	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
MARK K GILLILAND	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
MS ANNIE SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
ILIKEA SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-293-4255
MR RYDER SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
JENNIFER M ANTONY	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
LINDA SWISHER	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	949-388-3831
ASHLEY TRISLER	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
GARY RADZAT	57-435 HONOKAWELA DR APT 435, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
RICHARD D HESS	57-431 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	530-629-2862
DARREN L WESEMANN	57-431 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-312-1000

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Name	Address	Phone
GARY RADZAT	57-435 HONOKAWELA DR APT 435, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
MARILYN RADZAT	57-435 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	293-5859
SISSI SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-293-4255
RICHARD JESS SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-293-4255
ELIZABETH M SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-293-4255
SHONA P COMPOC	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
MICHAEL DOLPH	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
MR SIONA E TEJADA	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
DAVID DEXTER	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
ROLAND LORENZO LUCERO	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
CHRISTIAN DANIEL LOEZA	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
PENISIMANI H PASI	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
RICHARD SPENCER	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
WENDY L HALL	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
SCOTT J DADY	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
CHRIS GHOSH	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A

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Name	Address	Phone
CHRISTOPHER GHOSH	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
MS TANYA BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
SEAN T MAKRA	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
MEGAN SHOJI	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
ANJULI S SANCHEZ	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
CHARLES J BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
ROBERT S BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
MAUREEN M BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
MEADE C BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
CONSTANCE ANN BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
FRANKLIN TOKIOKA	57-421 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
RICHARD D HESS	57-431 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-9017
CHRIS GODWIN	57-451 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	734-8856

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Name	Address	Phone
JANAY WYSS	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
MERVIN GILLILAND	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
MS MIRANDA HINNANT	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
MERVIN F GILLILAND	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
MERVIN F GILLILAND	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-262-7388
JOHN A LIBBY	57-441 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
CHRIS GODWIN	57-451 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-9087
JUDY PAVEY	57-421 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-1354
LANCE M BLAISDELL	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	487-1476
KENT D SWISHER	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
CURIELLE BRYANT DUFFY	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	970-921-7467
MR FRANKLIN TOKIOKA	57-421 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
JUDY PAVEY	57-421 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A

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Name	Address	Phone
FRANKLIN TOKIOKA	57-421 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-1354

Possible Named Parties

People Associations

BARBARA J MIGEDT	CHRISTINE W PONTIN
GERT WALTER	JOEL ISAAC GRAMAJO PEREZ
COVE K PONTIN	DALE PONTIN
KEAL PONTIN	JIMMIE P LEGER
RADIM HAVLICEK	LINDA R PARACHINI
RITA RAMONA MENENDEZ	KEVIN H FREESTONE
BRANDI A PONTIN	ALEXEI HERNANDEZ
PATRICK SIMONDS	DONNAJEAN ZAMBORY

Business Associations

SEA TOW	SPIRIT MARINE TOWING AND ASSISTANCE
AMERICAN PET ASSOCIATION	SPIRIT MARINE TOWING AND SALVAGE
SPIRIT MARINE TOWING AND ASSISTANCE	

No Documents Found

No Documents Were Found In These Sources

Aircraft Records	Arrest Records
Bankruptcy Records	BusFindCanada
BusFindUS	Business Contact Records
Conceal & Carry Weapons Permits	D&B Worldbase
Death Records	Divorce Records
Dockets	Executive Affiliations
Executive Bios	FBN/DBA
Global Sanctions	Healthcare Licenses
Healthcare Sanctions	Hunting & Fishing Licenses
International Business Profile	Lawsuit Records
Liens & Judgments	Marijuana Related Businesses
National Provider Identifier	New Movers Records
OFAC	People Canada Records
Political Donors	Professional Licenses

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Real Property Pre-Foreclosure Records	Real-Time Motor Vehicles
Stock	UCC Records
Unclaimed Assets	Voter Registrations
Watercraft Records	Work Affiliations

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Business Overview (1)
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Corporate Filings Summary (1)
Full-Text Documents
Corporate Filings (1)
Miscellaneous
Report Section(s) with no Matches (104)

Business Overview (1 Section)



Address:	P.O. BOX 717 KAHUKU, HI 96731
Additional Entity Source(s):	Corporate Filings - Secretary of State
Active Ticker Symbols:	
Inactive Ticker Symbols:	
Filing Date:	11/03/2019
Filing Number:	G19000118498
Officers/Directors/Contacts:	DUKE PONTIN, FICTITIOUS NAME OWNER

Corporate Filings Summary (1 Record)

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	Business Name	Business Type	Status	Filing State	View Full-Text
1.	SPIRIT MARINE	FICTITIOUS NAME	ACTIVE	FL	Full-Text

Quick Analysis Flags (1 Chart)

List of Possible Quick Analysis Flags

OFAC listing:	No
Global Sanctions:	No
Business Address Used as Residential Address:	YES
P.O. Box listed as Address:	YES
Bankruptcy Debtor or Creditor:	No
Other Listings Linked to Business Phone Number:	No
Other Businesses Linked to the Business Address:	YES
Other Businesses Linked to Same FEIN:	No
Key Nature of Suit:	No
Party to a Class Action last 12 months:	No
Going Concern:	No
MSB listing:	No
Healthcare Sanction:	No

Associate Analytics Chart (1 Chart)

Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
SPIRIT MARINE	PO BOX 717 KAHUKU, HI 96731	Post Office Box	Shared Business Name	No	No
DUKE PONTIN	56-970 KAMEHAMEHA HWY KAHUKU, HI 96731	Street	Shared Person Contact	No	No
SPIRIT MARINE TOWING & ASSISTANCE	911 W INDIES DR SUMMERLAND KEY, FL 33042	Street	Shared Person Contact	No	No
SPIRIT MARINE TOWING & SALVAGE	PO BOX 244 BIG PINE KEY, FL 33043	Post Office Box	Shared Person Contact	No	No
SEA TOW SERVICES FL KEYS	PO BOX 244 BIG PINE KEY, FL 33043		Shared Person Contact	No	No
SLENDER QUEST OF BIG PINE KEY, INC.	1501 W INDIES DR;P.O. BOX 244 BIG PINE KEY RAMROD KEY, FL 33043		Shared Person Contact	No	No
SPIRIT MARINE TOWING &	25123 OVERSEAS HWY SUMMERLAND		Shared Person Contact	No	No

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Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
ASSISTANCE	KEY, FL 33042				
PONTIN, DUKE	56211 KAM HIGH WAY KAHUKU, HI 96731	Street	Possible Relationship	No	No
NSHE HI NARCISSUS, LLC	PO BOX 717 KAHUKU, HI 96731	Post Office Box	Shared Named Executive	No	No
PONTIN DUKE	PO BOX 244 BIG PINE KEY, FL 33043		Shared Person Contact	No	No

Federal Case Law (2 Records)

	Case Title	Westlaw Case Number	Filing Date	Court	Company Interest
1.	United Bank v. Melo	2019 WL 3890866		S.D.Fla.	
2.	Basketball City, Inc. v. Yacht Spirit of New York	2000 WL 194842		S.D.N.Y.	

Docket Records (20 Records)

	Docket Title	Docket Number	Filing Date	Court	Nature of Suit	Company Interest
1.	REEVES, BARNETT E III v. SPIRIT OF NORFOLK	CL01001647-00	07/09/2001	VA. CIR. CT.	TORTS/NEGLIGENCE	
2.	ITT COMMERCIAL v. DOBRINDT	3:92-CV-00156	03/26/1992	D.Conn.	Contract: Other Contract (190), Contracts, Other Contract	
3.	RIVERA,ROGER v. SPIRIT CRUISES, INC.SPIRIT MARINE CO. INC., FLEET NATIONAL BANK AS TRUSTEE & OWNER & BANKCORP. LEASING OF HAWAII, INC.	0034459/1996	04/23/1997	N.Y.SUP.	TORTS/NEGLIGENCE	
4.	Spirit v. International Marine	05-2018-SC-043910-XXXX-XX	09/05/2018	Fla.Cir.Ct.	Small Claims	
5.	Curtis-Lavallee, et al v. Spirit Cruises, Inc., et al	1:99-CV-01289	03/08/1999	E.D.N.Y.	Torts: Marine (340), Torts/Negligence, Marine	

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	Docket Title	Docket Number	Filing Date	Court	Nature of Suit	Company Interest
6.	DOBRINDT v. FDIC, ET AL	2:92-CV-00282	04/22/1992	D.Conn.	Real Property: Foreclosure (220), Foreclosure	
7.	Eady v. Offshore Express Inc, et al	6:00-CV-00415	03/01/2000	W.D.La.	Torts: Marine (340), Torts/Negligence, Marine	
8.	Basketball City v. The Yacht Spirit of, et al	1:97-CV-07996	10/29/1997	S.D.N.Y.	Torts: Other Personal Property Damage (380), Torts/Negligence, Personal Property, Other Personal Property Damage	
9.	Royal Insurance Co. v. The Yacht Spirit NY, et al	1:99-CV-09235	08/26/1999	S.D.N.Y.	Torts: Marine (340), Torts/Negligence, Marine	
10.	United Bank v. Melo et al	1:16-CV-20894	03/11/2016	S.D.FLA.	Contract: Marine (120), Contracts, Marine	
11.	Mobil Exploration v. US Abatement Corp, et al	2:90-CV-04678	11/28/1990	E.D.La.	Contract: Other Contract (190), Contracts, Other Contract	
12.	ACKERMAN v. SPIRIT OF PUGET SD, ET AL	2:96-CV-01950	12/12/1996	W.D.Wash.	Torts: Marine (340), Torts/Negligence, Marine	
13.	CGI Finance, Inc. v. Melo et al	1:11-CV-23498	09/26/2011	S.D.FLA.	Contract: Marine (120), Contracts, Marine	
14.	Sound Sail, Inc. v. Spirit Marine Co., et al	1:97-CV-04721	06/26/1997	S.D.N.Y.	Contract: Marine (120), Contracts, Marine	
15.	IN RE: US ABATEMENT CORP v. CALLAIS ENT PRT INC, ET AL	2:92-CV-01805	07/31/1992	E.D.La.	Bankruptcy: Appeal 28 USC 158 (422), Bankruptcy, Appeal	
16.	Gulf Coast Hatteras, et al v. Pontin, et al	4:05-CV-10092	08/30/2005	S.D.FLA.	Other Statutes: Other Statutory Actions (890), Other Federal Statutes, Other Federal Statutory Actions	
17.	United Bank v. Melo et al	1:18-CV-24982	11/29/2018	S.D.Fla.	Contract: Marine (120), Contracts, Marine	
18.	USA v. ANANGEL SPIRIT MV	3:97-CV-01649	09/10/1997	S.D.Cal.	Torts: Other Personal Property Damage (380), Torts/Negligence, Personal Property, Other Personal Property Damage	
19.	Frank Depinto v. Spirit Cruises, Inc.	L-005870-93	07/16/1993	N.J.SUPER.	Torts/Negligence	
20.	SPIRIT MARINE, v. OBRIEN, DANIEL T	SCK000000270	06/05/2000	FLA.CIR.CT.	OTHER	

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Corporate Filings (1 Record)

To Summary

SPIRIT MARINE

Corporation Address:	P.O. BOX 717 KAHUKU, HI 96731

Filing Record

Filing Date:	11/3/2019		
Corporation Number:	G19000118498		
Status:	ACTIVE	**Information Current Through:**	11/09/2019
Business Type:	FICTITIOUS NAME		
Office Location Where Filed:	FICTITIOUS NAME DIVISION	**Office Address Where Filed:**	409 E GAINES ST TALLAHASSEE, FL 32301

Officer

Name	Title	Address	Principle Office Location
PONTIN, DUKE		25 012 OVERSEAS HIGHWAY SUMMERLAND KEY, FL 33043	

Report Section(s) with no Matches (104 Records)

Phone Numbers, Full Business Description (SEC Filings), FEIN Records Summary, Business Finder Records Summary, Business Profile Records Summary, D&B Market Identifier Records Summary, D&B Worldbase Summary, D&B PCI Summary, Marijuana-Related Business Records Summary, Fictitious Business Names Summary, Annual Reports, Money Service Business Records Summary, NPI Records Summary, News, Businesses with Same Phone Number, Businesses with Same Address, People with Same Phone Number, People with Same Address, Executive Affiliations Summary, Executive Biographies Summary, Executive Profile Records Summary, Professional Licenses Summary, Beneficial and Management Ownership (SEC Filings), Listing of Officers and Directors (SEC Filings), Legal Advisors, Financial Advisors, Matters Related to Accountants and Financial Statements (SEC Filings), FAA Aircraft Registrations Summary, Real Property Pre-Foreclosure Records Summary, Real Property Tax Assessor Records Summary, Real Property Transactions Summary, Watercraft Summary, Bankruptcy Records Summary, Bankruptcy or Receivership (SEC Filings), UCC Filings Summary, Liens & Judgments Summary, Criminal Records Summary, Arrest Records Summary, Global Sanctions Summary, OFAC Infractions Summary, Healthcare Sanctions Summary, Company Disclosed Risk Factors (SEC Filings), Lawsuit Records Summary, State Case Law, Company Disclosed Legal Proceedings (SEC Filings), SEC Filings, SEC Insider Filings, Subsidiaries Disclosed in SEC Filings, SEC Staff Review Letters, SEC No Action Letters, Registrations & Prospectuses Transactions, Other Securities Filings, Controls and Procedures (SEC Filings), Quantitative and Qualitative Discussions About Market Risk (SEC Filings), Material Modifications to Rights of Security Holders (SEC Filings), Unregistered Sales of Equity Securities (SEC Filings), Notice of Delisting Failure to Satisfy Listing Rule or Transfer of Listing (SEC Filings), SEDAR Filings, UK Listing Authority Filings, International Prospectuses & 144As, Mergers & Acquisitions Transactions, Mergers & Acquisitions Agreements, Business Organization Agreements, Capital Market Agreements, Corporate Finance Agreements, Private Equity Agreements, Intellectual Property Agreements, Other Material Agreements, Entry or Termination of a Material Definitive Agreement (SEC Filings), Changes in Control of Registrant (SEC Filings), Relationships and Related Transactions (SEC Filings), Financials - Annual, Ratios, Company Profile, Executive Officers, Folder Content, Lawsuit Records, Bankruptcy Records, UCC Filings, Liens & Judgments, Criminal Records, Arrest Records, Global Sanctions, OFAC Infractions, Healthcare

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Sanctions, FAA Aircraft Registrations, Real Property Pre-Foreclosure Records, Real Property Tax Assessor Records, Real Property Transactions, Watercraft, Executive Affiliations, Executive Biographies, Executive Profile Records, Professional Licenses, FEIN Records, Business Finder Records, Business Profile Records, D&B Market Identifier Records, D&B Worldbase, D&B PCI, Marijuana-Related Business Records, Fictitious Business Names, Money Service Business Records, NPI Records

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ONESTOP REPORT

Duke Pontin

24 MAY 2021



D&B Hoovers

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COMPANY SUMMARY

CORPORATE OVERVIEW

Company Summary

Duke Pontin
56-970 Kam Hwy
Kahuku, Hawaii, 96731
United States
Tel: +1-305-923-5458
Marketability: Has Not Opted Out of Direct Marketing

Employees (This Site):	1 (Actual)	**Reporting Currency:**	USD
Employees (All Sites):	1 (Actual)	**Financials In:**	USD
Company Type:	Private Independent	**Annual Sales:**	47k (Modelled)
D-U-N-S® Number:	07-889-3137		

Business Description

Duke Pontin is primarily engaged in providing combinations of electric, gas, and other services, not elsewhere classified.

Source: D&B

Industry

D&B Hoovers: Electricity Generation and Distribution
US 8-Digit SIC: 49390000 - Combination utilities, nec

Company Identifiers

D-U-N-S® Number: 078893137

Corporate Highlights

Prescreen Score:	LOW RISK	**Plant/Facility Size (sq. ft.):**	1,886
Year Founded:	2010	**Latitude:**	21.682
		Longitude:	-157.9653

BACK TO TABLE OF CONTENTS

Corporate Overview

Key ID℠ Number: 190832236

Location
56-970 Kam Hwy
Kahuku, HI, 96731
Honolulu County
United States

Sales USD(mil): 0.0
Assets USD(mil): NA
Employees: 1
KeyID℠: 190832236
Industry: Electric Utilities

Incorporation Date: 2010
Company Type: Private Independent
Quoted Status: Not Quoted

Tel: 305-923-5458

Marketability: Has Not Opted Out of Direct Marketing

Industry Codes

NAICS 2017:

221118 - Other Electric Power Generation (Primary)

ANZSIC 2006:

26 - Electricity Supply (Primary)

ISIC Rev 4:

35 - Electricity, gas, steam and air conditioning supply (Primary)

NACE Rev 2:

35 - Electricity, gas, steam and air conditioning supply (Primary)

UK SIC 2007:

35 - Electricity, gas, steam and air conditioning supply (Primary)

UK SIC 2003:

40 - Electricity, Gas, Steam and Hot Water Supply (Primary)

US SIC 1987:

4939 - Combination Utilities, Not Elsewhere Classified (Primary)

US 8-Digit SIC:

49390000 - Combination utilities, nec (Primary)

Business Description

Duke Pontin is primarily engaged in providing combinations of electric, gas, and other services, not elsewhere classified.

Source: D&B

Financial Data

Financials in:	USD(mil)	1 Year Growth
Revenue:	0.0	NA

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BACK TO TABLE OF CONTENTS

LIVE REPORT

PONTIN, DUKE

Tradestyle(s): -

ACTIVE SINGLE LOCATION

D-U-N-S Number: 07-889-3137

Phone: +1 305-923-5458

Address: 56-970 Kam Hwy, Kahuku, HI, 96731, United States Of America

Endorsement: Helga/R9 Library

Summary

KEY DATA ELEMENTS (Formerly: SCORE BAR)

KDE Name	Current Status	Details
PAYDEX®		
Delinquency Score	47	Moderate Risk of severe payment delinquency.
Failure Score	9	Moderate to High Risk of severe financial stress.
D&B Viability Rating	6 6 G W	View More Details
Bankruptcy Found	N	
D&B Rating	DS	The information available does not permit us to classify the company.

D&B PAYDEX - 3 MONTHS

-

COMPANY PROFILE

D-U-N-S
07-889-3137

Legal Form
Proprietorship

Ownership
Not publicly traded

Mailing Address
PO Box 717
Kahuku, HI, 96731, UNITED STATES

Telephone
+1 305-923-5458

Present Control Succeeded
2010

Employees
1

Age (Year Started)
11 Years (2010)

Named Principal
Duke Pontin , OWNER

Line of Business
Combination utilities

LEGAL EVENTS

Events	Occurrences	Last Filed
Bankruptcies	0	-
Judgements	0	-
Liens	0	-
Suits	0	-
UCC	0	-

DELINQUENCY SCORE (Formerly Commercial Credit Score)

Company's Risk Level
MODERATE

Probability of delinquency over the next 12 months
6.38 %

47

High Risk (1) — Low Risk (100)

Past 12 Months



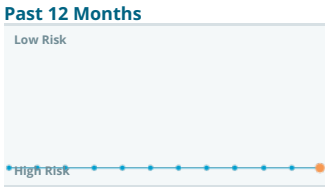
FAILURE SCORE (Formerly Financial Stress Score)

Company's Risk Level
MODERATE-HIGH

Probability of failure over the next 12 months
0.97 %

High Risk (1) — Low Risk (100)

Past 12 Months



PAYDEX® TREND CHART

FRAUD RISK SCORE INFORMATION

No Fraud Risk Score is Available

The scores and ratings included in this report are designed as a tool to assist the user in making their own credit related decisions, and should be used as part of a balanced and complete assessment relying on the knowledge and expertise of the reader, and where appropriate on other information sources. The score and rating models are developed using statistical analysis in order to generate a prediction of future events. Dun & Bradstreet monitors the performance of thousands of businesses in order to identify characteristics common to specific business events. These characteristics are weighted by significance to form rules within its models that identify other businesses with similar characteristics in order to provide a score or rating.

Dun & Bradstreet's scores and ratings are not a statement of what will happen, but an indication of what is more likely to happen based on previous experience. Though Dun & Bradstreet uses extensive procedures to maintain the quality of its information, Dun & Bradstreet cannot guarantee that it is accurate, complete or timely, and this may affect the included scores and ratings. Your use of this report is subject to applicable law, and to the terms of your agreement with Dun & Bradstreet.

Risk Assessment

D&B RISK ASSESSMENT

OVERALL BUSINESS RISK

HIGH	MODERATE-HIGH	MODERATE	LOW-MODERATE	LOW

Dun & Bradstreet thinks...

- Overall assessment of this organization over the next 12 months: **SOME-FINANCIAL-STRESS-CONCERNS**
- Based on the predicted risk of business discontinuation: **MODERATELY-HIGHER-THAN-AVERAGE-RISK-OF-FINANCIAL-STRESS**
- Based on the predicted risk of severely delinquent payments: **MODERATE POTENTIAL FOR SEVERELY DELINQUENT PAYMENTS**

MAXIMUM CREDIT RECOMMENDATION

US$ 17,500

The recommended limit is based on a moderately low probability of severe delinquency.

D&B VIABILITY RATING SUMMARY

The D&B Viability Rating uses D&B's proprietary analytics to compare the most predictive business risk indicators and deliver a highly reliable assessment of the probability that a company will go out of business, become dormant/inactive, or file for bankruptcy/insolvency within the next 12 months. The D&B Viability Rating is made up of 4 components:

Viability Score
Compared to All US Businesses within the D&B Database:

- Level of Risk:**Moderate Risk**
- Businesses ranked **6** have a probability of becoming no longer viable: **13** %
- Percentage of businesses ranked **6: 30** %
- Across all US businesses, the average probability of becoming no longer viable: **14** %

Portfolio Comparison
Compared to All US Businesses within the same MODEL SEGMENT:

- Model Segment :**Firmographics and Business Activity**
- Level of Risk:**Moderate Risk**
- Businesses ranked **6** within this model segment have a probability of becoming no longer viable: **18** %
- Percentage of businesses ranked **6** with this model segment: **12** %
- Within this model segment, the average probability of becoming no longer viable:**16** %

Data Depth Indicator
Data Depth Indicator:

- ✓ Basic Firmographics
- ▫ No Financial Attributes

Greater data depth can increase the precision of the D&B Viability Rating assessment.

To help improve the current data depth of this company, you can ask D&B to make a personalized request to this company on your behalf to obtain its latest financial information. To make the request, click the link below. Note, the company must be saved to a folder before the request can be made.

Request Financial Statements

Reference the FINANCIALS tab for this company to monitor the status of your request.

Company Profile:
Company Profile Details:

- Financial Data: **False**
- Trade Payments: **Not Available**
- Company Size: **Small: Employees: <10 and Sales: <$10K or Missing**
- Years in Business: **Established: 5+**

W

Financial Data	Trade Payments	Company Size	Years in Business
False	Not Available	Small	Established

FAILURE SCORE FORMERLY FINANCIAL STRESS SCORE

9

High Risk (1) — Low Risk (100)

- No payment experiences
- Limited time under present management control
- Higher risk legal structure

Level of Risk	Raw Score	Probability of Failure	Average Probability of Failure for Businesses in D&B Database
Moderate-High	1397	0.97 %	0.48

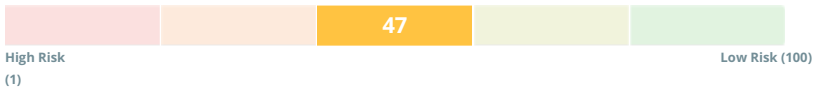
Business and Industry Trends

BUSINESS AND INDUSTRY COMPARISON

Selected Segments of Business Attributes

Norms	National %
This Business	9
Region:(PACIFIC)	52
Industry:INFRASTRUCTURE	43
Employee range:(1-9)	52
Years in Business:(11-25)	68

DELINQUENCY SCORE FORMERLY COMMERCIAL CREDIT SCORE



- No payment experiences reported
- Limited time under present management control
- Higher risk region based on delinquency rates for this region
- Higher risk industry based on delinquency rates for this industry
- Limited business activity signals reported in the past 12 months

Level of Risk	Raw Score	Probability of Delinquency	Compared to Businesses in D&B Database
Moderate	495	6.38 %	10.2 %

Business and Industry Trends

BUSINESS AND INDUSTRY COMPARISON

Selected Segments of Business Attributes

Norms	National %
This Business	47
Region:(PACIFIC)	50
Industry:INFRASTRUCTURE	32
Employee range:(1-9)	66
Years in Business:(11-25)	66

D&B RATING

Current Rating

Special Rating

DS : Undetermined

Trade Payments

TRADE PAYMENTS SUMMARY (Based on 24 months of data)

Overall Payment Behaviour
-
Days Beyond Terms

% of Trade Within Terms
-

Highest Past Due
-

Highest Now Owing:
-

Total Trade Experiences:
0
Largest High Credit:
-
Average High Credit:
-

Total Placed in Collections:
-
Largest High Credit:
-

D&B PAYDEX

No Data Available

OTHER PAYMENT CATEGORIES

Other Payment Categories	Experience	Total Amount
Cash experiences	-	-
Payment record unknown	-	-
Unfavorable comments	-	-
Placed for collections	-	-
Total in D&B's file	-	-

Legal Events

The following Public Filing data is for information purposes only and is not the official record. Certified copies can only be obtained from the official source.

Bankruptcies	Judgements	Liens	Suits	UCCs
No	0 Latest Filing: -	0 Latest Filing: -	0 Latest Filing: -	0 Latest Filing: -

D&B has not received any Public Filings for this company

Special Events

SPECIAL EVENTS

Date	Event Description
11/20/2017	The name and address of this business have been confirmed by D&B using available sources.

Financials - D&B

D&B currently has no financial information on file for this company.

D&B currently has no financial information on file for this company.

D&B currently has no financial information on file for this company

D&B currently has no financial information on file for this company.

D&B currently has no financial information on file for this company

D&B currently has no financial information on file for this company

Company Profile

COMPANY OVERVIEW

D-U-N-S
07-889-3137

Legal Form
Proprietorship

Ownership
Not publicly traded

Mailing Address
PO Box 717
KAHUKU, HI, 96731, UNITED STATES

Telephone
+1 305-923-5458

Present Control Succeeded
2010

Employees
1

Age (Year Started)
11 Years (2010)

Named Principal
Duke Pontin , OWNER

Line of Business
Combination utilities

BUSINESS REGISTRATION

Corporate and business registrations reported by the secretary of state or other official source as of: -
This data is for informational purposes only, certification can only be obtained through the Office of the Secretary of State.

Registered Name	PONTIN, DUKE
Corporation Type	Proprietorship
Business Commenced On	2010

COMPANY EVENTS

The following information was reported on: 11/03/2018

Business started 2010.

BUSINESS ACTIVITIES AND EMPLOYEES

The following information was reported on: 11/03/2018

Business Information	
Description	Provides utilities combined (electric, gas or other) (100%).
Employees	1 which includes owner.
Financing Status	Unsecured
Facilities	Occupies premises in building.

Related Concerns

SIC/NAICS Information

SIC Codes	SIC Description	Percentage of Business
4939	Combination utilities	-
49390000	Combination utilities, nec	-

NAICS Codes	NAICS Description
221118	Other Electric Power Generation

Your Information

Record additional information about this company to supplement the D&B information.

Note: Information entered in this section will not be added to D&B's central repository and will be kept private under your user ID. Only you will be able to view the information.

Account Number

Endorsement/Billing Reference *

Helga/R9 Library

Sales Representatives

Credit Limit

0

Total Outstanding

0

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Parcel Information

Parcel Number	620070190000
Location Address	66-532 KAMEHAMEHA HWY
Project Name	
Legal Information	RP 906 LCAW 2939: APANA 1 12,047 SF
Property Class	COMMERCIAL
Land Area (approximate sq ft)	12,047
Land Area (acres)	0.2766

Plat Map PDF GIS Parcel Map

Email us at bfsrpmailbox@honolulu.gov regarding Supplemental Plat Map PDFs.

Owner Information

Owner Names
NSHE HI NARCISSUS LLC Fee Owner
NSHE HI SUNFLOWER LLC Fee Owner

⊞ Show All Owners and Addresses

Assessment Information

⊞ Show Historical Assessments

Assessment Year	Property Class	Assessed Land Value	Dedicated Use Value	Land Exemption	Net Taxable Land Value	Assessed Building Value	Building Exemption	Net Taxable Building Value	Total Property Assessed Value	Total Property Exemption	Total Net Taxable Value
2024	COMMERCIAL	$2,434,700	$0	$0	$2,434,700	$93,400	$0	$93,400	$2,528,100	$0	$2,528,100

2024 amended values not to be posted until new tax rates are processed on or after July 20.
How to calculate real property taxes

The Assessment Information section contains records for the last 10 years.
For inquiries over 10 years and any other assessment data questions, please email the Real Property Assessment Division at bfsrpmailbox@honolulu.gov

Appeal Information

Year	Appeal Type Value	Scheduled Hearing Date *subject to change*	Status
2020	BOARD OF REVIEW	7/13/2021	Closed

Land Information

Land Classification	Square Footage	Acreage	Agricultural Use Indicator
COMMERCIAL	12,047	0.2766	

Department of Planning and Permitting (DPP)

Commercial Improvement Information

Property Class		**Units**	1
Building Card	1	**Structure Type**	SERVICE STATION M-3
Building Number	0001	**Year Built**	1963
Improvement Name		**Effective Year Built**	1963
Identical Units	1	**Gross Building Description**	

Card	Section	Floor #	Area	Perimeter	Usage	Wall Height	Exterior Wall
1	1	01	1,950	185	Service Station	13	DEFAULT WALLS

Other Building and Yard Improvements

Description	Quantity	Year Built	Area
SERVICE STATION CANOPY	1	1963	360
CARPORT OPEN BIT/CONC FLOOR	1	1961	380

Sales Information

Sale Date	Sale Amount	Instrument #	Instrument Type	Instrument Description	Valid Sale	Date of Recording	Land Court Document Number	Cert #	Book/Page
02/08/2021		A77100521	FEE CONVEYANCE	Grant of easement		02/09/2021			
02/08/2021		A77100520	FEE CONVEYANCE	Grant of easement		02/09/2021			
12/15/2017			FEE CONVEYANCE	Route Slip					
10/02/2017	$1,950,000	A64860320	FEE CONVEYANCE	AGREEMENT		10/04/2017			
09/29/2017	$1,950,000	A64860321	FEE CONVEYANCE	Deed	Valid	10/04/2017			
05/27/2016		A-60080598	FEE CONVEYANCE	Deed		06/13/2016			
05/27/2016		A-60080597	FEE CONVEYANCE	Deed		06/13/2016			
03/04/2000		0000043432	FEE CONVEYANCE			03/31/2000			

Recent Sales in Area

Sale date range:

From: 03/25/2021 To: 03/25/2024

Sales by Neighborhood

1500 Feet Sales by Distance

Pay online at www.rphnlpay.com
Other Payment Options Click Here

Please call Treasury Division at (808)768-3980 if you have questions on your balance.

Historical Tax Information

Year	Tax	Payments and Credits	Penalty	Interest	Other	Amount Due
⊞ 2023	$31,313.72	($31,313.72)	($313.14)	$0.00	$0.00	$0.00
⊞ 2022	$30,527.56	($30,527.56)	$0.00	$0.00	$0.00	$0.00
⊞ 2021	$30,874.76	($30,874.76)	($333.45)	($20.01)	$0.00	$0.00
⊞ 2020	$30,941.72	($30,941.72)	$0.00	$0.00	$0.00	$0.00
⊞ 2019	$25,898.64	($25,898.64)	$0.00	$0.00	$0.00	$0.00
⊞ 2018	$25,820.52	($25,820.52)	$0.00	$0.00	$0.00	$0.00
⊞ 2017	$18,374.32	($18,374.32)	$0.00	$0.00	$0.00	$0.00
⊞ 2016	$13,400.68	($13,400.68)	$0.00	$0.00	$0.00	$0.00
⊞ 2015	$12,114.80	($12,114.80)	$0.00	$0.00	$0.00	$0.00
⊞ 2014	$12,628.16	($12,628.16)	$0.00	$0.00	$0.00	$0.00

How to calculate real property taxes

The Historical Tax Information section displays records for the last 10 years. For real property tax information inquiries over 10 years, please contact the Treasury division at bfstreasmailbox@honolulu.gov or (808)768-3980.

Map



No data available for the following modules: Condominium/Apartment Unit Information, Agricultural Assessment Information, Residential Improvement Information, Residential Additions, Sketches, Permit Information, Current Tax Bill Information.

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Schneider GEOSPATIAL

(10 Records)

Business Overview (1)
Quick Analysis Flags (1)
Associate Analytics Chart (1)
Background Information
D&B Worldbase Summary (1)
Corporate Filings Summary (1)
Potential Assets
Real Property Tax Assessor Records Summary (3)
Full-Text Documents
Real Property Tax Assessor Records (3)
D&B Worldbase (1)
Corporate Filings (1)
Miscellaneous
Report Section(s) with no Matches (98)

Business Overview (1 Section)



Address:	PO BOX 717 KAHUKU, HI 96731
Additional Entity Source(s):	Corporate Filings - Secretary of State D&B Worldbase
Active Ticker Symbols:	
Inactive Ticker Symbols:	
Location of Incorporation:	HAWAII
DUNS:	10-943-9879
Registered Agent:	TIFFANY DAVIES
Filing Date:	05/24/2017
Filing Number:	174214 C5
Officers/Directors/Contacts:	BRANDY PONTIN, PRINCIPAL
Officers/Directors/Contacts:	BRANDY PONTIN, OFFICER-MEM

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D&B Worldbase Summary (1 Record)

	Business Name	Business Address	View Full-Text
1.	HI NSHE SUNFLOWER LLC	HONOLULU, HI 96813USA	Full-Text

Corporate Filings Summary (1 Record)

	Business Name	Business Type	Status	Filing State	View Full-Text
1.	NSHE HI SUNFLOWER, LLC	DOMESTIC LIMITED LIABILITY CO	ANNUAL REPORT 1 YR DELINQUENT	HI	Full-Text

Quick Analysis Flags (1 Chart)

List of Possible Quick Analysis Flags

OFAC listing:	No
Global Sanctions:	No
Business Address Used as Residential Address:	YES
P.O. Box listed as Address:	YES
Bankruptcy Debtor or Creditor:	No
Other Listings Linked to Business Phone Number:	No
Other Businesses Linked to the Business Address:	YES
Other Businesses Linked to Same FEIN:	No
Key Nature of Suit:	No
Party to a Class Action last 12 months:	No
Going Concern:	No
MSB listing:	No
Healthcare Sanction:	No

Associate Analytics Chart (1 Chart)

Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
NSHE HI CEPHEUS, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI MIMOSA, LLC			Shared Person Contact	No	No
GREEN JACK, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
98-1538	98-1538 AKAAKA ST	Street	Shared Person Contact	No	No

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Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
AKAAKA LLC	AIEA, HI 96701				
NSHE HI MONOCEROS, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI BELLFLOWER, LLC	15 COCONUT GROVE LN UNIT 15 LAHAINA, HI 96761	Street	Shared Person Contact	No	No
NAPOOPOO ROAD 1031, LLC	2425 E CAMELBACK RD STE 200 PHOENIX, AZ 85016	High Rise	Shared Person Contact	No	No
NSHE HI DELPHINIS, LLC	1188 BISHOP ST STE 2503 HONOLULU, HI 96813	High Rise	Shared Person Contact	No	No
NSHE HI ALEXANDRITE, LLC	601 ASH ST WINNETKA, IL 60093	Street	Shared Person Contact	No	No
BUTTERFLY LOACH, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI ANTLIA, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
DAVIES, TIFFANY	808 KALINA PL HONOLULU, HI 96825	Street	Possible Relationship	No	No
NSHE HI CAPRICORNUS, LLC	PO BOX 50106 PASADENA, CA 91115	Post Office Box	Shared Person Contact	No	No
JOHN & HIROMI YEE LLC	2425 E CAMELBACK RD STE 200 PHOENIX, AZ 85016	High Rise	Shared Person Contact	No	No
NSHE HI BLUEBELL, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI THISTLE, LLC	PO BOX 82 PAPAIKOU, HI 96781	Post Office Box	Shared Person Contact	No	No
NSHE HI	60 E RIO SALADO				

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Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
CHAMAELEON, LLC	PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI HYDRUS, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI BUTTERCUP, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI SUNFLOWER, LLC	PO BOX 717 KAHUKU, HI 96731	Post Office Box	Shared Business Name	No	No
ALU ROAD RT, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
STEVE'S HAWAII LLC	2425 E CAMELBACK RD STE 200 PHOENIX, AZ 85016	High Rise	Shared Person Contact	No	No
NSHE HI TANSY, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
TEAM Z HAWAII, LLC	3 WHITING CT MORAGA, CA 94556	Street	Shared Person Contact	No	No
POHAKU MOKU, LLC	150 E CARRILLO ST SANTA BARBARA, CA 93101	Street	Shared Person Contact	No	No
NSHE HI CHERRY BLOSSOM, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
GERALD RYUSAKI PROPERTIES, LLC	2291 LAUWILIWILI ST KAPOLEI, HI 96707	Street	Shared Person Contact	No	No
SILVER TIP TETRA EXCHANGE, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No

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Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
BLUE ACARA, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
PONTIN, BRANDY			Possible Relationship	No	No
NSHE HI CARNATION, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI BOTTLEBRUSH, LLC			Shared Person Contact	No	No
TFT ALOHA PROPERTIES, LLC	6581 GRIFFIN CREEK RD MEDFORD, OR 97501	Street	Shared Person Contact	No	No
MELE KAI	2333 KAPIOLANI BLVD APT 916 HONOLULU, HI 96826	High Rise	Shared Person Contact	No	No
SPILL THE TEA CAFE	47-283 HUI IWA ST APT A KANEOHE, HI 96744	High Rise	Shared Person Contact	No	No
NSHE HI BEGONIA, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
130 KAI MALINA, LLC	2425 E CAMELBACK RD STE 200 PHOENIX, AZ 85016	High Rise	Shared Person Contact	No	No
241 AMAKIHI WAY, LLC	26183 ENGELMANN RD VALLEY CENTER, CA 92082	Street	Shared Person Contact	No	No
NSHE HI FREESIA, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI CAMELLIAS, LLC	1039 HOOMAIKAI ST HONOLULU, HI 96817	Street	Shared Person Contact	No	No

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Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
ASTON BREEZE LLC	21832 SE 245TH ST MAPLE VALLEY, WA 98038	Street	Shared Person Contact	No	No
NSHE HI BERGAMOT, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NEON TETRA, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI ALBITE, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
LEMONPEEL ANGEL, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI NARCISSUS, LLC	PO BOX 717 KAHUKU, HI 96731	Post Office Box	Shared Business Name	No	No
NSHE HI FOXGLOVE, LLC	PO BOX 82 PAPAIKOU, HI 96781	Post Office Box	Shared Person Contact	No	No
HHR AMW LLC			Shared Person Contact	No	No

Real Property Tax Assessor Records Summary (3 Records)

	Property Address	Property Type	Market Value	Tax Year	County	View Full-Text
1.	56 KAMEHAMEHA HWY KAHUKU, HI 96731	VACANT	$300.00	2023	HONOLULU	Full-Text
2.	56 KAMEHAMEHA HWY KAHUKU, HI 96731	VACANT	$9,200.00	2023	HONOLULU	Full-Text
3.	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	SERVICE	$2,525,300.00	2023	HONOLULU	Full-Text

Real Property Tax Assessor Records (3 Records)

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To Summary

56 KAMEHAMEHA HWY KAHUKU, HI 96731

TAX RECORD - HONOLULU County		TAX YEAR 2023	
Situs Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731		
Owner:	NSHE HI NARCISSUS LLC		
Additional Name:	NSHE HI NARCISSUS LLC		
		Owner Corporate Indicator:	CORPORATE OWNER

TAX RECORD - HONOLULU County		TAX YEAR 2023	
Situs Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731		
Owner:	NSHE HI NARCISSUS LLC		
Additional Name:	NSHE HI NARCISSUS LLC		
		Owner Corporate Indicator:	CORPORATE OWNER

FIPS Code:	HONOLULU	**Municipality Name:**	OAHU
FIPS Sub Code:	000		
FIPS State Code:	HAWAII	**Subdivision Name:**	KAHUKU LCAW 4422 02
APN Sequence Number:	1	**Property Indicator:**	VACANT
Unformatted APN:	1560050060000	**Land Use:**	AGRICULTURAL LAND
Formatted APN:	1-5-6-005-006-0000		
Original APN:	1 5 6 005 006 0000	**Land Square Footage:**	48134
		Lot Number:	968-D
Acres:	1.1050		
		Legal Description:	EXCLUSION 48 RP 249 LCAW 4422:2 1.105 AC DES TOG/ESMT
		Zoning:	A/51/50

Calculated Land Value:	300	**Market Land Value:**	300
Calculated Total Value:	$300.00	**Market Total Value:**	$300.00
Assessed Land Value:	300		
		Total Value Calculated Indicator:	MARKET
Assessed Total Value:	300		
Tax Year:	2023		
Tax Amount:	300.00		
Tax Code Area:	5		

		Number of Buildings:	1

Sale Date:	11/04/2009	**Deed Type:**	QUIT CLAIM
Seller Name:	CONTINENTAL PACIFIC LLC	**Type of Sale:**	RESALE
Sale Price:	35000.00		
		Document Number:	169217
Recording Date:	11/04/2009		
		Title Company:	TITLE GUARANTY

Document Number:	127617		
Sale Date:	07/11/2002	**Multiple Parcel Sale:**	MULTIPLE PARCELS IN THE SALE ? FIRST APN LISTED ON THE DOCUMENT
Sale Price:	18844400		
		Recording Date:	07/23/2002
Type of Sale:	RESALE		

Historical Tax Assessor Record 1

Tax Year:	2022		
Calculated Land Value:	300	**Unformatted APN:**	1560050060000
Calculated Total Value:	300	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	NSHE HI NARCISSUS LLC		

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Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 2

Tax Year:	2021		
Calculated Land Value:	300	**Unformatted APN:**	1560050060000
Calculated Total Value:	300	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	NSHE HI NARCISSUS LLC		
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 3

Tax Year:	2020		
Calculated Land Value:	26500	**Unformatted APN:**	1560050060000
Calculated Total Value:	26500	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	NSHE HI NARCISSUS LLC	**Co-Owner:**	NSHE HI SUNFLOWER LLC
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 4

Tax Year:	2020		
Calculated Land Value:	26500	**Unformatted APN:**	1560050060000
Calculated Total Value:	26500	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	NSHE HI NARCISSUS LLC	**Co-Owner:**	NSHE HI SUNFLOWER LLC
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 5

Tax Year:	2020		
Calculated Land Value:	26500	**Unformatted APN:**	1560050060000
Calculated Total Value:	26500	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 17908 HONOLULU, HI 96817-0908)

Historical Tax Assessor Record 6

Tax Year:	2019		
Calculated Land Value:	26500	**Unformatted APN:**	1560050060000
Calculated Total Value:	26500	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 17908 HONOLULU, HI 96817-0908)

Historical Tax Assessor Record 7

Tax Year:	2018		
Calculated Land Value:	26500	**Unformatted APN:**	1560050060000
Calculated Total Value:	26500	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	815 WAIAKAMILO RD A HONOLULU, HI 96817-4337)

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Historical Tax Assessor Record 8

Tax Year:	2017		
Calculated Land Value:	26500	**Unformatted APN:**	1560050060000
Calculated Total Value:	26500	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	815 WAIAKAMILO RD A HONOLULU, HI 96817-4337)

Historical Tax Assessor Record 9

Tax Year:	2016		
Calculated Land Value:	44200	**Unformatted APN:**	1560050060000
Calculated Total Value:	44200	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	815 WAIAKAMILO RD A HONOLULU, HI 96817-4337)

Historical Tax Assessor Record 10

Tax Year:	2015		
Calculated Land Value:	44200	**Unformatted APN:**	1560050060000
Calculated Total Value:	44200	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	200	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	815 WAIAKAMILO RD HONOLULU, HI 96817-4337)

Historical Tax Assessor Record 11

Tax Year:	2014		
Calculated Land Value:	44200	**Unformatted APN:**	1560050060000
Calculated Total Value:	44200	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	815 WAIAKAMILO RD HONOLULU, HI 96817-4337)

Historical Tax Assessor Record 12

Tax Year:	2013		
Calculated Land Value:	44200	**Unformatted APN:**	1560050060000
Calculated Total Value:	44200	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	200	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	56 0000001048 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	815 WAIAKAMILO RD HONOLULU, HI 96817-4337)

Historical Tax Assessor Record 13

Tax Year:	2012		
Calculated Land Value:	44200	**Unformatted APN:**	1560050060000
Calculated Total Value:	44200	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	200	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	815 WAIAKAMILO RD HONOLULU, HI 96817-4337)

Historical Tax Assessor Record 14

Tax Year:	2011		
Calculated Land Value:	300	**Unformatted APN:**	1560050060000

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Calculated Total Value:	300	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	KAM HWY HAUULA, HI 96717	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

Historical Tax Assessor Record 15

Tax Year:	2011		
Calculated Land Value:	44200	**Unformatted APN:**	1560050060000
Calculated Total Value:	44200	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	44200	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	KAM HWY HAUULA, HI 96717	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

Historical Tax Assessor Record 16

Tax Year:	2010		
Calculated Land Value:	300	**Unformatted APN:**	1560050060000
Calculated Total Value:	300	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	KAM HWY HAUULA, HI 96717	**Mailing Address:**	KAM HWY HAUULA, HI 96717)

Historical Tax Assessor Record 17

Tax Year:	2010		
Calculated Land Value:	1700	**Unformatted APN:**	1560050060000
Calculated Total Value:	1700	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	1700	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	KAM HWY HAUULA, HI 96717	**Mailing Address:**	815 WAIAKAMILO RD HONOLULU, HI 96817-4337)

Historical Tax Assessor Record 18

Tax Year:	2009		
Calculated Land Value:	1700	**Unformatted APN:**	1560050060000
Calculated Total Value:	1700	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	1700	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	KAM HWY HAUULA, HI 96717	**Mailing Address:**	815 WAIAKAMILO RD HONOLULU, HI 96817-4337)

Historical Tax Assessor Record 19

Tax Year:	2009		
Calculated Land Value:	1700	**Unformatted APN:**	1560050060000
Calculated Total Value:	1700	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	1700	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	KAM HWY HAUULA, HI 96717	**Mailing Address:**	815 WAIAKAMILO RD HONOLULU, HI 96817-4337)

Historical Tax Assessor Record 20

Tax Year:	2009		
Calculated Land Value:	1700	**Unformatted APN:**	1560050060000
Calculated Total Value:	1700	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	1700	**Original APN:**	1 5 6 005 006 0000
Owner:	KANNO CHRISTOPHER J		
Situs Address:	KAM HWY HAUULA, HI 96717	**Mailing Address:**	815 WAIAKAMILO RD HONOLULU, HI 96817-4337)

Historical Tax Assessor Record 21

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Tax Year:	2009		
Calculated Land Value:	1700	**Unformatted APN:**	1560050060000
Calculated Total Value:	1700	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	1700	**Original APN:**	1 5 6 005 006 0000
Owner:	CONTINENTAL PACIFIC LLC		
Situs Address:	KAM HWY HAUULA, HI 96717	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

Historical Tax Assessor Record 22

Tax Year:	2008		
Calculated Land Value:	1700	**Unformatted APN:**	1560050060000
Calculated Total Value:	1700	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	1700	**Original APN:**	1 5 6 005 006 0000
Owner:	CONTINENTAL PACIFIC LLC		
Situs Address:	KAM HWY HAUULA, HI 96717	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

Historical Tax Assessor Record 23

Tax Year:	2007		
Calculated Land Value:	1700	**Unformatted APN:**	1560050060000
Calculated Total Value:	1700	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	1700	**Original APN:**	1 5 6 005 006 0000
Owner:	CONTINENTAL PACIFIC LLC		
Situs Address:	KAM HWY HAUULA, HI 96717	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

Historical Tax Assessor Record 24

Tax Year:	2006		
Calculated Land Value:	1700	**Unformatted APN:**	1560050060000
Calculated Total Value:	1700	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	1700	**Original APN:**	1 5 6 005 006 0000
Owner:	CONTINENTAL PACIFIC LLC		
Situs Address:	KAM HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

Historical Tax Assessor Record 25

Tax Year:	2002		
Calculated Land Value:	300	**Unformatted APN:**	1560050060000
Calculated Total Value:	300	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1560050060000
Owner:	AINA NUI CORP		
Situs Address:	KAM HWY	**Mailing Address:**	1001 KAMOKILA BLVD 255 KAPOLEI, HI 96707-2014)

Historical Tax Assessor Record 26

Tax Year:	2001		
Calculated Land Value:	300	**Unformatted APN:**	1560050060000
Calculated Total Value:	300	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1560050060000
Owner:	JAMES CAMPBELL TRUST ESTATE		
Situs Address:		**Mailing Address:**	KAPOLEI, HI 96707)

Historical Tax Assessor Record 27

Tax Year:	2000		
Calculated Land Value:	300	**Unformatted APN:**	1560050060000
Calculated Total Value:	300	**Formatted APN:**	1-5-6- 5- 6
Assessed Total Value:	300	**Original APN:**	1560050060000
Owner:	JAMES CAMPBELL TRUST		

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	ESTATE		
Situs Address:		**Mailing Address:**	KAPOLEI, HI 96707)

To Summary

56 KAMEHAMEHA HWY KAHUKU, HI 96731

TAX RECORD - **HONOLULU County**		**TAX YEAR 2023**	
Situs Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731		
Owner:	CONTINENTAL PACIFIC LLC	**Co-Owner Name:**	KAHUKU WIND POWER II LLC
Additional Name:	CONTINENTAL PACIFIC LLC		
		Owner Corporate Indicator:	CORPORATE OWNER

TAX RECORD - **HONOLULU County**		**TAX YEAR 2023**	
Situs Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731		
Owner:	CONTINENTAL PACIFIC LLC	**Co-Owner Name:**	KAHUKU WIND POWER II LLC
Additional Name:	CONTINENTAL PACIFIC LLC		
		Owner Corporate Indicator:	CORPORATE OWNER

FIPS Code:	HONOLULU	**Municipality Name:**	OAHU
FIPS Sub Code:	000		
FIPS State Code:	HAWAII		
APN Sequence Number:	1	**Property Indicator:**	VACANT
Unformatted APN:	1560050240000	**Land Use:**	AGRICULTURAL LAND
Formatted APN:	1-5-6-005-024-0000		
Original APN:	1 5 6 005 024 0000	**Land Square Footage:**	1637028
		Lot Number:	6
Acres:	37.5810		
		Legal Description:	LOT 1194 37.581 AC MAP 153 LCAPP 1095 TOG/E; SUBJ/E
		Zoning:	A/51/50

Calculated Land Value:	9200	**Market Land Value:**	9200
Calculated Total Value:	$9,200.00	**Market Total Value:**	$9,200.00
Assessed Land Value:	9200		
		Total Value Calculated Indicator:	MARKET
Assessed Total Value:	9200		
Tax Year:	2023		
Tax Amount:	300.00		
Tax Code Area:	5		

Sale Date:	07/01/2021	**Deed Type:**	DEED
Seller Name:	ABC DEV CO LLC	**Type of Sale:**	RESALE
		Document Number:	T11504192
Recording Date:	07/01/2021		
		Title Company:	TITLE GUARANTY

Historical Tax Assessor Record 1

Tax Year:	2022		
Calculated Land Value:	9200	**Unformatted APN:**	1560050240000
Calculated Total Value:	9200	**Formatted APN:**	1-5-6- 5- 24
Assessed Total Value:	9200	**Original APN:**	1 5 6 005 024 0000
Owner:	CONTINENTAL PACIFIC LLC	**Co-Owner:**	KAHUKU WIND POWER II LLC
Situs Address:	56 0000001030 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

Historical Tax Assessor Record 2

Tax Year:	2021		
Calculated Land Value:	9200	**Unformatted APN:**	1560050240000

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Calculated Total Value:	9200	**Formatted APN:**	1-5-6- 5- 24
Assessed Total Value:	9200	**Original APN:**	1 5 6 005 024 0000
Owner:	CONTINENTAL PACIFIC LLC	**Co-Owner:**	AMORIENT AQUACULTURE INTL
Situs Address:	56 0000001030 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

Historical Tax Assessor Record 3

Calculated Land Value:	916500	**Unformatted APN:**	1560050240000
Calculated Total Value:	916500	**Formatted APN:**	1-5-6- 5- 24
Assessed Total Value:	9200	**Original APN:**	1 5 6 005 024 0000
Owner:	CONTINENTAL PACIFIC LLC	**Co-Owner:**	AMORIENT AQUACULTURE INTL
Situs Address:	56 0000001030 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

Historical Tax Assessor Record 4

Calculated Land Value:	916500	**Unformatted APN:**	1560050240000
Calculated Total Value:	916500	**Formatted APN:**	1-5-6- 5- 24
Assessed Total Value:	9200	**Original APN:**	1 5 6 005 024 0000
Owner:	NSHE HI NARCISSUS LLC	**Co-Owner:**	NSHE HI SUNFLOWER LLC
Situs Address:	56 0000001030 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 5

Tax Year:	2019		
Calculated Land Value:	916500	**Unformatted APN:**	1560050240000
Calculated Total Value:	916500	**Formatted APN:**	1-5-6- 5- 24
Assessed Total Value:	9200	**Original APN:**	1 5 6 005 024 0000
Owner:	CONTINENTAL PACIFIC LLC	**Co-Owner:**	AMORIENT AQUACULTURE INTL
Situs Address:	56 0000001030 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

Historical Tax Assessor Record 6

Calculated Land Value:	692200	**Unformatted APN:**	1560050240000
Calculated Total Value:	692200	**Formatted APN:**	1-5-6- 5- 24
Assessed Total Value:	692200	**Original APN:**	1 5 6 005 024 0000
Owner:	CONTINENTAL PACIFIC LLC	**Co-Owner:**	KAHUKU WIND POWER II LLC
Situs Address:	56 0000001030 KAMEHAMEHA HWY KAHUKU, HI 96731	**Mailing Address:**	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350)

To Summary

66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425

TAX RECORD - **HONOLULU County**		**TAX YEAR 2023**	
Situs Address:	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425		
Owner:	NSHE HI NARCISSUS LLC		
Additional Name:	NSHE HI NARCISSUS LLC		
		Owner Corporate Indicator:	CORPORATE OWNER

TAX RECORD - **HONOLULU County**		**TAX YEAR 2023**	
Situs Address:	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425		
Owner:	NSHE HI NARCISSUS LLC		

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Additional Name:	NSHE HI NARCISSUS LLC	**TAX YEAR 2023**	
		Owner Corporate Indicator:	CORPORATE OWNER

TAX RECORD - HONOLULU County

FIPS Code:	HONOLULU	**Municipality Name:**	OAHU
FIPS Sub Code:	000		
FIPS State Code:	HAWAII	**Subdivision Name:**	JOHN CLINE MANN
APN Sequence Number:	1	**Property Indicator:**	SERVICE
Unformatted APN:	1620070190000	**Land Use:**	SERVICE STATION
Formatted APN:	1-6-2-007-019-0000		
Original APN:	1 6 2 007 019 0000	**Land Square Footage:**	12047
Acres:	0.2766		
		Legal Description:	RP 906 LCAW 2939: APANA 1 12,047 SF
		Zoning:	U/31/30

Calculated Land Value:	2434700	**Market Land Value:**	2434700
Calculated Improvement Value:	90600	**Market Improvement Value:**	90600
Calculated Total Value:	$2,525,300.00	**Market Total Value:**	$2,525,300.00
Assessed Land Value:	2434700		
Assessed Improvement Value:	90600	**Total Value Calculated Indicator:**	MARKET
Assessed Total Value:	2525300		
Tax Year:	2023		
Tax Amount:	31313.72		
Tax Code Area:	3		

Year Built:	1963	**Number of Buildings:**	1
Building Code:	SERVICE STATION		
		Number of Units:	1
Living Square Feet:	1950		
		Construction Quality:	FAIR
Garage Type:	CARPORT		

Sale Date:	09/29/2017	**Deed Type:**	DEED
Seller Name:	KAWAMATA GILBERT K TRUST	**Type of Sale:**	RESALE
Sale Price:	1950000.00	**Sale Code:**	ORIGINAL
		Document Number:	A64860321
Recording Date:	10/04/2017		
		Title Company:	TITLE GUARANTY

Historical Tax Assessor Record 1

Tax Year:	2022		
Calculated Land Value:	2434700	**Unformatted APN:**	1620070190000
Calculated Total Value:	2525300	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	2525300	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC		
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 2

Tax Year:	2021		
Calculated Land Value:	2378100	**Unformatted APN:**	1620070190000
Calculated Total Value:	2461900	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	2461900	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC		
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 3

Tax Year:	2020		
Calculated Land Value:	2403400	**Unformatted APN:**	1620070190000
Calculated Total Value:	2489900	**Formatted APN:**	1-6-2- 7- 19

Assessed Total Value:	2489900	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC		
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 4

Tax Year:	2019		
Calculated Land Value:	2403400	**Unformatted APN:**	1620070190000
Calculated Total Value:	2495300	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	2495300	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC		
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 5

Tax Year:	2018		
Calculated Land Value:	1997200	**Unformatted APN:**	1620070190000
Calculated Total Value:	2088600	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	2088600	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC		
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 6

Tax Year:	2017		
Calculated Land Value:	1997200	**Unformatted APN:**	1620070190000
Calculated Total Value:	2082300	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	2082300	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC		
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	60 E RIO SALADO PKWY 1103 TEMPE, AZ 85281-9533)

Historical Tax Assessor Record 7

Tax Year:	2016		
Calculated Land Value:	1398100	**Unformatted APN:**	1620070190000
Calculated Total Value:	1481800	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	1481800	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC	**Co-Owner:**	NSHE HI SUNFLOWER LLC
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	60 E RIO SALADO PKWY 1103 TEMPE, AZ 85281-9533)

Historical Tax Assessor Record 8

Tax Year:	2016		
Calculated Land Value:	1398100	**Unformatted APN:**	1620070190000
Calculated Total Value:	1481800	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	1481800	**Original APN:**	1 6 2 007 019 0000
Owner:	KAWAMATA GILBERT K & KATHERINE	**Co-Owner:**	! K & JAMES K & CAROLYN M
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 532B KAMEHAMEHA HWY HALEIWA, HI 96712)

Historical Tax Assessor Record 9

Tax Year:	2015		
Calculated Land Value:	998600	**Unformatted APN:**	1620070190000
Calculated Total Value:	1080700	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	1080700	**Original APN:**	1 6 2 007 019 0000
Owner:	KAWAMATA GILBERT K & JAMES K &	**Co-Owner:**	! CAROLYN M

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Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 10

Tax Year:	2014		
Calculated Land Value:	898800	**Unformatted APN:**	1620070190000
Calculated Total Value:	977000	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	977000		
Owner:	KAWAMATA GILBERT K & JAMES K &	**Co-Owner:**	! CAROLYN M
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 11

Tax Year:	2013		
Calculated Land Value:	942500	**Unformatted APN:**	1620070190000
Calculated Total Value:	1018400	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	1018400		
Owner:	KAWAMATA GILBERT K & JAMES K &	**Co-Owner:**	! CAROLYN M
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 12

Tax Year:	2012		
Calculated Land Value:	858800	**Unformatted APN:**	1620070190000
Calculated Total Value:	933200	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	933200		
Owner:	KAWAMATA GILBERT K & JAMES K &	**Co-Owner:**	! CAROLYN M
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 13

Tax Year:	2011		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	871100	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	871100		
Owner:	KAWAMATA GILBERT K & JAMES K T	**Co-Owner:**	!RUST & CAROLYN M TRU
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 14

Tax Year:	2011		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	871100	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	871100		
Owner:	KAWAMATA GILBERT K & JAMES K T	**Co-Owner:**	!RUST & CAROLYN M TRU
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 15

Tax Year:	2010		
Calculated Land Value:	719000	**Unformatted APN:**	1620070190000
Calculated Total Value:	789400	**Formatted APN:**	1-6-2- 7- 19

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Assessed Total Value:	789400		
Owner:	KAWAMATA GILBERT K & JAMES K T	**Co-Owner:**	!RUST & CAROLYN M TRU
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 16

Tax Year:	2009		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	865400	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	865400		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 17

Tax Year:	2009		
Calculated Land Value:	719000	**Unformatted APN:**	1620070190000
Calculated Total Value:	788700	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	788700		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 18

Tax Year:	2009		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	865400	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	865400		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425)

Historical Tax Assessor Record 19

Tax Year:	2008		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	865400	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	865400		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425)

Historical Tax Assessor Record 20

Tax Year:	2007		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	862300	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	862300		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425)

Historical Tax Assessor Record 21

Tax Year:	2006		
Calculated Land Value:	549200	**Unformatted APN:**	1620070190000
Calculated Total Value:	609100	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	609100		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 540 KAMEHAMEHA HWY HALEIWA, HI 96712-1425)

Historical Tax Assessor Record 22

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Tax Year:	2002		
Calculated Land Value:	308700	**Unformatted APN:**	1620070190000
Calculated Total Value:	360100	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	360100	**Original APN:**	1620070190000
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	532 KAM HWY HALEIWA, HI 96712	**Mailing Address:**	HALEIWA, HI 96712)

Historical Tax Assessor Record 23

Tax Year:	2001		
Calculated Land Value:	281300	**Unformatted APN:**	1620070190000
Calculated Total Value:	333800	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	333800	**Original APN:**	1620070190000
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	SHELL OIL CO
Situs Address:	00066 532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	HALEIWA, HI 96712)

Historical Tax Assessor Record 24

Tax Year:	2000		
Calculated Land Value:	281300	**Unformatted APN:**	1620070190000
Calculated Total Value:	334800	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	334800	**Original APN:**	1620070190000
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	SHELL OIL CO
Situs Address:	66 532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	HALEIWA, HI 96712)

D&B Worldbase (1 Record)

To Summary

BusinessInformation

Business Name:	HI NSHE SUNFLOWER LLC		
Business Address:	HONOLULU, HI 96813	**Mailing Address:**	P O BOX 717 HONOLULU, HI 96808-0717)
County:	HONOLULU		
Country:	USA	**Country:**	USA
Continent:	NORTH AMERICA	**Continent:**	NORTH AMERICA
Year Started:	2017	**Operating Status:**	ACTIVE
Duns ID:	10-943-9879		
Last Update to Record:	08/22/2022		

Management Team

CEO Name:	BRANDY PONTIN	**Title:**	PRINCIPAL

Business Details

Line of Business:	UNDETERMINED		
Primary SIC:	9999	**Primary SIC Description:**	NONCLASSIFIED ESTABLISHMENT
Total Employees:	11-MODELED*	**Employees Here:**	11-MODELED
	*PRINCIPALS NOT INCLUDED IN TOTAL		

Financial Information

Net Worth US:	NOT AVAILABLE	**Profit US:**	NOT AVAILABLE
Net Worth Local:	NOT AVAILABLE	**Profit Local:**	NOT AVAILABLE
Currency:	U.S. DOLLAR		

Sales Information

Annual Sales US:	$53,482-MODELED	**Annual Sales Local:**	$NOT AVAILABLE

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Company History/Operations/Relationships & Other Information

This Company's Specifics			
DUNS:	10-943-9879		
Ownership Is:	PRIVATELY OWNED		
Business Is A:	SINGLE LOCATION		

Parent Company Address:	

Ultimate Company Address:	

Headquarters Company Address:	

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Corporate Filings (1 Record)

To Summary

NSHE HI SUNFLOWER, LLC

Corporation Address:	PO BOX 717 KAHUKU, HI 96731

Filing Record

Filing Date:	5/24/2017		
State of Incorporation:	HAWAII		
Corporation Number:	174214 C5		
Status:	ANNUAL REPORT 1 YR DELINQUENT	**Information Current Through:**	09/13/2023
Duns ID:	10-943-9879	**Filing Office Duns ID:**	36-166-6266
Business Type:	DOMESTIC LIMITED LIABILITY CO		
Office Location Where Filed:	SECRETARY OF STATE/CORPORATIONS DIVISION	**Office Address Where Filed:**	1010 RICHARDS ST FL2 HONOLULU, HI 96813

Officer

Name	Title	Address	Principle Office Location
BRANDY PONTIN			

Registered Agent

Name:	TIFFANY DAVIES		
Address:	201 MERCHANT ST STE 2100 HONOLULU, HI 96813		

Amendments

Effective Date	History Code	Description
05/24/2017	MISCELLANEOUS	ARTICLES OF ORGANIZATION;ARTICLES OF ORGANIZATION

Report Section(s) with no Matches (98 Records)

Phone Numbers, Full Business Description (SEC Filings), FEIN Records Summary, Business Finder Records Summary, Business Profile Records Summary, D&B Market Identifier Records Summary, Marijuana-Related Business Records Summary, Fictitious Business Names Summary, Money Service Business Records Summary, NPI Records Summary, News, Businesses with Same Phone Number, Businesses with Same Address, People

with Same Phone Number, People with Same Address, Business Contact Records Summary, Executive Affiliations Summary, Executive Biographies Summary, Executive Profile Records Summary, Professional Licenses Summary, Beneficial and Management Ownership (SEC Filings), Listing of Officers and Directors (SEC Filings), Legal Advisors, Financial Advisors, Matters Related to Accountants and Financial Statements (SEC Filings), FAA Aircraft Registrations Summary, Real Property Pre-Foreclosure Records Summary, Real Property Transactions Summary, Watercraft Summary, Bankruptcy Records Summary, Bankruptcy or Receivership (SEC Filings), UCC Filings Summary, Liens & Judgments Summary, Criminal Records Summary, Arrest Records Summary, Global Sanctions Summary, OFAC Infractions Summary, Healthcare Sanctions Summary, Company Disclosed Risk Factors (SEC Filings), Lawsuit Records Summary, Federal Case Law, State Case Law, Docket Records, Company Disclosed Legal Proceedings (SEC Filings), SEC Filings, SEC Insider Filings, Subsidiaries Disclosed in SEC Filings, SEC Staff Review Letters, SEC No Action Letters, Registrations & Prospectuses Transactions, Controls and Procedures (SEC Filings), Quantitative and Qualitative Discussions About Market Risk (SEC Filings), Material Modifications to Rights of Security Holders (SEC Filings), Unregistered Sales of Equity Securities (SEC Filings), Notice of Delisting Failure to Satisfy Listing Rule or Transfer of Listing (SEC Filings), SEDAR Filings, Mergers & Acquisitions Transactions, Mergers & Acquisitions Agreements, Business Organization Agreements, Capital Market Agreements, Corporate Finance Agreements, Private Equity Agreements, Intellectual Property Agreements, Other Material Agreements, Entry or Termination of a Material Definitive Agreement (SEC Filings), Changes in Control of Registrant (SEC Filings), Relationships and Related Transactions (SEC Filings), Financials - Annual, Ratios, Company Profile, Executive Officers, Folder Content, Lawsuit Records, Bankruptcy Records, UCC Filings, Liens & Judgments, Criminal Records, Arrest Records, Global Sanctions, OFAC Infractions, Healthcare Sanctions, FAA Aircraft Registrations, Real Property Pre-Foreclosure Records, Real Property Transactions, Watercraft, Business Contact Records, Executive Affiliations, Executive Biographies, Executive Profile Records, Professional Licenses, FEIN Records, Business Finder Records, Business Profile Records, D&B Market Identifier Records, Marijuana-Related Business Records, Fictitious Business Names, Money Service Business Records, NPI Records

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(8 Records)

Business Overview (1)
Quick Analysis Flags (1)
Associate Analytics Chart (1)
Background Information
Corporate Filings Summary (1)
Potential Assets
Real Property Tax Assessor Records Summary (1)
Full-Text Documents
Real Property Tax Assessor Records (1)
Corporate Filings (1)
Miscellaneous
Report Section(s) with no Matches (104)

Business Overview (1 Section)



Address:	PO BOX 717 KAHUKU, HI 96731
Additional Entity Source(s):	Corporate Filings - Secretary of State
Active Ticker Symbols:	
Inactive Ticker Symbols:	
Location of Incorporation:	HAWAII
Registered Agent:	TIFFANY DAVIES
Filing Date:	05/24/2017
Filing Number:	174214 C5
Officers/Directors/Contacts:	BRANDY PONTIN, OFFICER-MEM

Corporate Filings Summary (1 Record)

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	Business Name	Business Type	Status	Filing State	View Full-Text
1.	NSHE HI SUNFLOWER, LLC	DOMESTIC LIMITED LIABILITY CO	ACTIVE	HI	Full-Text

Quick Analysis Flags (1 Chart)

List of Possible Quick Analysis Flags

OFAC listing:	No
Global Sanctions:	No
Business Address Used as Residential Address:	YES
P.O. Box listed as Address:	YES
Bankruptcy Debtor or Creditor:	No
Other Listings Linked to Business Phone Number:	No
Other Businesses Linked to the Business Address:	YES
Other Businesses Linked to Same FEIN:	No
Key Nature of Suit:	No
Party to a Class Action last 12 months:	No
Going Concern:	No
MSB listing:	No
Healthcare Sanction:	No

Associate Analytics Chart (1 Chart)

Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
NSHE HI CEPHEUS, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI MIMOSA, LLC			Shared Person Contact	No	No
98-1538 AKAAKA LLC	98-1538 AKAAKA ST AIEA, HI 96701	Street	Shared Person Contact	No	No
NSHE HI MONOCEROS, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI BELLFLOWER, LLC	15 COCONUT GROVE LN UNIT 15 LAHAINA, HI 96761	Street	Shared Person Contact	No	No
NAPOOPOO ROAD 1031, LLC	2425 E CAMELBACK RD STE 200 PHOENIX, AZ 85016	High Rise	Shared Person Contact	No	No
NSHE HI DELPHINIS, LLC	1188 BISHOP ST STE 2503 HONOLULU, HI 96813	High Rise	Shared Person Contact	No	No

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Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
MELE KAI, LLC	MICHAEL W. BONE;655 ASHLAND AVE SANTA MONICA, CA 90405		Shared Person Contact	No	No
NSHE HI ANTLIA, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
HHR AMW LLC	4747 BETHESDA AVE STE 1300 BETHESDA, MD 20814	High Rise	Shared Person Contact	No	No
NSHE HI CAPRICORNUS, LLC	PO BOX 50106 PASADENA, CA 91115	Post Office Box	Shared Person Contact	No	No
JOHN & HIROMI YEE LLC	2425 E CAMELBACK RD STE 200 PHOENIX, AZ 85016	High Rise	Shared Person Contact	No	No
NSHE HI BLUEBELL, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI THISTLE, LLC	PO BOX 82 PAPAIKOU, HI 96781	Post Office Box	Shared Person Contact	No	No
NSHE HI HYDRUS, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI BUTTERCUP, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI ALEXANDRITE, LLC	122 WOODSTOCK AVE KENILWORTH, IL 60043	Street	Shared Person Contact	No	No
NSHE HI CHAMAELEON, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
TEAM Z HAWAII, LLC	ALLAN I. ZACKLER;120 SANDRINGHAM RD PIEDMONT, CA 94611		Shared Person Contact	No	No
NSHE HI SUNFLOWER, LLC	PO BOX 717 KAHUKU, HI 96731	Post Office Box	Shared Business Name	No	No

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Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
NSHE HI TANSY, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
STEVE'S HAWAII LLC	2425 E CAMELBACK RD STE 200 PHOENIX, AZ 85016	High Rise	Shared Person Contact	No	No
POHAKU MOKU, LLC	150 E CARRILLO ST SANTA BARBARA, CA 93101	Street	Shared Person Contact	No	No
NSHE HI CHERRY BLOSSOM, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
GERALD RYUSAKI PROPERTIES, LLC	2291 LAUWILIWILI ST KAPOLEI, HI 96707	Street	Shared Person Contact	No	No
NSHE HI CARNATION, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI BOTTLEBRUSH, LLC			Shared Person Contact	No	No
TFT ALOHA PROPERTIES, LLC	6581 GRIFFIN CREEK RD MEDFORD, OR 97501	Street	Shared Person Contact	No	No
SPILL THE TEA CAFE	47-283 HUI IWA ST APT A KANEOHE, HI 96744	High Rise	Shared Person Contact	No	No
130 KAI MALINA, LLC	2425 E CAMELBACK RD STE 200 PHOENIX, AZ 85016	High Rise	Shared Person Contact	No	No
241 AMAKIHI WAY, LLC	26183 ENGELMANN RD VALLEY CENTER, CA 92082	Street	Shared Person Contact	No	No
NSHE HI BEGONIA, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI	60 E RIO SALADO PKWY STE 1103	High Rise	Shared Person Contact	No	No

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Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
FREESIA, LLC	TEMPE, AZ 85281				
NSHE HI CAMELLIAS, LLC	1039 HOOMAIKAI ST HONOLULU, HI 96817	Street	Shared Person Contact	No	No
ASTON BREEZE LLC	21832 SE 245TH ST MAPLE VALLEY, WA 98038	Street	Shared Person Contact	No	No
NSHE HI BERGAMOT, LLC	60 E RIO SALADO PKWY STE 1103 TEMPE, AZ 85281	High Rise	Shared Person Contact	No	No
NSHE HI NARCISSUS, LLC	PO BOX 717 KAHUKU, HI 96731	Post Office Box	Shared Business Name	No	No
NSHE HI FOXGLOVE, LLC	PO BOX 82 PAPAIKOU, HI 96781	Post Office Box	Shared Person Contact	No	No

Real Property Tax Assessor Records Summary (1 Record)

	Property Address	Property Type	Market Value	Tax Year	County	View Full-Text
1.	66 532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	SERVICE	$2,489,900.00	2020	HONOLULU	Full-Text

Real Property Tax Assessor Records (1 Record)

To Summary

66 532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425

TAX RECORD - HONOLULU County		TAX YEAR 2020	
Situs Address:	66 532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425		
Owner:	NSHE HI NARCISSUS LLC		
Additional Name:	NSHE HI NARCISSUS LLC		
		Owner Corporate Indicator:	CORPORATE OWNER

TAX RECORD - HONOLULU County		TAX YEAR 2020	
Situs Address:	66 532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425		
Owner:	NSHE HI NARCISSUS LLC		
Additional Name:	NSHE HI NARCISSUS LLC		
		Owner Corporate Indicator:	CORPORATE OWNER

FIPS Code:	HONOLULU	**Municipality Name:**	OAHU
FIPS Sub Code:	000		
FIPS State Code:	HAWAII	**Subdivision Name:**	JOHN CLINE MANN
APN Sequence Number:	1	**Property Indicator:**	SERVICE

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Unformatted APN:	1620070190000	**Land Use:**	SERVICE STATION
Formatted APN:	1-6-2- 7- 19		
Original APN:	1 6 2 007 019 0000	**Land Square Footage:**	12047
Acres:	0.2766		
		Legal Description:	RP 906 LCAW 2939: APANA 1 12,047 SF
		Zoning:	B-1

Calculated Land Value:	2403400	**Market Land Value:**	2403400
Calculated Improvement Value:	86500	**Market Improvement Value:**	86500
Calculated Total Value:	$2,489,900.00	**Market Total Value:**	$2,489,900.00
Assessed Land Value:	2403400		
Assessed Improvement Value:	86500	**Total Value Calculated Indicator:**	MARKET
Assessed Total Value:	2489900		
Tax Year:	2020		
Tax Amount:	30941.72		
Tax Code Area:	3		

Year Built:	1963	**Number of Buildings:**	1
Lot Area:	6000012047COMMERCIAL		
Building Code:	SERVICE STATION		
		Number of Units:	1
		Construction Quality:	FAIR
Garage Type:	CARPORT		

Sale Date:	09/29/2017	**Deed Type:**	GRANT DEED
Seller Name:	KAWAMATA GILBERT K TRUST	**Type of Sale:**	RESALE
Sale Price:	1950000	**Sale Code:**	O
		Document Number:	A64860321
Recording Date:	10/04/2017		
		Title Company:	TITLE GUARANTY

		Number of Parcels:	Y Y

Historical Tax Assessor Record 1

Tax Year:	2019		
Calculated Land Value:	2403400	**Unformatted APN:**	1620070190000
Calculated Total Value:	2495300	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	2495300	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC		
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 2

Tax Year:	2018		
Calculated Land Value:	1997200	**Unformatted APN:**	1620070190000
Calculated Total Value:	2088600	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	2088600	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC		
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	PO BOX 717 KAHUKU, HI 96731-0717)

Historical Tax Assessor Record 3

Tax Year:	2017		
Calculated Land Value:	1997200	**Unformatted APN:**	1620070190000
Calculated Total Value:	2082300	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	2082300	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC		
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	60 E RIO SALADO PKWY 1103 TEMPE, AZ 85281-9533)

Historical Tax Assessor Record 4

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Tax Year:	2016		
Calculated Land Value:	1398100	**Unformatted APN:**	1620070190000
Calculated Total Value:	1481800	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	1481800	**Original APN:**	1 6 2 007 019 0000
Owner:	NSHE HI NARCISSUS LLC	**Co-Owner:**	NSHE HI SUNFLOWER LLC
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	60 E RIO SALADO PKWY 1103 TEMPE, AZ 85281-9533)

Historical Tax Assessor Record 5

Tax Year:	2016		
Calculated Land Value:	1398100	**Unformatted APN:**	1620070190000
Calculated Total Value:	1481800	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	1481800	**Original APN:**	1 6 2 007 019 0000
Owner:	KAWAMATA GILBERT K & KATHERINE	**Co-Owner:**	! K & JAMES K & CAROLYN M
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 532B KAMEHAMEHA HWY HALEIWA, HI 96712)

Historical Tax Assessor Record 6

Tax Year:	2015		
Calculated Land Value:	998600	**Unformatted APN:**	1620070190000
Calculated Total Value:	1080700	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	1080700	**Original APN:**	1 6 2 007 019 0000
Owner:	KAWAMATA GILBERT K & JAMES K &	**Co-Owner:**	! CAROLYN M
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 7

Tax Year:	2014		
Calculated Land Value:	898800	**Unformatted APN:**	1620070190000
Calculated Total Value:	977000	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	977000		
Owner:	KAWAMATA GILBERT K & JAMES K &	**Co-Owner:**	! CAROLYN M
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 8

Tax Year:	2013		
Calculated Land Value:	942500	**Unformatted APN:**	1620070190000
Calculated Total Value:	1018400	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	1018400		
Owner:	KAWAMATA GILBERT K & JAMES K &	**Co-Owner:**	! CAROLYN M
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 9

Tax Year:	2012		
Calculated Land Value:	858800	**Unformatted APN:**	1620070190000
Calculated Total Value:	933200	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	933200		
Owner:	KAWAMATA GILBERT K & JAMES K &	**Co-Owner:**	! CAROLYN M
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

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Historical Tax Assessor Record 10

Tax Year:	2011		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	871100	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	871100		
Owner:	KAWAMATA GILBERT K & JAMES K T	**Co-Owner:**	!RUST & CAROLYN M TRU
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 11

Tax Year:	2011		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	871100	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	871100		
Owner:	KAWAMATA GILBERT K & JAMES K T	**Co-Owner:**	!RUST & CAROLYN M TRU
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 12

Tax Year:	2010		
Calculated Land Value:	719000	**Unformatted APN:**	1620070190000
Calculated Total Value:	789400	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	789400		
Owner:	KAWAMATA GILBERT K & JAMES K T	**Co-Owner:**	!RUST & CAROLYN M TRU
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 13

Tax Year:	2009		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	865400	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	865400		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 14

Tax Year:	2009		
Calculated Land Value:	719000	**Unformatted APN:**	1620070190000
Calculated Total Value:	788700	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	788700		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-2431)

Historical Tax Assessor Record 15

Tax Year:	2009		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	865400	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	865400		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425)

Historical Tax Assessor Record 16

Tax Year:	2008

Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	865400	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	865400		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425)

Historical Tax Assessor Record 17

Tax Year:	2007		
Calculated Land Value:	798900	**Unformatted APN:**	1620070190000
Calculated Total Value:	862300	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	862300		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 KAMEHAMEHA HWY HALEIWA, HI 96712-1425)

Historical Tax Assessor Record 18

Tax Year:	2006		
Calculated Land Value:	549200	**Unformatted APN:**	1620070190000
Calculated Total Value:	609100	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	609100		
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	66 0000000532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	66 540 KAMEHAMEHA HWY HALEIWA, HI 96712-1425)

Historical Tax Assessor Record 19

Tax Year:	2002		
Calculated Land Value:	308700	**Unformatted APN:**	1620070190000
Calculated Total Value:	360100	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	360100	**Original APN:**	1620070190000
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	KAWAMATA JAMES K
Situs Address:	532 KAM HWY HALEIWA, HI 96712	**Mailing Address:**	HALEIWA, HI 96712)

Historical Tax Assessor Record 20

Tax Year:	2001		
Calculated Land Value:	281300	**Unformatted APN:**	1620070190000
Calculated Total Value:	333800	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	333800	**Original APN:**	1620070190000
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	SHELL OIL CO
Situs Address:	00066 532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	HALEIWA, HI 96712)

Historical Tax Assessor Record 21

Tax Year:	2000		
Calculated Land Value:	281300	**Unformatted APN:**	1620070190000
Calculated Total Value:	334800	**Formatted APN:**	1-6-2- 7- 19
Assessed Total Value:	334800	**Original APN:**	1620070190000
Owner:	KAWAMATA GILBERT K	**Co-Owner:**	SHELL OIL CO
Situs Address:	66 532 KAMEHAMEHA HWY HALEIWA, HI 96712-1425	**Mailing Address:**	HALEIWA, HI 96712)

Corporate Filings (1 Record)

To Summary

NSHE HI SUNFLOWER, LLC

Corporation Address:	PO BOX 717 KAHUKU, HI 96731

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Filing Record

Filing Date:	5/24/2017		
State of Incorporation:	HAWAII		
Corporation Number:	174214 C5		
Status:	ACTIVE	**Information Current Through:**	03/05/2019
Business Type:	DOMESTIC LIMITED LIABILITY CO		
Office Location Where Filed:	SECRETARY OF STATE/CORPORATIONS DIVISION	**Office Address Where Filed:**	1010 RICHARDS ST FL2 HONOLULU, HI 96813

Officer

Name	Title	Address	Principle Office Location
BRANDY PONTIN			

Registered Agent

Name:	TIFFANY DAVIES		
Address:	201 MERCHANT ST, STE 2100 HONOLULU, HI 96813		

Amendments

Effective Date	History Code	Description
05/24/2017	MISCELLANEOUS	ARTICLES OF ORGANIZATION;ARTICLES OF ORGANIZATION

Report Section(s) with no Matches (104 Records)

Phone Numbers, Full Business Description (SEC Filings), FEIN Records, Business Finder Records, Business Profile Records, D&B Market Identifier Records, D&B Worldbase, D&B PCI, Marijuana-Related Business Records, Fictitious Business Names, Annual Reports, Money Service Business Records, NPI Records, News, Businesses with Same Phone Number, Businesses with Same Address, People with Same Phone Number, People with Same Address, Executive Affiliations, Executive Biographies, Executive Profile Records, Professional Licenses, Beneficial and Management Ownership (SEC Filings), Listing of Officers and Directors (SEC Filings), Legal Advisors, Financial Advisors, Matters Related to Accountants and Financial Statements (SEC Filings), FAA Aircraft Registrations, Real Property Pre-Foreclosure Records, Real Property Transactions, Watercraft, Bankruptcy Records, Bankruptcy or Receivership (SEC Filings), UCC Filings, Liens & Judgments, Criminal Records, Arrest Records, Global Sanctions, OFAC Infractions, Healthcare Sanctions, Company Disclosed Risk Factors (SEC Filings), Lawsuit Records, Federal Case Law, State Case Law, Docket Records, Company Disclosed Legal Proceedings (SEC Filings), SEC Filings, SEC Insider Filings, Subsidiaries Disclosed in SEC Filings, SEC Staff Review Letters, SEC No Action Letters, Registrations & Prospectuses Transactions, Other Securities Filings, Controls and Procedures (SEC Filings), Quantitative and Qualitative Discussions About Market Risk (SEC Filings), Material Modifications to Rights of Security Holders (SEC Filings), Unregistered Sales of Equity Securities (SEC Filings), Notice of Delisting Failure to Satisfy Listing Rule or Transfer of Listing (SEC Filings), SEDAR Filings, UK Listing Authority Filings, International Prospectuses & 144As, Mergers & Acquisitions Transactions, Mergers & Acquisitions Agreements, Business Organization Agreements, Capital Market Agreements, Corporate Finance Agreements, Private Equity Agreements, Intellectual Property Agreements, Other Material Agreements, Entry or Termination of a Material Definitive Agreement (SEC Filings), Changes in Control of Registrant (SEC Filings), Relationships and Related Transactions (SEC Filings), Financials - Annual, Ratios, Company Profile, Executive Officers, Folder Content, NPI Records Summary, Money Service Business Records Summary, Fictitious Business Names Summary, Marijuana-Related Business Records Summary, D&B PCI Summary, D&B Worldbase Summary, D&B Market Identifier Records Summary, Business Profile Records Summary, Business Finder Records Summary, FEIN Records Summary, Professional Licenses Summary, Executive Profile Records Summary, Executive

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Biographies Summary, Executive Affiliations Summary, Watercraft Summary, Real Property Transactions Summary, Real Property Pre-Foreclosure Records Summary, FAA Aircraft Registrations Summary, Healthcare Sanctions Summary, OFAC Infractions Summary, Global Sanctions Summary, Arrest Records Summary, Criminal Records Summary, Liens & Judgments Summary, UCC Filings Summary, Bankruptcy Records Summary, Lawsuit Records Summary

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Business Information

MASTER NAME	NSHE HI SUNFLOWER, LLC
BUSINESS TYPE	Domestic Limited Liability Company (LLC)
FILE NUMBER	174214 C5
STATUS	Active
PLACE INCORPORATED	Hawaii UNITED STATES
REGISTRATION DATE	May 24, 2017
MAILING ADDRESS	PO BOX 717 KAHUKU, Hawaii 96731 UNITED STATES
PARTNER TERMS	AT-WILL
MANAGED BY	MEMBER(S)
AGENT NAME	TIFFANY DAVIES
AGENT ADDRESS	201 MERCHANT ST, STE 2100 HONOLULU, Hawaii 96813 UNITED STATES

Annual Filings

FILING YEAR	DATE RECEIVED	STATUS
2021		Not Filed
2020	May 19, 2020	Processed
2019	May 3, 2019	Processed
2018	Feb 28, 2019	Processed

Officers

NAME	OFFICE	DATE
BRANDY PONTIN	MEM	Apr 1, 2018

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General Info

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Trade Name
BIG ROCK RANCH

File Number
479764 ZZ

Certificate Number
4252042

Status
Active

Purpose
HORSE AND CATTLE RANCH

Category
0 - NO CATEGORY SELECTED

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Expiration Date
Apr 4, 2026

Registration Date
Apr 5, 2021

Mailing Address
56-970 KAMEHAMEHA HWY
KAHUKU, Hawaii 96731
UNITED STATES

Registrant
DUKE PONTIN

Other Filings

Date	Description	Remarks
Apr 5, 2021	Application for Registration of TN/TM/SM	Application for Registration of TN/TM/SM

Note: Transactions may be available for purchase. Please see the **Buy Available Docs** tab for additional information.

BREG DCCA | Contact us (http://cca.hawaii.gov/breg/contact/)
King Kalakaua Building
335 Merchant St Rm 201
Honolulu, Hawaii 96813

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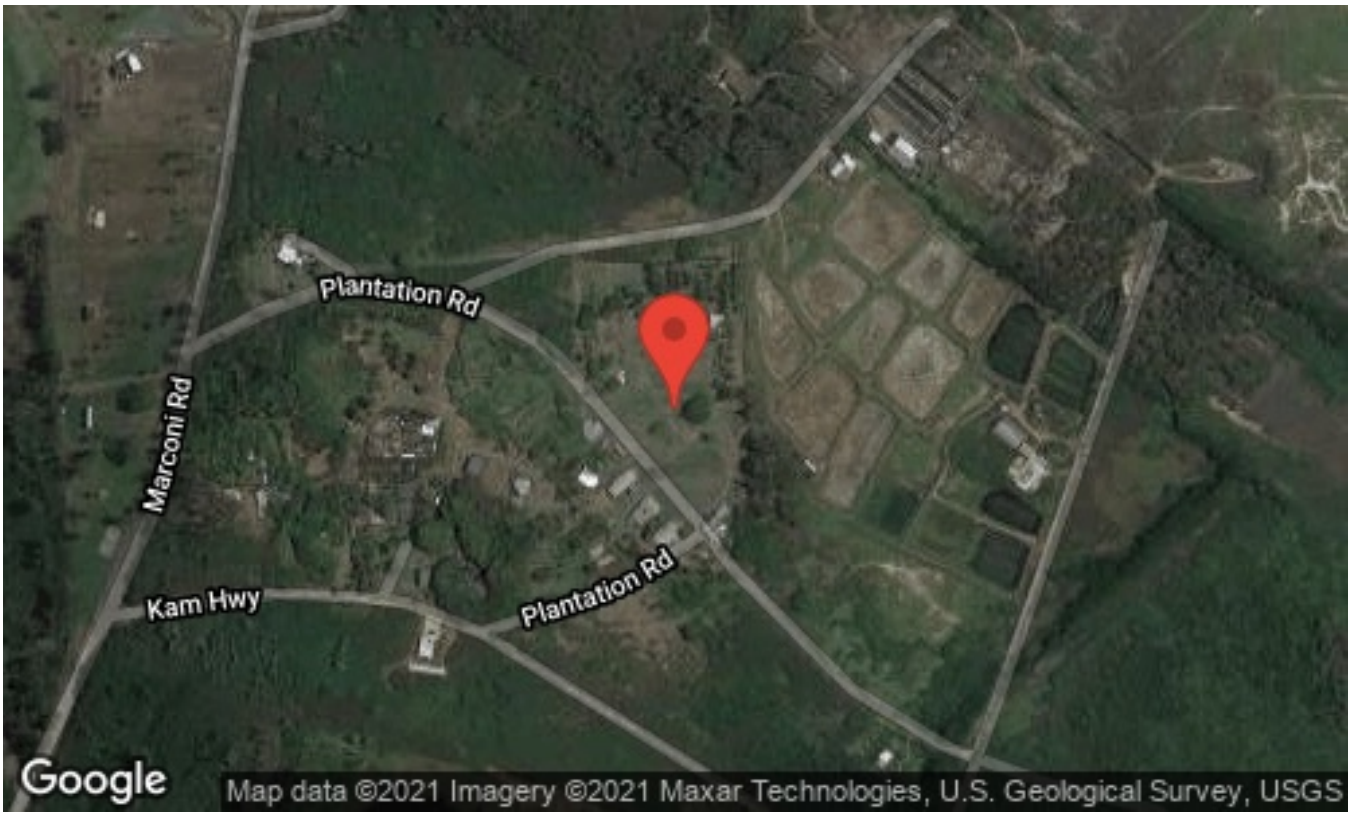
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(14 Records)

Business Overview (1)
Phone Numbers (1)
Businesses with Same Phone Number (1)
People with Same Address (1)
Quick Analysis Flags (1)
Associate Analytics Chart (1)
Federal Case Law (6)
State Case Law (2)
Docket Records (8)
Background Information
D&B Market Identifier Records Summary (1)
D&B Worldbase Summary (1)
Full-Text Documents
D&B Market Identifier Records (1)
D&B Worldbase (1)
Miscellaneous
Report Section(s) with no Matches (98)

Business Overview (1 Section)



Address:	56-970 KAM HWY KAHUKU, HI 96731
Phone Number:	(305) 923-5458
Additional Entity Source(s):	D&B Market Identifiers (DMI) D&B Worldbase
Active Ticker Symbols:	
Inactive Ticker Symbols:	
DUNS:	07-889-3137

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Number of Employees:	1
Officers/Directors/Contacts:	DUKE PONTIN, OWNER

Phone Numbers (1 Record)

Business	Phone Number
DUKE PONTIN	(305) 923-5458

D&B Market Identifier Records Summary (1 Record)

	Business Name	Business Address	Executive Name	SIC Description	Latest Update to Record	View Full-Text
1.	DUKE PONTIN	56-970 KAM HWY KAHUKU, HI 96731	DUKE PONTIN	COMBINATION UTILITIES, NEC	11/04/2018	Full-Text

D&B Worldbase Summary (1 Record)

	Business Name	Business Address	View Full-Text
1.	DUKE PONTIN	56-970 KAM HWY KAHUKU, HI 96731USA	Full-Text

Businesses with Same Phone Number (1 Record)

(305) 923-5458

SPIRIT MARINE TOWING & ASSISTANCE		

People with Same Address (1 Record)

56-970 KAMEHAMEHA HWY KAHUKU, HI 96731

ANNEKE BAILEY	KATE NOLAN	KATHERINE NEVILLE
DUKE PONTIN		

Quick Analysis Flags (1 Chart)

List of Possible Quick Analysis Flags

OFAC listing:	No
Global Sanctions:	No
Business Address Used as Residential Address:	YES
P.O. Box listed as Address:	No
Bankruptcy Debtor or Creditor:	No
Other Listings Linked to Business Phone Number:	YES
Other Businesses Linked to the Business Address:	YES
Other Businesses Linked to Same FEIN:	No
Key Nature of Suit:	No

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Party to a Class Action last 12 months:	No
Going Concern:	No
MSB listing:	No
Healthcare Sanction:	No

Associate Analytics Chart (1 Chart)

Associates	Address	Address Type	Strength/Type of Association	Global Sanctions?	OFAC?
POHAKU NUI RANCH	56-970 KAMEHAMEHA HWY KAHUKU, HI 96731	Street	Shared Named Executive	No	No
SPIRIT MARINE	PO BOX 717 KAHUKU, HI 96731	Post Office Box	Shared Person Contact	No	No
DUKE PONTIN	56-970 KAMEHAMEHA HWY KAHUKU, HI 96731	Street	Shared Business Name	No	No
SPIRIT MARINE TOWING & ASSISTANCE	911 W INDIES DR SUMMERLAND KEY, FL 33042	Street	Shared Person Contact	No	No
SPIRIT MARINE TOWING & SALVAGE	PO BOX 244 BIG PINE KEY, FL 33043	Post Office Box	Shared Person Contact	No	No
PONTIN, DUKE	56-970 KAM HWY KAHUKU, HI 96731	Street	Shared Phone Number	No	No
SEA TOW SERVICES FL KEYS	PO BOX 244 BIG PINE KEY, FL 33043		Shared Person Contact	No	No
PONTIN, DUKE	56211 KAM HIGH WAY KAHUKU, HI 96731	Street	Shared Phone Number	No	No
SLENDER QUEST OF BIG PINE KEY, INC.	1501 W INDIES DR;P.O. BOX 244 BIG PINE KEY RAMROD KEY, FL 33043		Shared Person Contact	No	No
SPIRIT MARINE TOWING & ASSISTANCE	25123 OVERSEAS HWY SUMMERLAND KEY, FL 33042		Shared Person Contact	No	No
PONTIN DUKE	PO BOX 244 BIG PINE KEY, FL 33043		Shared Person Contact	No	No

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Federal Case Law (6 Records)

	Case Title	Westlaw Case Number	Filing Date	Court	Company Interest
1.	Sea Tow Intern., Inc. v. Pontin	2007 WL 4180679		E.D.N.Y.	
2.	Sea Tow Servs. Int'l, Inc. v. Pontin	2011 WL 6091677		C.A.2 (N.Y.)	
3.	Sea Tow Services Intern., Inc. v. Pontin	2007 WL 1135601		E.D.N.Y.	
4.	Sea Tow Services Intern., Inc. v. Pontin	2009 WL 706250		E.D.N.Y.	
5.	Sea Tow Intern., Inc. v. Pontin	2007 WL 3409416		E.D.N.Y.	
6.	Sea Tow Services Intern., Inc. v. Pontin	2007 WL 162762		E.D.N.Y.	

State Case Law (2 Records)

	Case Title	Westlaw Case Number	Filing Date	Court	Company Interest
1.	Sea Tow Services Intern., Inc. v. Pontin	2007 WL 4482163		Fla.App. 3 Dist.	
2.	Frohnhoefer v. Pontin	2007 WL 981632		Fla.App. 3 Dist.	

Docket Records (8 Records)

	Docket Title	Docket Number	Filing Date	Court	Nature of Suit	Company Interest
1.	SEA TOW SERVICES INTERNATIONAL v. PONTIN	10-2314	06/11/2010	2ND CIR.	3840 PROPERTY RIGHTS-TRADEMARK, INTELLECTUAL PROPERTY, TRADEMARK/TRADE NAME	

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	Docket Title	Docket Number	Filing Date	Court	Nature of Suit	Company Interest
2.	Gulf Coast Hatteras, et al v. Pontin, et al	4:05-CV-10092	08/30/2005	S.D.FLA.	Other Statutes: Other Statutory Actions (890), Other Federal Statutes, Other Federal Statutory Actions	
3.	SEA TOW SERVICES INTERNATIONAL, INC., v. DUKE PONTIN, ETC., ET AL.	3D06-3036	12/12/2006	FLA.APP. 3 DIST.	APPEALS	
4.	Sea Tow Services International, Inc. v. Pontin et al	2:06-CV-03461	07/14/2006	E.D.N.Y.	Property Rights: Trademark (840), Intellectual Property, Trademark/Trade Name	
5.	SEA TOW SERVICES INTERNATIONAL v. PONTIN	10-3023	07/22/2010	2ND CIR.	3840 PROPERTY RIGHTS-TRADEMARK, INTELLECTUAL PROPERTY, TRADEMARK/TRADE NAME	
6.	Dawn Wasson v. Brandi Pontin Et Al	1SS141000227	03/12/2014	Hawai'i Dist.	Remedies, Temporary Restraining Order	
7.	JOSEPH J. FROHNHOEFER, ET AL., v. DUKE PONTIN D/B/A SPIRIT TOWING, ETC., ET AL.	3D06-1921	08/02/2006	FLA.APP. 3 DIST.	APPEALS	
8.	Cole, Schotz, Meisel, Forman & Leonard, P.A. v. Pontin, et al	2:12-CV-00158	01/12/2012	E.D.N.Y.	Contract: Other Contract (190), Contracts, Other Contract	

D&B Market Identifier Records (1 Record)

To Summary

56-970 KAM HWY KAHUKU, HI 96731

BusinessInformation

Business Name:	DUKE PONTIN		
Business Address:	56-970 KAM HWY KAHUKU, HI 96731	**County:**	HONOLULU
Year Started:	2010	**Phone:**	(305) 923-5458
Line of Business:	COMBINATION UTILITIES		

Executive Information

Executive Name:	DUKE PONTIN	**Executive Title:**	OWNER

SIC Information

Primary SIC:	4939	**SIC Description:**	COMBINATION UTILITIES, NEC
Primary SIC:	4939 0000	**SIC Description:**	COMBINATION UTILITIES, NEC

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Financial Information

Annual Sales:	$47,179-ESTIMATED	**Annual Sales Revision Date:**	Annual Sales Revision Date:06/06/2020
1-Yr-Ago:	$ NOT AVAILABLE	**3-Yr-Ago:**	$ NOT AVAILABLE
Sales Growth:	%		
MSA Code:	3320	**MSA Name:**	HONOLULU, HI
		Industry Group:	TRANSPORATION, COMMUNICATION, ELECTRIC, GAS, AND SANITARY SERVICES

Employee Information

Employees Total:	1	**Employees Here:**	1-ACTUAL
1-Yr-Ago:	1	**Employment Growth:**	%
3-Yr-Ago:	1		

Other Information

DUNS:	07-889-3137		
Business Is A:	SINGLE LOCATION PROPRIETORSHIP SMALL BUSINESS	**Establishment Is:**	US OWNED
Last Update to Record:	11/04/2018		

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D&B Worldbase (1 Record)

To Summary

BusinessInformation

Business Name:	DUKE PONTIN		
Business Address:	56-970 KAM HWY KAHUKU, HI 96731	**Mailing Address:**	P O BOX 717 KAHUKU, HI 96731-0717)
County:	HONOLULU		
Country:	USA	**Country:**	USA
Continent:	NORTH AMERICA	**Continent:**	NORTH AMERICA
Phone Number:	(305) 923-5458		
Year Started:	2010	**Operating Status:**	ACTIVE
Duns ID:	07-889-3137		
Last Update to Record:	11/03/2018		

Management Team

CEO Name:	DUKE PONTIN	**Title:**	OWNER

Business Details

Line of Business:	COMB UTILITIES NEC		
Primary SIC:	4939	**Primary SIC Description:**	COMBINATION UTILITIES
Total Employees:	1-ACTUAL*	**Employees Here:**	1-ACTUAL
	*PRINCIPALS INCLUDED IN TOTAL		

Financial Information

Net Worth US:	NOT AVAILABLE	**Profit US:**	NOT AVAILABLE
Net Worth Local:	NOT AVAILABLE	**Profit Local:**	NOT AVAILABLE
Currency:	U.S. DOLLAR		

Sales Information

Annual Sales US:	$47,179-MODELED	**Annual Sales Local:**	$NOT AVAILABLE

Company History/Operations/Relationships & Other Information

This Company's Specifics			
DUNS:	07-889-3137		
Ownership Is:	PRIVATELY OWNED		
Business Is A:	SINGLE LOCATION		

Data by Dun & Bradstreet, COPYRIGHT ©2021 DUN & BRADSTREET, INC.

Report Section(s) with no Matches (98 Records)

Full Business Description (SEC Filings), FEIN Records Summary, Business Finder Records Summary, Business Profile Records Summary, D&B PCI Summary, Corporate Filings Summary, Marijuana-Related Business Records Summary, Fictitious Business Names Summary, Annual Reports, Money Service Business Records Summary, NPI Records Summary, News, Businesses with Same Address, People with Same Phone Number, Executive Affiliations Summary, Executive Biographies Summary, Executive Profile Records Summary, Professional Licenses Summary, Beneficial and Management Ownership (SEC Filings), Listing of Officers and Directors (SEC Filings), Legal Advisors, Financial Advisors, Matters Related to Accountants and Financial Statements (SEC Filings), FAA Aircraft Registrations Summary, Real Property Pre-Foreclosure Records Summary, Real Property Tax Assessor Records Summary, Real Property Transactions Summary, Watercraft Summary, Bankruptcy Records Summary, Bankruptcy or Receivership (SEC Filings), UCC Filings Summary, Liens & Judgments Summary, Criminal Records Summary, Arrest Records Summary, Global Sanctions Summary, OFAC Infractions Summary, Healthcare Sanctions Summary, Company Disclosed Risk Factors (SEC Filings), Lawsuit Records Summary, Company Disclosed Legal Proceedings (SEC Filings), SEC Filings, SEC Insider Filings, Subsidiaries Disclosed in SEC Filings, SEC Staff Review Letters, SEC No Action Letters, Registrations & Prospectuses Transactions, Other Securities Filings, Controls and Procedures (SEC Filings), Quantitative and Qualitative Discussions About Market Risk (SEC Filings), Material Modifications to Rights of Security Holders (SEC Filings), Unregistered Sales of Equity Securities (SEC Filings), Notice of Delisting Failure to Satisfy Listing Rule or Transfer of Listing (SEC Filings), SEDAR Filings, UK Listing Authority Filings, International Prospectuses & 144As, Mergers & Acquisitions Transactions, Mergers & Acquisitions Agreements, Business Organization Agreements, Capital Market Agreements, Corporate Finance Agreements, Private Equity Agreements, Intellectual Property Agreements, Other Material Agreements, Entry or Termination of a Material Definitive Agreement (SEC Filings), Changes in Control of Registrant (SEC Filings), Relationships and Related Transactions (SEC Filings), Financials - Annual, Ratios, Company Profile, Executive Officers, Folder Content, Lawsuit Records, Bankruptcy Records, UCC Filings, Liens & Judgments, Criminal Records, Arrest Records, Global Sanctions, OFAC Infractions, Healthcare Sanctions, FAA Aircraft Registrations, Real Property Pre-Foreclosure Records, Real Property Tax Assessor Records, Real Property Transactions, Watercraft, Executive Affiliations, Executive Biographies, Executive Profile Records, Professional Licenses, FEIN Records, Business Finder Records, Business Profile Records, D&B PCI, Corporate Filings, Marijuana-Related Business Records, Fictitious Business Names, Money Service Business Records, NPI Records

4th

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECORDED
October 04, 2017 8:01 AM
Doc No(s) A – 64860321

1 2/2 ICL
B – 33059573

/s/ LESLIE T. KOBATA
REGISTRAR

Conveyance Tax: $5,850.00

Return by Mail (x) Pickup ( )

NSHE HI NARCISSUS LLC
60 E. Rio Salado Pkwy
Suite 1103
Tempe, AZ 85281

TG: 201734760 -S
TGE: 21017099046
Jeremy Trueblood

This document contains 13 pages

Tax Map Key No.: (1) 6-2-007-019

LIMITED WARRANTY DEED

THIS LIMITED WARRANTY DEED (this "**Deed**") is entered into as of Sept 29, 2017, by and between **GILBERT K. KAWAMATA, Trustee of the Gilbert K. Kawamata Revocable Trust Agreement dated May 27, 2016**, with powers to sell, mortgage, lease, etc., subject to the provisions of H.R.S. Section 509-2, whose address is 66-532 B Kamehameha Highway, Haleiwa, Hawaii 96712 ("***Gilbert Kawamata Trust***"), **KATHERINE K. KAWAMATA, Trustee of the Katherine K. Kawamata Revocable Trust Agreement dated May 27, 2016**, with powers to sell, mortgage, lease, etc., subject to the provisions of H.R.S. Section 509-2,whose address is 66-532 B Kamehameha Highway, Haleiwa, Hawaii 96712 ("***Katherine Kawamata Trust***"), **CAROLYN M. KAWAMATA, Sole Trustee of the James K. Kawamata Revocable Living Trust, an unrecorded trust dated March 4, 2000**, with powers to sell, mortgage, lease, etc., whose address is 1977 Kinipono Street, Wahiawa, Hawaii 96786 (the "***James Kawamata Trust***"), **CAROLYN M. KAWAMATA, Sole Trustee of the Carolyn M. Kawamata Revocable Living Trust, an unrecorded trust dated March 4, 2000**, with powers to sell, mortgage, lease, etc., whose address is whose address is 1977 Kinipono Street, Wahiawa, Hawaii 96786 (the "***Carolyn Kawamata Trust***") (the Gilbert Kawamata Trust, the Katherine Kawamata Trust, the James Kawamata Trust and the Carolyn Kawamata Trust are collectively, "***Grantor***"), and **NSHE HI NARCISSUS, LLC**, a Hawaii limited liability company, whose address is 60 E Rio Salado Parkway, Suite 1103, Tempe, Arizona 85281 ("***NSHE Narcissus***"), and **NSHE HI SUNFLOWER, LLC**, a Hawaii limited liability company, whose address is 60 E Rio Salado Parkway, Suite 1103, Tempe, Arizona 85281 ("***NSHE Sunflower***") (NSHE Narcissus and NSHE Sunflower are collectively, "***Grantee***").

WITNESSETH:

IN CONSIDERATION of the sum of Ten Dollars ($10.00) and other valuable consideration to it paid by Grantor, the receipt of which is hereby acknowledged, Grantor does hereby grant, bargain, sell and convey unto the Grantee, as tenants in common in equal shares, the following:

ALL of that certain parcel of land situate at Paalaa, District of Waialua, City and County of Honolulu, State of Hawaii (the "**Property**"), described in Exhibit "A" attached hereto and made a part hereof;

AND the reversions, remainders, rents, issues and profits thereof, together with all improvements, tenements, rights, easements, privileges and appurtenances to the same belonging or appertaining or held and enjoyed therewith, and all of the estate, right, title and interest of Grantor both at law and in equity therein and thereto;

SUBJECT, HOWEVER, to all encumbrances described in said Exhibit "A".

TO HAVE AND TO HOLD the same unto Grantee and its successors and assigns, forever, subject to the encumbrances mentioned in said Exhibit "A".

AND for the consideration aforesaid, Grantor for itself and its successors in trust, hereby covenants and agrees with Grantee that Grantor has good right to sell and convey its interest in the Property and that the Property hereby conveyed is free and clear from all encumbrances made or permitted by Grantor, except for real property taxes for the current year which are to be prorated as of the date this Deed is recorded or as provided in this Deed or as shown in said Exhibit "A", and that Grantor will warrant the foregoing unto Grantee, against the lawful claims and demands of all persons claiming by, through or under Grantor except as aforesaid.

AND, in consideration of the premises, Grantee, for itself and its successors and assigns, hereby acknowledges that, Grantee is aware, understands and agrees that the Property is being conveyed by Grantor, to the Grantee "AS-IS" and "WHERE IS" without any warranty or representation whatsoever.

The obligations and liability of Grantor under this Deed are not personally binding upon nor shall resort be had to the private property of any trustee of Grantor; but only the property of the trust estate shall be bound. Such trustee or trustees are executing this Deed in their respective fiduciary capacities and not in their respective individual capacities.

The term "Grantor" as and when used herein shall mean and include the Grantor named above and the Grantor's successors in trust and assigns, and the term "Grantee" as and when used herein shall mean and include the Grantee named above and the Grantee's successors and assigns; where there is more than one Grantor or Grantee, the use of the singular herein shall be construed to include the plural wherever the context shall so require; and the use of any gender shall include all genders.

This Deed may be executed in counterparts, each of which shall be deemed an original, and all counterparts together shall constitute one and the same instrument, binding upon Grantor and Grantee, notwithstanding that the Grantor and Grantee are not signatory to the same counterparts. For all purposes, including, without limitation, recordation, filing and delivery of this Deed, duplicate unexecuted and unacknowledged pages of the counterparts may be discarded and the remaining pages assembled as one document.

(*See next page for signatures*)

IN WITNESS WHEREOF, Grantor and Grantee have executed these presents as of the day and year first above written.

GRANTOR:

GILBERT K. KAWAMATA, Trustee of the Gilbert K. Kawamata Revocable Trust Agreement dated May 27, 2016

KATHERINE K. KAWAMATA, Trustee of the Katherine K. Kawamata Revocable Trust Agreement dated May 27, 2016

CAROLYN M. KAWAMATA, Sole Trustee of the James K. Kawamata Revocable Living Trust, an unrecorded trust dated March 4, 2000

CAROLYN M. KAWAMATA, Sole Trustee of the Carolyn M. Kawamata Revocable Living Trust, an unrecorded trust dated March 4, 2000

[*signatures continued on the next page*]

GRANTEE:

NSHE HI NARCISSUS, LLC, a Hawaii limited liability company

By National Safe Harbor Exchanges
Its Member

By _____
Name: Paula Sanchez
Its: Asst VP

NSHE HI SUNFLOWER, LLC, a Hawaii limited liability company

By National Safe Harbor Exchanges
Its Member

By _____
Name: Paula Sanchez
Its: Asst VP

STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

On this _____ day of SEP 2 9 2017, 2017, before me personally appeared GILBERT K. KAWAMATA, Trustee of the Gilbert K. Kawamata Revocable Trust Agreement dated May 27, 2016, to me personally known, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

JILL KIRIHARA NOTARY 2000-236 PUBLIC STATE OF HAWAII

Signature: _____
Name: Jill Kirihara
Notary Public, State of Hawaii

My commission expires: JILL KIRIHARA
Expiration Date: May 28, 2020

(Official Stamp or Seal)

NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Limited Warranty Deed

Doc. Date: Undated

No. of Pages: 13

Jurisdiction: First Circuit
(in which notarial act is performed)

SEP 2 9 2017

Signature of Notary

Date of Notarization and Certification Statement

JILL KIRIHARA NOTARY 2000-236 PUBLIC STATE OF HAWAII

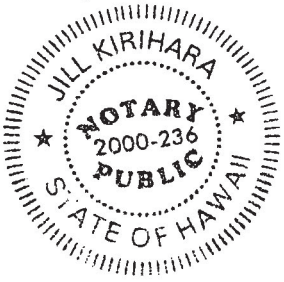
Jill Kirihara

Printed Name of Notary

(Official Stamp or Seal)

STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

On this _____ day of SEP 2 9 2017, 2017, before me personally appeared KATHERINE K. KAWAMATA, Trustee of the Katherine K. Kawamata Revocable Trust Agreement dated May 27, 2016, to me personally known, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.



Signature: _____
Name: Jill Kirihara
Notary Public, State of Hawaii

My commission expires: JILL KIRIHARA Expiration Date: May 28, 2020

(Official Stamp or Seal)

NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Limited Warranty Deed

Doc. Date: Undated

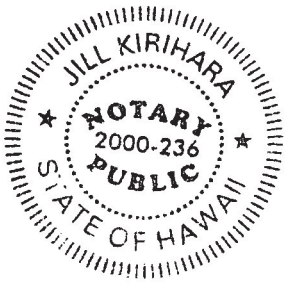
No. of Pages: 13 Jurisdiction: First Circuit
(in which notarial act is performed)

SEP 2 9 2017

Signature of Notary Date of Notarization and Certification Statement

Jill Kirihara

Printed Name of Notary



(Official Stamp or Seal)

STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

On this _____ day of SEP 2 9 2017, 2017, before me personally appeared CAROLYN M. KAWAMATA, Sole Trustee of the James K. Kawamata Revocable Living Trust, an unrecorded trust dated March 4, 2000, to me personally known, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

JILL KIRIHARA NOTARY 2000-236 PUBLIC STATE OF HAWAII

(Official Stamp or Seal)

Signature: _____
Name: Jill Kirihara
Notary Public, State of Hawaii

My commission expires: JILL KIRIHARA ~~Expiration Date: May 28,~~ 2020

NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Limited Warranty Deed

Doc. Date: Undated

No. of Pages: 13 Jurisdiction: First Circuit
(in which notarial act is performed)

JILL KIRIHARA NOTARY 2000-236 PUBLIC STATE OF HAWAII

SEP 2 9 2017

Signature of Notary Date of Notarization and Certification Statement

Jill Kirihara

(Official Stamp or Seal)

Printed Name of Notary

STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

On this _____ day of SEP 2 9 2017, 2017, before me personally appeared CAROLYN M. KAWAMATA, Sole Trustee of the Carolyn M. Kawamata Revocable Living Trust, an unrecorded trust dated March 4, 2000, to me personally known, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

JILL KIRIHARA NOTARY 2000-236 PUBLIC STATE OF HAWAII

Signature: _____
Name: Jill Kirihara
Notary Public, State of Hawaii

My commission expires: JILL KIRIHARA ~~Expiration Date: May 28~~, 2020

(Official Stamp or Seal)

NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Limited Warranty Deed

Doc. Date: Undated

No. of Pages: 13 Jurisdiction: First Circuit (in which notarial act is performed)

JILL KIRIHARA NOTARY 2000-236 PUBLIC STATE OF HAWAII

SEP 2 9 2017

Signature of Notary Date of Notarization and Certification Statement

Jill Kirihara

Printed Name of Notary

(Official Stamp or Seal)

From: Duke Pontin
To: Shareem, Jelani
Subject: LCC
Date: Tuesday, November 23, 2021 9:40:11 AM
Attachments: acquire Prop 10417.png

Jelani Shareem, 11/23/21

October 4, 2017 I acquired the property. One bathroom was unusable the other so bad nobody would want to use it.
My recollection it was probably March 2018 before they were usable.

April 2018 Jenny's shrimp truck moved on the property but did not become busy until later that fall.

2019 was a pretty good year for Jenny's shrimp truck, for the most part the building was empty

2020 Covid hit and Haleiwa became a ghost town.

August 2020 the SmoothieTruck started, one man show with no customer access to the restrooms.
Did not want to deal with who cleans what.

November 2020 the building was rented.
From the time I bought the property until November 2020 the building was rented to an eccentric man for his private art gallery or was empty.

April 28, 2021 after speaking with Connor the restrooms where used by five or six people, a porta potty was installed a couple weeks later for the customers.

November 22, 2021 received an email from you and talk with you on the phone. Because of that conversation the bathrooms were screwed shut and the septic was pumped dry.

There are cesspit all over the state of Hawaii and until my conversation with Connor I had no idea about EPA regulations or the term LCC. After speaking with Connor and making the restrooms only available to five or six people I truly believe that was in compliance. After speaking with you and made aware of Reality I completely shut the restrooms down and pump the septic dry. As we discussed I reached out to the Hawaii Health Department and awaiting a return phone call. As soon as the department of health gets back to me I will be backfilling the septic area per their instructions.

Duke

TITLE GUARANTY
TITLE & ESCROW SERVICES

TITLE GUARANTY ESCROW SERVICES, INC.
MAIN OFFICE, 235 QUEEN STREET, HONOLULU, HI 96813
Tel: (808)521-0211 Fax: (808)521-0280 Email: MAIN@TGHAWAII.COM

FINAL BUYER SETTLEMENT STATEMENT

NSHE HI Narcissus, LLC

File Number: 21017099046
Escrow Officer: Jeremy Trueblood
Buyer: NSHE HI Narcissus, LLC
NSHE HI Sunflower, LLC
Seller: GILBERT K. KAWAMATA, TRUSTEE
CAROLYN M. KAWAMATA, TTEE
KATHERINE K. KAWAMATA, TTEE
CAROLYN M. KAWAMATA, TTEE
Tax Map: 1620070190000
Property Location: 66-532 Kamehameha Hwy
Haleiwa, HI 96712
Settlement Date: 10/04/2017
Lender:

TITLE GUARANTY
TITLE & ESCROW SERVICES

TITLE GUARANTY ESCROW SERVICES, INC.
MAIN OFFICE, 235 QUEEN STREET, HONOLULU, HI 96813
Tel: (808)521-0211 Fax: (808)521-0280 Email: MAIN@TGHAWAII.COM

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Escrow Officer: Jeremy Trueblood
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CAROLYN M. KAWAMATA, TTEE
KATHERINE K. KAWAMATA, TTEE
CAROLYN M. KAWAMATA, TTEE
Tax Map: 1620070190000
Property Location: 66-532 Kamehameha Hwy
Haleiwa, HI 96712
Settlement Date: 10/04/2017
Lender:





The picture of the bathrooms was taken April 28, 2021 immediately after speaking with Connor about his report that he emailed to me the day before. It was my misunderstanding from the conversation that if I only allowed employees (6 people) to use the restrooms I would be in compliance and not have a LCC. I also informed him that I would be ordering a porter potty immediately but was not delivered until May 14, 2021









On 11/22/2021 I received an email from Jelani Shareem and spoke with him shortly there after. Within an hour of that conversation both bathroom doors were screwed shut and the septic was pumped dry.



LARGE CAPACITY CESSPOOL (LESS THAN 1,000 GPD)
BACKFILLING FINAL COMPLETION REPORT

US Environmental Protection Agency – Region 9 Ground Water Office

Property owner: NSHE HI NARCISSUS, LLC (DUKE PONTIN)

Project address: 66-540 KAMEHAMEHA HWY, HALEIWA, HI

TMK: 1-6-2-007-019

Number of cesspools, and numbering if any: 1

Diameter(s): 5' Depth(s): 10'

Was sludge/sediment or liquid removal necessary? ☑ Yes ☐ No

Where was sludge/sediment or liquid taken or disposed of? ABC PUMPING

Was groundwater encountered? ☐ Yes ☑ No

Date of backfilling: 12/2/2021 Type of backfill material: 1R, C, S

Amount of backfill used (cubic yards): 8

Was the cesspool completely backfilled? ☑ Yes ☐ No

How was it compacted? VIBRACTOR & HAND COMPACTION

Backfilling contractor: ANCHOR BUILDERS HAWAII LLC (BC-37198)

Please provide:

- Pictures: Attach photos of the large capacity cesspool from step-back distances of approximately 8 feet and 20 feet.
- Copy of this report to: LCC Program Coordinator
  EPA Ground Water Office (WTR-9)
  75 Hawthorne Street
  San Francisco, CA 94105

LARGE CAPACITY CESSPOOL BACKFILLING FINAL COMPLETION REPORT (Continuation)

The backfilling work and the final completion report have been performed and completed under my supervision, and the work was properly completed:

☐ Architect

☐ Geologist

☑ Licensed Contractor License Number: BC-37198

☐ Licensed Plumber License Number: _____

☐ Professional Engineer Include P.E. stamp:

Printed Name: Scott Olson

Signature: _____

Date: 12/2/2024

Company: Anchor Builders Hawaii LLC

Address: P.O. Box 971, Laie, HI 96762

Phone: 808-421-8156 Fax: _____

342921

ABC Pumping LLC
1479 GLEN AVE
WAHIAWA, HI 96786
808-561-7736

CUSTOMER'S ORDER NO.	DEPT.	DATE: 11/22/21
NAME: Dulce Pontin		
ADDRESS: 66-540		
CITY, STATE, ZIP		

SOLD BY:	CASH	C.O.D.	CHARGE	ON ACCT.	MDSE RTD.	PAID OUT

QUANTITY		DESCRIPTION	PRICE	AMOUNT
	1			
	2	Pumped cesspool		175 00
	3	empty on this date		
	4			
	5			
	6			
	7			
	8	CC Payment		
	9			
	10			
	11			
	12			
	13			
	14			
	15			

RECEIVED BY:

ORIGINAL

©2001 REDIFORM® 5L320

81361

ALOHA Trucking Inc.

PO BOX 752[illegible] • KAPOLEI, HI 96707
PH: 216-3[illegible]86 • FAX: 685-3898
C31013 • PUC [illegible]57-C • DOT 1313126

CHARGE TO: DUKE PONTIN		DATE: 12/2/21	P.O. NO. / TAG NO.
FROM: GP MAKAKILO		TO: 66-540 KAM HWY	
JOB NAME		TRUCK TYPE: SUPER	TRUCK NO.: 214

TIME START: 615 AM / PM

TIME END: 925 AM / PM

LUNCH FROM ____ TO ____ AM / PM

DELAYS: TIME & REASON

FROM ____ TO ____

REASON: ____

INSTRUCTIONS:

TIME WANTED: ____

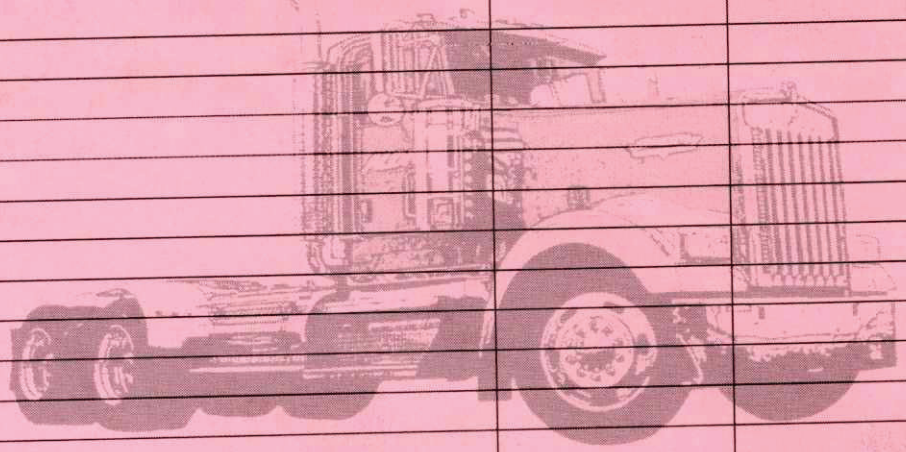
DELIVERY SITE CONDITIONS

The Customer agrees to provide suitable roadways or approaches to points on delivery other than paved public streets. We reserve the right to stop delivery if the roadways or approaches are not satisfactory. Should the Customer order delivery beyond a public street curb line, we will not assume liability for damage to sidewalks, roadways, driveways, or other property and the Customer agrees to indemnify and hold Aloha Trucking harmless against liabilities, loss and expense incurred as a result of any damage or trespass caused by such deliveries.

Signature

CREDIT HAUL TO:

NO. UNITS	DESCRIPTION	TICKET NUMBER	WEIGHT/MEAS	RATE
	RECYCLE CONCRETE SCALP	1476120	14.10	



DRIVER'S FULL NAME: MAKA S.

TOTAL →

TERMS: 30 DAYS NET. THE CUSTOMER AGREES TO PAY INTEREST AT 2% OF ANY UNPAID BALANCE FOR COLLECTION FEES OR ATTORNEY FEES IN THE EVENT THIS BILL BECOMES OVERDUE.

BY: ____

RECEIVED IN GOOD ORDER EXCEPT AS NOTED

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Permissible Uses 111

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Possible People Information

Person Overview

BRANDI A PONTIN

56-211 KAMEHAMEHA HWY
KAHUKU, HI 96731-2218 | HONOLULU County

Phone Number(s):

305-872-2752

808-293-2458

305-923-5458

SSN:

357-50-XXXX - issued in IL in 1970-1971

DOB:

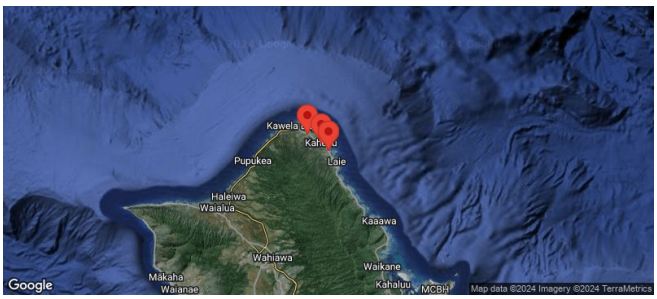
01/XX/1956 (Age: 68)

Entity ID:

P443923468

Spouse/Close Association:

DUKEDALE



Date of Birth Summary

Date of Birth	Source
01/XX/1956 (Age: 68)	Address Historical #1 | Address Historical #2 | Address Historical #3 | Bank Account Header Records | Driver License | Experian Credit Header | Experian Credit Header Real Time | People Find | People Household #1 | People Household #2 | People Household #3

SSN Summary

SSN	Source
357-50-XXXX - issued in IL in 1970-1971	Bank Account Header Records | Equifax Credit Header | Experian Credit Header | Experian Credit Header Real Time | People Find | People Historical #1 | People Historical #2

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Name Variations

Name	Source
BRANDY A PONTIN	Address Historical #1 | Address Historical #2 | Bank Account Header Records | Criminal&Infraction | Experian Credit Header Real Time | People Find | People Household
BRANDI PONTIN	Bank Account Header Records | Experian Credit Header | Experian Credit Header Real Time | People Find #1 | People Find #2
BRANDI ANN PONTIN	Experian Credit Header | Experian Credit Header Real Time
PONTIN BRANDY	Experian Credit Header | Experian Credit Header Real Time
BRANDY PONTIN	Address Historical | Experian Credit Header | Experian Credit Header Real Time | Motor Vehicle Service & Warranty Records
BRANDY ANNE PONTIN	Driver License
SUE WILLER	People Historical
MS BRANDY A PONTIN	People Household #1 | People Household #2 | People Household #3
BRANDY K PONTIN	Bank Account Header Records #1 | Bank Account Header Records #2
BRANDI ANNE PONTIN	Experian Credit Header Real Time
BRANDI A PONTIN	Experian Credit Header Real Time

Addresses

Address	
56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	
Reported 06/08/2007 - 08/08/2023	
By Experian Credit Header Real Time 06/08/2007 - 08/08/2023	Experian Credit Header Real Time
By People Find 02/14/2023 - 02/14/2023	People Find
By Equifax Credit Header 12/01/2015 - 12/31/2015	Equifax Credit Header
By Experian Credit Header 08/01/2012 - 08/01/2012	Experian Credit Header
By Motor Vehicle Service & Warranty Records	Motor Vehicle Service & Warranty Records
56-211 KAMEHAMEHA, KAHUKU, HI 96731	
Reported 06/08/2007 - 08/08/2023	
By Experian Credit Header Real Time 06/08/2007 - 08/08/2023	Experian Credit Header Real Time
56211 KAM HIGH WAY, KAHUKU, HI 96731 | HONOLULU County	
Reported 05/07/2009 - 07/09/2020	
By Experian Credit Header 05/07/2009 - 05/07/2009	Experian Credit Header

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County

Reported 01/01/2001 - 10/11/2017

By People Household 01/01/2001 - 05/31/2015	People Household #1 | People Household #2
By Experian Credit Header 07/16/2001 - 10/25/2012	Experian Credit Header
By Equifax Credit Header 03/01/2008 - 03/31/2008	Equifax Credit Header
By Bank Account Header Records 10/12/2002 - 10/12/2002	Bank Account Header Records #1 | Bank Account Header Records #2 | Bank Account Header Records #3
By People Find 07/15/2001 - 07/15/2001	People Find
By Real Property Deeds	Real Property Deeds #1 | Real Property Deeds #2 | Real Property Deeds #3
By Real Property Tax Assessor	Real Property Tax Assessor #1 | Real Property Tax Assessor #2 | Real Property Tax Assessor #3

56-211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County

Reported 04/23/2012 - 09/14/2017

By Experian Credit Header Real Time 04/23/2012 - 09/14/2017	Experian Credit Header Real Time
By Experian Credit Header 04/23/2012 - 07/13/2012	Experian Credit Header

56-211 KAM HWY, KAHUKU, HI 96731-5455

Reported 04/23/2012 - 09/14/2017

By Experian Credit Header Real Time 04/23/2012 - 09/14/2017	Experian Credit Header Real Time

56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305

Reported 07/24/2017 - 07/24/2017

By Experian Credit Header Real Time 07/24/2017 - 07/24/2017	Experian Credit Header Real Time

911 W INDIES DR, SUMMRLND KEY, FL 33042-5455 | MONROE County

Reported 01/01/1995 - 06/10/2014

By People Find 06/01/1995 - 06/10/2014	People Find #1 | People Find #2
By People Household 01/01/2001 - 03/31/2012	People Household
By Bank Account Header Records 08/14/2006 - 08/14/2006	Bank Account Header Records
By Experian Credit Header 10/07/1995 - 11/20/2000	Experian Credit Header
By Experian Credit Header Real Time 10/07/1995 - 11/20/2000	Experian Credit Header Real Time
By People Historical 01/01/1995 - 12/31/1995	People Historical
By Address Historical	Address Historical #1 | Address Historical #2
By Real Property Deeds	Real Property Deeds #1 | Real Property Deeds #2 | Real Property Deeds #3 | Real Property Deeds #4

56-211 KAMEMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

Reported 08/01/2012 - 08/01/2012

By Experian Credit Header 08/01/2012 - 08/01/2012	Experian Credit Header

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

56211 KAM, KAHUKU, HI 96731 | HONOLULU County

Reported 05/21/2003 - 04/06/2009

By Experian Credit Header 05/21/2003 - 04/06/2009	Experian Credit Header

PO BOX 244, SUMMERLAND KEY, FL 33042-0001 | MONROE County

Reported 11/13/2000 - 01/08/2004

By Driver License 01/08/2004 - 01/08/2004	Driver License
By People Find 11/13/2000 - 11/13/2000	People Find
By Bank Account Header Records	Bank Account Header Records

PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County

Reported 02/01/1996 - 01/23/2003

By Equifax Credit Header 11/01/1999 - 11/30/1999	Equifax Credit Header
By Motor Vehicle 07/26/1999 - 07/26/1999	Motor Vehicle
By People Find 02/01/1996 - 02/01/1996	People Find
By Address Historical	Address Historical
By Bank Account Header Records	Bank Account Header Records

PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County

Reported 01/01/1988 - 01/15/2002

By Motor Vehicle 12/19/2000 - 01/15/2002	Motor Vehicle #1 | Motor Vehicle #2 | Motor Vehicle #3
By Experian Credit Header 11/01/1988 - 09/11/2001	Experian Credit Header
By People Historical 01/01/1988 - 12/31/1988	People Historical

56 211KAM HY, KAHUKU, HI 96731 | HONOLULU County

Reported 10/01/2001 - 10/31/2001

By Equifax Credit Header 10/01/2001 - 10/31/2001	Equifax Credit Header

1234 KAM HWY, KAHUKU, HI 96731-2305

Reported 10/22/2001 - 10/22/2001

By Experian Credit Header Real Time 10/22/2001 - 10/22/2001	Experian Credit Header Real Time

56 211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County

Reported 10/22/2001 - 10/22/2001

By Experian Credit Header 10/22/2001 - 10/22/2001	Experian Credit Header
By Experian Credit Header Real Time 10/22/2001 - 10/22/2001	Experian Credit Header Real Time
By Real Property Deeds	Real Property Deeds

56 211 KAM HWY, KAHUKU, HI 96731-2305

Reported 10/22/2001 - 10/22/2001

By Experian Credit Header Real Time 10/22/2001 - 10/22/2001	Experian Credit Header Real Time

244, BIG PINE KEY, FL 33043 | MONROE County

Reported 11/01/1988 - 09/11/2001

By Experian Credit Header 11/01/1988 - 09/11/2001	Experian Credit Header

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

911 W INDIES DR, RAMROD KEY, FL 33042-5455

Reported 10/07/1995 - 11/20/2000

By Experian Credit Header Real Time 10/07/1995 - 11/20/2000 — Experian Credit Header Real Time

971 W INDIES DR, RAMROD KEY, FL 33042-5455 | MONROE County

Reported N/A

By Real Property Deeds — Real Property Deeds

By Real Property Tax Assessor — Real Property Tax Assessor

56 KAMEHAMEHA HWY # 211-211, KAHUKU, HI 96731-2218 | HONOLULU County

Reported N/A

By Real Property Deeds — Real Property Deeds #1 | Real Property Deeds #2 | Real Property Deeds #3

By Real Property Tax Assessor — Real Property Tax Assessor #1 | Real Property Tax Assessor #2

56 KAMEHAMEHA HWY # 970-970, KAHUKU, HI 96731-2305 | HONOLULU County

Reported N/A

By Real Property Deeds — Real Property Deeds

56 211 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

Reported N/A

By Real Property Deeds — Real Property Deeds #1 | Real Property Deeds #2

970 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

Reported N/A

By Real Property Deeds — Real Property Deeds

56 56 211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County

Reported N/A

By Real Property Deeds — Real Property Deeds

211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County

Reported N/A

By Real Property Deeds — Real Property Deeds #1 | Real Property Deeds #2

56-0000000211 KAMEHAMEHA HWY, KAHUKU, HI 96731

Reported N/A

By Real Property Tax Assessor — Real Property Tax Assessor

N/AVAIL, BIG PINE KEY, FL 33043 | MONROE County

Reported N/A

By Real Property Deeds — Real Property Deeds

Drivers Licenses

Issuing State	Issue Date	Expiration Date	Confidence Score	View Full Text
FL	01/08/2004	01/XX/2010	99%	Full-Text

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Phone Numbers

Phone	Source
305-872-2752	Bank Account Header Records | Experian Credit Header Real Time | People Find #1 | People Find #2
808-293-2458	Experian Credit Header Real Time | People Find
305-923-5458	D&B Market Identifiers (DMI) | Experian Credit Header Real Time
305-923-5458	Experian Credit Header Real Time
305-872-2752	Experian Credit Header Real Time
808-293-2458	Experian Credit Header Real Time
305-872-2400	Bank Account Header Records

Bank Account Header Records

City	State	Last Activity Date	Confidence Score	View Full Text
SUMMERLAND KEY	FL	06/30/2008	99%	Full-Text
KAHUKU	HI	10/12/2002	97%	Full-Text
KAHUKU	HI	10/12/2002	87%	Full-Text

Possible Asset Information

Real Property Tax Assessor Records

Property Address	Assessed Total Value	Tax Year	Confidence Score	View Full Text
971 W INDIES DR RAMROD KEY, FL 33042-5455	$1,124,460.00	2023	95%	Full-Text
56 KAMEHAMEHA HWY KAHUKU, HI 96731-2305	$561,400.00	2023	99%	Full-Text
56 KAMEHAMEHA HWY KAHUKU, HI 96731-2218	$2,952,400.00	2023	99%	Full-Text
56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731		2011	99%	Full-Text

Real Property Transactions

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Property Address	Sale Price	Mortgage Amount	Recording Date	Confidence Score	View Full Text
56-970 970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305			09/01/2023	99%	Full-Text
56-211 -211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218		$822,375.00	03/16/2022	94%	Full-Text
971 W INDIES DR RAMROD KEY, FL 33042-5455	$1,200,000.00		12/29/2017	95%	Full-Text
56-211 -211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218		$1,450,000.00	09/29/2017	94%	Full-Text
970 KAMEHAMEHA HWY KAHUKU, HI 96731	$1,050,000.00	$750,000.00	08/06/2009	99%	Full-Text
211 KAM HWY HI		$500,000.00	04/02/2008	99%	Full-Text
211 KAM HWY HI		$500,000.00	04/02/2008	99%	Full-Text
FL	$250,000.00		08/03/2004	85%	Full-Text
56 211 KAMEHAMEHA HWY KAHUKU, HI 96731		$249,000.00	07/09/2004	94%	Full-Text
HI	$360,000.00		07/21/2003	97%	Full-Text
56 211 KAMEHAMEHA HWY KAHUKU, HI 96731		$200,000.00	07/11/2003	94%	Full-Text
FL	$31,100.00		03/03/2000	97%	Full-Text
FL	$369,000.00		03/03/2000	97%	Full-Text

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Vehicle Registrations

Year	Make	Model	Registration Date	Confidence Score	View Full Text
Current Motor Vehicles					
1990	99900		01/05/2001	99%	Full-Text
1994	999 0		07/26/1999	65%	Full-Text
1978	GMC		03/22/1999	99%	Full-Text
Historical Motor Vehicles					
1970	99900			99%	Full-Text

Motor Vehicle Service & Warranty Records

Year	Make	Model	Confidence Score	View Full Text
2013	HYUNDAI	SANTA FE SPORT	97%	Full-Text

Possible Adverse Information

Risk Flags Analysis

List of Possible Risk Flags

Risk Flags Name	Yes/No
Arrest Record	No
Criminal Record	Yes
OFAC Listing	No
World-Check Listing	No
Global Sanctions	No
Bankruptcy	No
Recorded as Deceased	No
Person Associated with Marijuana Related Business	No
Multiple SSNs	No
SSN Matches Multiple Individuals	No
Age Younger than SSN Issue Date	No
SSN Format is Invalid	No
SSN Is an ITIN	No
Address 1st Reported <90 Days	No
Residential Address Used as a Business Address	Yes
Prison Address on Record	No
P.O. Box Listed as Address	Yes

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Telephone Number Inconsistent with Address	No
Associate or Relative With a Residential Address Used as a Business Address	Yes
Associate or Relative with a Prison Address on Record	No
Associate or Relative with P.O. Box Listed as Address	Yes

Risk Flag Details

Criminal Record	
Full-Text	
Residential Address Used as a Business Address	
Address: 25123 OVERSEAS HWY, SUMMERLAND KEY, FL 33042-4627 | MONROE County	**Source:** D&B Market Identifiers (DMI) Corporate Filings - Secretary of State
Address: PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County	**Source:** Business Profile Corporate Filings - Secretary of State
P.O. Box Listed as Address	
Address: PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	**Source:** Address Historical People Find Equifax Credit Header Motor Vehicle Bank Account Header Records
Address: PO BOX 244, SUMMERLAND KEY, FL 33042-0001 | MONROE County	**Source:** People Find Driver License Bank Account Header Records
Address: PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	**Source:** People Household People Find Experian Credit Header Equifax Credit Header Bank Account Header Records

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Address:	Source:
PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County	Corporate Filings - Secretary of State Business Profile Experian Credit Header Motor Vehicle People Historical

Associate or Relative With a Residential Address Used as a Business Address

Associate:	Address:	Source:
CHRIS JACKSON	1649 MERRILL DR APT 6, SAN JOSE, CA 95124-5913 | SANTA CLARA County	Business Profile Corporate Filings - Secretary of State
Associate:	**Address:**	**Source:**
MCGREGOR GANTHIER	56-150 KAHANA ST, KAHUKU, HI 96731-2014 | HONOLULU County	D&B Market Identifiers (DMI)
	Address:	**Source:**
	56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	Corporate Filings - Secretary of State
	Address:	**Source:**
	PO BOX 737, KAHUKU, HI 96731-0737 | HONOLULU County	Corporate Filings - Secretary of State D&B Market Identifiers (DMI)
Associate:	**Address:**	**Source:**
EVETTE M SMITH	2148 AUMAKUA ST, PEARL CITY, HI 96782-1356 | HONOLULU County	Corporate Filings - Secretary of State

Relative:	Address:
DALE PONTIN	951 W INDIES DR, SUMMERLAND KEY, FL 33042-5455 | MONROE County
Relative:	**Address:**
KEAL PONTIN	56-645 LOALA ST UNIT A, KAHUKU, HI 96731 | HONOLULU County
	Address:

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County
Relative:	**Address:**
COVE K PONTIN	56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County
	Address:
	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County
	Address:
	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County
Relative:	**Address:**
DUKE H PONTIN	911 W INDIES DR, SUMMERLAND KEY, FL 33042-5455 | MONROE County
	Address:
	25123 OVERSEAS HWY, SUMMERLAND KEY, FL 33042-4627 | MONROE County
	Address:
	PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County
	Address:
	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County
	Address:
	25012 OVERSEAS HWY, SUMMERLAND KEY, FL 33042 | MONROE County
	Address:
	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
	Address:
	PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County

Associate or Relative with P.O. Box Listed as Address

Associate:	Address:	Source:
RONALD L JACKSON		Experian Credit Header

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	PO BOX 38011, SAN JUAN, PR 00937-1011 | SAN JUAN County	People Find Equifax Credit Header
	Address: PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	**Source:** People Find Experian Credit Header Bank Account Header Records
	Address: PO BOX 42664, DETROIT, MI 48242-0664 | WAYNE County	**Source:** People Find Experian Credit Header Bank Account Header Records Equifax Credit Header
	Address: PO BOX 272, NEW BOSTON, MI 48164-0272 | WAYNE County	**Source:** Phone Records People Household People Find Experian Credit Header Equifax Credit Header
	Address: PO BOX 90784, RALEIGH, NC 27675-0784 | WAKE County	**Source:** Phone Records People Find Experian Credit Header Equifax Credit Header Motor Vehicle
Associate: AKIKO B JACKSON	**Address:** PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	**Source:** People Find Experian Credit Header
	Address: PO BOX 38011, SAN JUAN, PR 00937-1011 | SAN JUAN County	**Source:** Experian Credit Header

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	Address: PO BOX 42664, DETROIT, MI 48242 | WAYNE County	**Source:** Experian Credit Header
Associate: SUMIKO JACKSON	**Address:** PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	**Source:** People Historical People Find Experian Credit Header
	Address: PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	**Source:** People Historical
	Address: PO BOX 38011, SAN JUAN, PR 00937-1011 | SAN JUAN County	**Source:** Experian Credit Header
	Address: PO BOX 272, NEW BOSTON, MI 48164-0272 | WAYNE County	**Source:** People Find Experian Credit Header Equifax Credit Header
	Address: PO BOX 90784, RALEIGH, NC 27675-0784 | WAKE County	**Source:** Equifax Credit Header Experian Credit Header
	Address: PO BOX 42664, DETROIT, MI 48242 | WAYNE County	**Source:** Equifax Credit Header Experian Credit Header
Associate: MCGREGOR GANTHIER	**Address:** PO BOX 737, KAHUKU, HI 96731-0737 | HONOLULU County	**Source:** D&B Market Identifiers (DMI) Professional License People Household Equifax Credit Header Corporate Filings - Secretary of State
Associate: JUNEKO C JACKSON	**Address:** PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	**Source:** People Find Experian Credit Header

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

		People Historical Equifax Credit Header
	Address: PO BOX 42664, DETROIT, MI 48242 | WAYNE County	**Source:** Experian Credit Header
Associate: EVETTE M SMITH	**Address:** PO BOX 110, KAHUKU, HI 96731-0110 | HONOLULU County	**Source:** Experian Credit Header Equifax Credit Header
	Address: PO BOX 182, KAHUKU, HI 96731-0182 | HONOLULU County	**Source:** People Historical People Find
	Address: PO BOX 84, KAAAWA, HI 96730-0084 | HONOLULU County	**Source:** Experian Credit Header Equifax Credit Header People Find
	Address: PO BOX 626, KAHUKU, HI 96731-0626 | HONOLULU County	**Source:** People Historical People Find
Associate: JOSHUA A SMITH	**Address:** PO BOX 493, KAHUKU, HI 96731-0493 | HONOLULU County	**Source:** Experian Credit Header People Household Equifax Credit Header
Associate: CHRIS JACKSON	**Address:** PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	**Source:** People Find People Historical
	Address: PO BOX 3584, SANTA CLARA, CA 95055-3584 | SANTA CLARA County	**Source:** People Find Experian Credit Header Equifax Credit Header
	Address: PO BOX 112631, CAMPBELL, CA 95011-2631 | SANTA CLARA County	**Source:** People Find People Household Equifax Credit Header

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Experian Credit Header

Relative:	Address:
BRANDI A PONTIN	PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County
	Address: PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
	Address: PO BOX 244, SUMMERLAND KEY, FL 33042 | MONROE County
Relative:	**Address:**
DUKE PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
Relative:	**Address:**
DALE PONTIN	PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
Relative:	**Address:**
DUKE PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
Relative:	**Address:**
DUKE H PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
	Address: PO BOX 244, SUMMERLAND KEY, FL 33042-0001 | MONROE County
	Address: PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County
	Address: PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
Relative:	**Address:**
DUKE PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
Relative:	**Address:**
KEAL PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County
	Address: PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County
	Address: PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
Relative:	**Address:**

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

COVE K PONTIN	PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County **Address:** PO BOX 426, KAHUKU, HI 96731-0426 | HONOLULU County
Relative: COVE KIRKWOOD PONTIN	**Address:** PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County **Address:** PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County
Relative: DUKE PONTIN	**Address:** PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County

Criminal & Infraction Records

Offense Charged	Date of Offense or Charges Filed	Source State	Confidence Score	View Full Text
EXP OF REG (CRIMINAL)	12/01/1998	FL	96%	Full-Text

Possible Business & Employment

Corporate Records & Business Registrations

Business Name	Business Address	Confidence Score	View Full Text
SPIRIT MARINE TOWING & ASSISTANCE	PO BOX 244 BIG PINE KEY, FL 33043	85%	Full-Text

DMI

Business Name	Business Address	Confidence Score	View Full Text
SPIRIT MARINE TOWING & ASSISTANCE	25123 OVERSEAS HWY SUMMERLAND KEY, FL 33042-4627	65%	Full-Text

Business Profile

Business Name	Business Address	Confidence Score	View Full Text
SPIRIT MARINE TOWING & SALVAGE	PO BOX 244 BIG PINE KEY, FL 33043	97%	Full-Text

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Full-Text Documents

All Full-Text Documents

Drivers Licenses (1)

To Summary

Driver License Record

Source Information

Information Current Through:	02/16/2024
Database Last Updated:	02/19/2024
Update Frequency:	WEEKLY
Current Date:	02/20/2024
Source:	FL DEPT OF HIGHWAY SAFETY AND MOTOR VEHICLES

License Information

Issuing State:	FL
License Type:	REGULAR LICENCE
Issue Date:	01/08/2004
License Expiration Date:	01/XX/2010
Original Issue Date:	11/14/1975

Other Information:

Drivers License Number:	P535061565XXX

Licensee Information

Name:	BRANDY ANNE PONTIN
County:	MONROE
Date of Birth:	01/XX/1956
Gender:	FEMALE
Mailing Address:	P O BOX 244 BIG PINE KEY, FL 33042
Race:	WHITE
Height:	5'04"
File Acquired Date:	06/24/2010

End of Document

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Historical People Records (2)

To Summary

People Historical

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Individual Information

Name:	PONTIN, BRANDI A
SSN:	357-50-XXXX
On File Since:	06/01/1995

Historical Address Information

Address 1:	911 W INDIES DR RAMROD KEY, FL 33042-5455
Address Last Reported:	1995
Address Type:	STREET OR RESIDENTIAL ADDRESS

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To Summary

People Historical

Individual Information

Name:	WILLER, SUE
SSN:	357-50-XXXX
On File Since:	12/01/1988

Historical Address Information

Address 1:	POB 244 BIG PINE KEY, FL 33043
Address Last Reported:	1988

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Historical Address Records (3)

To Summary

Address Historical

Individual Information

Name:	PONTIN, BRANDY A
Date of Birth:	01/XX/1956

Historical Address Information

Address:	PO BOX 430244 BIG PINE KEY, FL 33043-0244

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To Summary

Address Historical

Individual Information

Name:	PONTIN, BRANDY A

Historical Address Information

Address:	911 W INDIES DR

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Date of Birth:	01/XX/1956		SUMMERLAND KEY, FL 33042-5455

End of Document

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To Summary

Address Historical

Individual Information

Name:	PONTIN, BRANDY
Date of Birth:	01/XX/1956

Historical Address Information

Address:	911 W INDIES DR BIG TORCH KEY, FL 33042-5455

End of Document

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People Find Records (2)

To Summary

People Finder - Historic Tracker Record

Source Information

Information Current Through:	01/31/2024
Database Last Updated:	02/13/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024
Source:	TRANS UNION

Last Known Address Information

Current Address:	56-211 KAMEHAMEHA HW KAHUKU, HI 96731-2218
Phone Number 1:	808-293-2458
Phone Number 2:	305-872-2752
Address First Reported:	02/14/2023

Individual Information

Name:	PONTIN, BRANDI A
Also Known As:	PONTIN, BRANDY A PONTIN, BRANDI
SSN:	357-50-XXXX
Date of Birth:	01/XX/1956
On File Since:	11/01/1985

Other Address Information

Previous Address:	PO BOX 717 KAHUKU, HI 96731-0717
Address First Reported:	07/15/2001
Previous Address:	PO BOX 244 SUMMERLAND KEY, FL 33042
Address First Reported:	11/13/2000
Previous Address:	PO BOX 430244

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	BIG PINE KEY, FL 33043-0244
Address First Reported:	02/01/1996
Previous Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Address First Reported:	06/01/1995

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To Summary

People Finder - Historic Tracker Record

Source Information

Information Current Through:	01/31/2024
Database Last Updated:	02/13/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024
Source:	TRANS UNION

Last Known Address Information

Current Address:	911 INDIES DR SUMMERLAND KEY, FL 33042-5455
Phone Number 1:	305-872-2752
Address First Reported:	06/10/2014

Individual Information

Name:	PONTIN, BRANDI
On File Since:	06/10/2014

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Experian Credit Header Records (1)

To Summary

CREDIT HEADER

Source Information

Information Current Through:	01/01/2024
Database Last Updated:	01/26/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024
Source:	EXPERIAN CREDIT HEADER

Individual Information

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Name:	PONTIN, BRANDY
Also Known As:	PONTIN, BRANDI A
Also Known As:	BRANDY, PONTIN
Other Name(s):	DUKE
Best SSN:	357-50-XXXX
Date of Birth:	01/XX/1956
Gender:	FEMALE
On File Since:	03/31/1999

Last Known Address Information

1 Address:	56-211 KAMEHAMEHA KAHUKU, HI 96731
Address First Reported:	03/03/2008
Address Last Reported:	08/08/2023

Other Address Information

2 Previous Address:	PO BOX 717 KAHUKU, HI 96731-0717
Address First Reported:	07/16/2001
Address Last Reported:	10/11/2017
3 Previous Address:	PO BOX 244 BIG PINE KEY, FL 33043
Address First Reported:	11/01/1988
Address Last Reported:	09/11/2001
4 Previous Address:	911 INDIES DR W RAMROD KEY, FL 33042-5455
Address First Reported:	10/07/1995
Address Last Reported:	11/20/2000
5 Previous Address:	56211 KAM HIGH WAY KAHUKU, HI 96731
Address First Reported:	05/07/2009
Address Last Reported:	07/09/2020
6 Previous Address:	56-211 KAM HWY KAHUKU, HI 96731
Address First Reported:	04/23/2012
Address Last Reported:	09/14/2017
7 Previous Address:	56-211 KAMEMEHA HWY KAHUKU, HI 96731
Address First Reported:	08/01/2012

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Address Last Reported:	08/01/2012
8 Previous Address:	56 211 KAM HWY KAHUKU, HI 96731
Address First Reported:	10/22/2001
Address Last Reported:	10/22/2001

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Experian Credit Header Real Time (1)

To Summary

CREDIT HEADER REAL TIME

Fraud Alert Information

SSN Alerts	
Inquiry SSN Has Not Been Issued	No
Inquiry SSN Recorded As Deceased	No
Inquiry Age Younger than SSN Issue Date	No
High Probability SSN Belongs to Another	No
Inquiry SSN Format Is Invalid	No
Best Onfile SSN Recorded as Deceased	No
Best Onfile SSN Not Issued as of:	No
SSN Reported more Frequently for Another	No
Other SSN(s)	No
Address Alerts	
Inquiry/Online Current Address Conflict	No
Inquiry Address 1ST Reported <90 Days	No
Inquiry Current Address Not Onfile	No
Inquiry Address: Alert	No

Individual Information

Best Name:	BRANDY PONTIN
Spouse Name:	DUKE
Other Name(s):	BRANDI A PONTIN
	BRANDI ANN PONTIN
	BRANDI PONTIN
	PONTIN BRANDY
	BRANDY A PONTIN
	BRANDI ANNE PONTIN
Best SSN:	357-50-XXXX
Times Reported:	8
Date of Birth:	01/XX/1956
Telephone Number(s):	305-923-5458 Type: Cellular
	305-872-2752 Type: Residence
	808-293-2458 Type: Residence

Best Address Information

Best Address:	56-211 KAMEHAMEHA KAHUKU, HI 96731
	Reported 2 Times
Address First Reported:	06/08/2007

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Inquiry Address: Non-Residential	No
Inquiry Address: Cautious	No
Best Address: Alert	No
Best Address: Non-Residential	No
Best Address: Cautious	No
Inquiry Telephone Number Inconsistent with Address	No

Source Information

Current Date:	02/20/2024
Source:	Experian Credit Header

Address Last Reported:	08/08/2023

Other Address Information

Other Address:	56-211 KAM HWY KAHUKU, HI 96731
	Reported 0 Times
Address First Reported:	04/23/2012
Address Last Reported:	09/14/2017
Other Address:	56-970 KAMEHAMEHA HWY KAHUKU, HI 96731
	Reported 0 Times
Address First Reported:	07/24/2017
Address Last Reported:	07/24/2017
Other Address:	1234 KAM HWY KAHUKU, HI 96731
	Reported 0 Times
Address First Reported:	10/22/2001
Address Last Reported:	10/22/2001
Other Address:	56 211 KAM HWY KAHUKU, HI 96731
	Reported 0 Times
Address First Reported:	10/22/2001
Address Last Reported:	10/22/2001
Other Address:	911 W INDIES DR RAMROD KEY, FL 33042
	Reported 0 Times
Address First Reported:	10/07/1995
Address Last Reported:	11/20/2000

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Equifax Credit Header Records (1)

To Summary

CREDIT HEADER

Source Information

Information Current Through:	02/14/2024

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Database Last Updated:	02/14/2024
Update Frequency:	WEEKLY
Current Date:	02/20/2024
Source:	EQUIFAX CREDIT HEADER

Individual Information

Name:	PONTIN, BRANDI A
SSN:	357-50-XXXX
SSN Status	CONFIRMED
Date of Birth:	01/XX/1956

Last Known Address Information

Current Address:	56-211 KAMEHAMEHA HWY KAHUKU, HI 96731
Address On File Since:	12/2015

Other Address Information

Previous Address:	PO BOX 717 KAHUKU, HI 96731
Address On File Since:	03/2008
Previous Address:	56 211KAM HY KAHUKU, HI 96731
Address On File Since:	10/2001
Previous Address:	PO BOX 430244 SUMMERLAND KEY, FL 33043
Address On File Since:	11/1999

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Bank Account Header Records (3)

To Summary

Bank Account Header Record

Source Information:

Information Current Through:	02/06/2024
Database Last Updated:	02/09/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024
Source:	BANK ACCOUNT HEADER RECORDS
Record Last Updated:	06/30/2008

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Individual Information:

Name:	PONTIN, BRANDI A
Last Reported:	06/30/2008
Also Known As:	PONTIN, BRANDY A
Last Reported:	08/14/2006
Also Known As:	PONTIN, BRANDY K
Last Reported:	04/06/2001

Social Security/Individual Taxpayer Identification Number:

Most Recent SSN/ITIN:	357-50-XXXX
Last Reported:	08/14/2006

Date of Birth Information:

Date of Birth:	01/XX/1956
Last Reported:	08/14/2006

Driver's License Information:

Driver's License:	P535061565XXX
Issue State:	FL
Last Reported:	08/14/2006

Address Information:

Current Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Last Reported:	08/14/2006
Previous Address:	PO BOX 717 KAHUKU, HI 96731-0717
Last Reported:	10/03/2003
Previous Address:	PO BOX 430244 BIG PINE KEY, FL 33043-0244

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Last Reported:	07/08/2003
Previous Address:	POB 244 SUMMERLAND KEY, FL 33042
Last Reported:	11/13/2000
Previous Address:	PO BOX 244 SUMMERLAND KEY, FL 33042-0001
Last Reported:	11/13/2000

Phone Numbers:

Current Phone Number:	305-872-2752
Last Reported:	06/30/2008
Previous Phone Number:	305-872-2400
Last Reported:	04/06/2001

End of Document

To Summary

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Bank Account Header Record

Source Information:

Information Current Through:	02/06/2024
Database Last Updated:	02/09/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024
Source:	BANK ACCOUNT HEADER RECORDS
Record Last Updated:	10/12/2002

Individual Information:

Name:	PONTIN, BRANDI
Last Reported:	10/12/2002

Address Information:

Current Address:	PO BOX 717 KAHUKU, HI 96731-0717

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Last Reported:	10/12/2002

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To Summary

Bank Account Header Record

Source Information:

Information Current Through:	02/06/2024
Database Last Updated:	02/09/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024
Source:	BANK ACCOUNT HEADER RECORDS
Record Last Updated:	10/12/2002

Individual Information:

Name:	PONTIN, BRANDY K
Last Reported:	10/12/2002

Address Information:

Current Address:	PO BOX 717 KAHUKU, HI 96731-0717
Last Reported:	10/12/2002

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Real Property Tax Assessor Records (4)

To Summary

Real Property Tax Assessor Record

Source Information

Tax Roll Certification Date:	09/29/2023
Owner Information Current Through:	01/26/2024
County Last Updated:	02/17/2024
Current Date:	02/20/2024
Source:	TAX ASSESSOR

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner Information

Owner(s):	WALTER GERT
	WALTER DEBBIE
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	28606 SICILY LOOP BONITA SPRINGS, FL 34135-8985

Property Information

County:	MONROE
Assessor's Parcel Number:	00206670-000000
Property Type:	SINGLE FAMILY RESIDENCE
Land Use:	SINGLE FAMILY RESIDENCE
Zoning:	IS
Lot Size:	9200
Lot Acreage:	0.2112
Location Attributes:	WATERFRONT
Municipality:	RAMROD KEY
Subdivision:	BREEZESWEPT BEACH ESTATES
Plat Recording:	BOOK 4, PAGE 143
Legal Description:	BK 19 LT 81 AND ELY PT LT 82 BREEZESWEPT BEACH ESTATES RAMROD KEY PB4-143 OR318-70 OR934-2188/89 OR1136-2154 OR1301-767/68 OR1313-61/62 OR1620-2034 OR2885-766/67 OR2978-1727
Block Number:	19
Lot Number:	81
Range:	29E
Township:	66S
Section:	32

Tax Assessment Information

Tax Year:	2023
Calculated Land Value:	$1,370,040.00
Calculated Improvement Value:	$407,495.00
Calculated Total Value:	$1,777,535.00
Assessed Total Value:	$1,124,460.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Market Land Value:	$1,370,040.00
Market Improvement Value:	$407,495.00
Market Total Value:	$1,777,535.00
Valuation Method:	MARKET
Tax Amount:	$12,172.93
Tax Code Area:	100H

Building/Improvement Characteristics

Building Type:	RESIDENTIAL
Number of Buildings:	1
Year Built:	20000000
Living Square Feet:	1920
Number of Bedrooms:	3
Number of Bathrooms:	1
Full Baths:	1
Garage Type:	CARPORT
Number of Stories:	2.00
Number of Units:	1
Improvement Type:	TYPE UNKNOWN
Construction Quality:	TYPE UNKNOWN
Exterior Wall Type:	CONCRETE BLOCK
Roof Type:	GABLE/HIP
Foundation Type:	CONCRETE
Heat:	FORCED AIR
A/C Type:	TYPE UNKNOWN

Last Market Sale Information

Sale Date:	12/29/2017
Seller Name:	PONTIN DUKE & BRANDI
Sale Price:	$1,200,000.00
Deed Type:	DEED
Type of Sale:	RESALE
Multiple Parcel Sale:	MULTIPLE PARCELS IN THE SALE ? SUBSEQUENT APNS LISTED ON THE DOCUMENT
Recording Date:	12/29/2017
Document Number:	2149286
Recording Book/Page:	BOOK 2885, PAGE 766

Previous Transaction Information

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Sale Date:	02/24/2000
Sale Price:	$369,000.00
Type of Sale:	RESALE
Recording Date:	03/03/2000
Recording Book/Page:	BOOK 1620, PAGE 2034

Historical Tax Assessor Information

Historical Tax Assessor Record: 1.	
Tax Year:	2022
Calculated Land Value:	$1,161,232.00
Calculated Improvement Value:	$410,338.00
Calculated Total Value:	$1,571,570.00
Assessed Total Value:	$1,020,199.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	28606 SICILY LOOP BONITA SPRINGS, FL 34135-8985
Historical Tax Assessor Record: 2.	
Tax Year:	2022
Calculated Land Value:	$1,161,232.00
Calculated Improvement Value:	$410,338.00
Calculated Total Value:	$1,571,570.00
Assessed Total Value:	$1,020,199.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Owner:	WALTER GERT, WALTER DEBBIE
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	28606 SICILY LOOP BONITA SPRINGS, FL 34135-8985
Historical Tax Assessor Record: 3.	
Tax Year:	2021
Calculated Land Value:	$892,763.00
Calculated Improvement Value:	$366,578.00
Calculated Total Value:	$1,259,341.00
Assessed Total Value:	$927,454.00
Assessor's Parcel Number:	00206670-000000

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Absentee Owner:	OWNER OCCUPIED
Owner:	WALTER GERT, WALTER DEBBIE
Property Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Mailing Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Historical Tax Assessor Record: 4.	
Tax Year:	2019
Calculated Land Value:	$504,976.00
Calculated Improvement Value:	$361,912.00
Calculated Total Value:	$866,888.00
Assessed Total Value:	$866,888.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Owner:	WALTER GERT, WALTER DEBBIE
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	30 BAYVIEW BLVD FORT MYERS BEACH, FL 33931-4506
Historical Tax Assessor Record: 5.	
Tax Year:	2019
Calculated Land Value:	$485,800.00
Calculated Improvement Value:	$357,340.00
Calculated Total Value:	$843,140.00
Assessed Total Value:	$843,140.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	OWNER OCCUPIED
Owner:	WALTER GERT, WALTER DEBBIE
Property Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Mailing Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Historical Tax Assessor Record: 6.	
Tax Year:	2018
Calculated Land Value:	$560,374.00
Calculated Improvement Value:	$362,180.00
Calculated Total Value:	$922,554.00
Assessed Total Value:	$922,554.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Assessor's Parcel Number:	00206670-000000
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Owner:	WALTER FAMILY JOINT
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	30 BAYVIEW BLVD FORT MYERS BEACH, FL 33931-4506
Historical Tax Assessor Record: 7.	
Tax Year:	2017
Calculated Land Value:	$488,796.00
Calculated Improvement Value:	$290,590.00
Calculated Total Value:	$779,386.00
Assessed Total Value:	$779,386.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 8.	
Tax Year:	2017
Calculated Land Value:	$488,796.00
Calculated Improvement Value:	$290,590.00
Calculated Total Value:	$779,386.00
Assessed Total Value:	$779,386.00
Assessor's Parcel Number:	00206670-000000
Absentee Owner:	SITUS FROM SALE (ABSENTEE)
Owner:	WALTER FAMILY TRUST
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	30 BAYVIEW BLVD FORT MYERS BEACH, FL 33931-4506
Historical Tax Assessor Record: 9.	
Tax Year:	2015
Calculated Land Value:	$295,475.00
Calculated Improvement Value:	$259,890.00
Calculated Total Value:	$555,365.00
Assessed Total Value:	$555,365.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 10.	
Tax Year:	2015
Calculated Land Value:	$560,691.00
Calculated Improvement Value:	$264,474.00
Calculated Total Value:	$825,165.00
Assessed Total Value:	$825,165.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 11.	
Tax Year:	2014
Calculated Land Value:	$373,794.00
Calculated Improvement Value:	$261,035.00
Calculated Total Value:	$634,829.00
Assessed Total Value:	$580,858.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 12.	
Tax Year:	2013
Calculated Land Value:	$311,495.00
Calculated Improvement Value:	$264,229.00
Calculated Total Value:	$575,724.00
Assessed Total Value:	$528,053.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 13.	
Tax Year:	2012
Calculated Land Value:	$210,036.00
Calculated Improvement Value:	$270,013.00
Calculated Total Value:	$480,049.00
Assessed Total Value:	$480,049.00
Assessor's Parcel Number:	00206670-000000
Owner:	DUKE PONTIN, DUKE BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 14.	
Tax Year:	2011
Calculated Land Value:	$235,235.00
Calculated Improvement Value:	$267,141.00
Calculated Total Value:	$502,376.00
Assessed Total Value:	$494,276.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Mailing Address:	PO BOX 244 BIG PINE KEY, FL 33043
Historical Tax Assessor Record: 15.	
Tax Year:	2010
Calculated Land Value:	$175,946.00
Calculated Improvement Value:	$273,396.00
Calculated Total Value:	$449,342.00
Assessed Total Value:	$449,342.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Mailing Address:	PO BOX 244 BIG PINE KEY, FL 33043
Historical Tax Assessor Record: 16.	
Tax Year:	2009
Calculated Land Value:	$479,854.00
Calculated Improvement Value:	$306,205.00
Calculated Total Value:	$786,059.00
Assessed Total Value:	$786,059.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 244 BIG PINE KEY, FL 33043
Historical Tax Assessor Record: 17.	
Tax Year:	2008
Calculated Land Value:	$598,000.00
Calculated Improvement Value:	$255,424.00
Calculated Total Value:	$853,424.00
Assessed Total Value:	$853,424.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 244 BIG PINE KEY, FL 33043
Historical Tax Assessor Record: 18.	
Tax Year:	2006
Calculated Land Value:	$552,000.00
Calculated Improvement Value:	$309,116.00
Calculated Total Value:	$861,116.00
Assessed Total Value:	$861,116.00
Assessor's Parcel Number:	00206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR RAMROD KEY, FL 33042-5455
Mailing Address:	PO BOX 244 BIG PINE KEY, FL 33043

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Historical Tax Assessor Record: 19.	
Tax Year:	2001
Calculated Land Value:	$78,200.00
Calculated Improvement Value:	$183,552.00
Calculated Total Value:	$261,752.00
Assessed Total Value:	$261,752.00
Assessor's Parcel Number:	206670-000000
Owner:	PONTIN DUKE, PONTIN BRANDI
Property Address:	971 W INDIES DR SUMMERLAND KEY, FL 33042-5455
Mailing Address:	33043
Historical Tax Assessor Record: 20.	
Tax Year:	2000
Calculated Land Value:	$62,560.00
Calculated Total Value:	$62,560.00
Assessed Total Value:	$62,560.00
Assessor's Parcel Number:	206670-000000
Owner:	MESSENGER JANET M
Mailing Address:	4312 NE 23RD AVE FORT LAUDERDALE, FL 33308-5632
Historical Tax Assessor Record: 21.	
Tax Year:	2000
Calculated Land Value:	$62,560.00
Calculated Total Value:	$62,560.00
Assessed Total Value:	$62,560.00
Assessor's Parcel Number:	206670-000000
Owner:	MESSENGER JANET M
Mailing Address:	4312 NE 23RD AVE FORT LAUDERDALE, FL 33308-5632

ADDITIONAL PROPERTIES POSSIBLY CONNECTED TO OWNER may have been located. The owner's mailing address is associated with other properties as indicated by tax assessor records. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

End of Document

To Summary

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Real Property Tax Assessor Record

Source Information

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Tax Roll Certification Date:	02/01/2023
Owner Information Current Through:	01/30/2024
County Last Updated:	02/17/2024
Current Date:	02/20/2024
Source:	TAX ASSESSOR

Owner Information

Owner(s):	PONTIN DUKE H & BRANDI A, ETAL
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	TENANTS IN COMMON
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Property Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6-005-005-0000
Property Type:	WAREHOUSE
Land Use:	WAREHOUSE
Zoning:	A/52/50
Lot Size:	1553350
Lot Acreage:	35.6600
Municipality:	OAHU
Legal Description:	LOT 20 MAP 6 LCAPP 1095 35.660 AC TOG W/ESMT SUBJ/GRANT OF ESMT
Lot Number:	20

Tax Assessment Information

Tax Year:	2023
Calculated Land Value:	$8,600.00
Calculated Improvement Value:	$552,800.00
Calculated Total Value:	$561,400.00
Assessed Land Value:	$8,600.00
Assessed Improvement Value:	$552,800.00
Assessed Total Value:	$561,400.00
Market Land Value:	$8,600.00
Market Improvement Value:	$552,800.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Market Total Value:	$561,400.00
Valuation Method:	MARKET
Tax Amount:	$3,199.98
Tax Code Area:	5

Building/Improvement Characteristics

Building Type:	WAREHOUSE
Number of Buildings:	1
Year Built:	20130000
Living Square Feet:	50750
Construction Quality:	LOW

Last Market Sale Information

Sale Date:	07/30/2009
Seller Name:	CONTINENTAL PACIFIC LLC
Sale Price:	$1,050,000.00
Deed Type:	DEED
Type of Sale:	RESALE
Mortgage Amount:	$750,000.00
Mortgage Loan Type:	CONVENTIONAL
Mortgage Deed Type:	MORTGAGE
Lender Name:	CONTINENTAL PACIFIC LLC
Recording Date:	08/06/2009
Document Number:	3886123
Title Company:	TITLE GUARANTY & ESCROW SVCS

Previous Transaction Information

Previous Document Number:	127617
Sale Date:	07/11/2002
Sale Price:	$18,844,400.00
Type of Sale:	RESALE
Multiple Parcel Sale:	MULTIPLE PARCELS IN THE SALE ? FIRST APN LISTED ON THE DOCUMENT
Recording Date:	07/23/2002

Historical Tax Assessor Information

Historical Tax Assessor Record: 1.	
Tax Year:	2022
Calculated Land Value:	$8,600.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Calculated Improvement Value:	$552,800.00
Calculated Total Value:	$561,400.00
Assessed Total Value:	$561,400.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 2.	
Tax Year:	2021
Calculated Land Value:	$8,600.00
Calculated Improvement Value:	$503,100.00
Calculated Total Value:	$511,700.00
Assessed Total Value:	$511,700.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 3.	
Tax Year:	2020
Calculated Land Value:	$855,800.00
Calculated Total Value:	$855,800.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 4.	
Tax Year:	2019
Calculated Land Value:	$855,800.00
Calculated Total Value:	$855,800.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 5.	
Tax Year:	2018
Calculated Land Value:	$855,800.00
Calculated Total Value:	$855,800.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 6.	
Tax Year:	2017
Calculated Land Value:	$855,800.00
Calculated Total Value:	$855,800.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 7.	
Tax Year:	2016
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$8,400.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Historical Tax Assessor Record: 8.	
Tax Year:	2015
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$8,000.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 9.	
Tax Year:	2014
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$8,700.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 10.	
Tax Year:	2013
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$7,500.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 11.	
Tax Year:	2012
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$6,900.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A & COV, !E K & KEAL T
Property Address:	56 0000000970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 12.	
Tax Year:	2011
Calculated Land Value:	$1,283,800.00
Calculated Total Value:	$1,283,800.00
Assessed Total Value:	$1,283,800.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 13.	
Tax Year:	2011
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 14.	
Tax Year:	2010
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	970 KAMEHAMEHA HWY HAUULA, HI 96717
Mailing Address:	PO BOX 717

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 15.	
Tax Year:	2010
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	970 KAMEHAMEHA HWY HAUULA, HI 96717
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 16.	
Tax Year:	2009
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A, PONTIN COVE K
Property Address:	KAM HWY HAUULA, HI 96717
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 17.	
Tax Year:	2009
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	970 KAMEHAMEHA HWY HAUULA, HI 96717
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 18.	
Tax Year:	2009
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	PONTIN DUKE H & BRANDI A, PONTIN COVE K
Property Address:	KAM HWY HAUULA, HI 96717
Mailing Address:	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350
Historical Tax Assessor Record: 19.	
Tax Year:	2008
Calculated Land Value:	$8,600.00
Calculated Total Value:	$8,600.00
Assessed Total Value:	$8,600.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	CONTINENTAL PACIFIC LLC
Property Address:	KAM HWY HAUULA, HI 96717
Mailing Address:	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350
Historical Tax Assessor Record: 20.	
Tax Year:	2007
Calculated Land Value:	$7,100.00
Calculated Total Value:	$7,100.00
Assessed Total Value:	$7,100.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	CONTINENTAL PACIFIC LLC
Property Address:	KAM HWY HAUULA, HI 96717
Mailing Address:	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350
Historical Tax Assessor Record: 21.	
Tax Year:	2006
Calculated Land Value:	$7,100.00
Calculated Total Value:	$7,100.00
Assessed Total Value:	$7,100.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	CONTINENTAL PACIFIC LLC
Property Address:	KAM HWY KAHUKU, HI 96731

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Mailing Address:	PO BOX 1350 SANTA ROSA BEACH, FL 32459-1350
Historical Tax Assessor Record: 22.	
Tax Year:	2002
Calculated Land Value:	$9,200.00
Calculated Total Value:	$9,200.00
Assessed Total Value:	$9,200.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	AINA NUI CORP
Property Address:	KAM HWY
Mailing Address:	1001 KAMOKILA BLVD 255 KAPOLEI, HI 96707-2014
Historical Tax Assessor Record: 23.	
Tax Year:	2001
Calculated Land Value:	$9,200.00
Calculated Total Value:	$9,200.00
Assessed Total Value:	$9,200.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	JAMES CAMPBELL TRUST ESTATE
Mailing Address:	KAPOLEI, HI 96707
Historical Tax Assessor Record: 24.	
Tax Year:	2000
Calculated Land Value:	$9,200.00
Calculated Total Value:	$9,200.00
Assessed Total Value:	$9,200.00
Assessor's Parcel Number:	1-5-6- 5- 5
Owner:	JAMES CAMPBELL TRUST ESTATE
Mailing Address:	KAPOLEI, HI 96707

ADDITIONAL PROPERTIES POSSIBLY CONNECTED TO OWNER may have been located. The owner's mailing address is associated with other properties as indicated by tax assessor records. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

End of Document

To Summary

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Real Property Tax Assessor Record

Source Information

Tax Roll Certification Date:	02/01/2023

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner Information Current Through:	01/30/2024
County Last Updated:	02/17/2024
Current Date:	02/20/2024
Source:	TAX ASSESSOR

Owner Information

Owner(s):	PONTIN DUKE H & BRANDI A
Ownership Rights:	TENANTS BY ENTIRETY
Absentee Owner:	OWNER OCCUPIED
Property Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6-001-081-0000
Property Type:	SINGLE FAMILY RESIDENCE
Land Use:	SINGLE FAMILY RESIDENCE
Zoning:	U/05/00
Homestead Exempt:	HOMEOWNER EXEMPTION
Lot Size:	39422
Lot Acreage:	0.9050
Municipality:	OAHU
Legal Description:	LOT 1258 0.905 AC MAP 177 LCAPP 1095
Lot Number:	1258

Tax Assessment Information

Tax Year:	2023
Calculated Land Value:	$2,533,100.00
Calculated Improvement Value:	$419,300.00
Calculated Total Value:	$2,952,400.00
Assessed Land Value:	$2,533,100.00
Assessed Improvement Value:	$419,300.00
Assessed Total Value:	$2,952,400.00
Market Land Value:	$2,533,100.00
Market Improvement Value:	$419,300.00
Market Total Value:	$2,952,400.00
Valuation Method:	MARKET

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Tax Amount:	$9,493.40
Tax Code Area:	2

Building/Improvement Characteristics

Building Type:	RESIDENTIAL
Number of Buildings:	1
Year Built:	19560000
Living Square Feet:	1254
Total Number of Rooms:	3
Number of Bedrooms:	2
Number of Bathrooms:	2
Full Baths:	2
Garage Type:	WOOD FRAME GARAGE
Number of Stories:	1.00
Style/Shape:	CONTEMPORARY
Improvement Type:	SINGLE FAMILY
Construction Quality:	FAIR
Exterior Wall Type:	WOOD
Roof Type:	GABLE
Foundation Type:	CONCRETE
A/C Type:	NONE

Last Market Sale Information

Sale Date:	10/25/2000
Seller Name:	GRAY JAMES S
Sale Price:	$850,000.00
Deed Type:	DEED
Type of Sale:	RESALE
Mortgage Amount:	$600,000.00
Mortgage Loan Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	MORTGAGE
Lender Name:	AMERICAN SVGS BK FSB
Recording Date:	10/30/2000
Document Number:	2660755

Previous Transaction Information

Previous Document Number:	1303470
Sale Date:	06/05/1985

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Sale Price:	$300,000.00
Type of Sale:	RESALE
Mortgage Amount:	$140,786.00
Recording Date:	06/01/1985

Historical Tax Assessor Information

Historical Tax Assessor Record: 1.	
Tax Year:	2022
Calculated Land Value:	$2,533,100.00
Calculated Improvement Value:	$419,300.00
Calculated Total Value:	$2,952,400.00
Assessed Total Value:	$2,952,400.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 2.	
Tax Year:	2021
Calculated Land Value:	$1,999,800.00
Calculated Improvement Value:	$561,700.00
Calculated Total Value:	$2,561,500.00
Assessed Total Value:	$2,561,500.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 3.	
Tax Year:	2020
Calculated Land Value:	$1,999,800.00
Calculated Improvement Value:	$92,100.00
Calculated Total Value:	$2,091,900.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Assessed Total Value:	$2,091,900.00
Assessor's Parcel Number:	1-5-6- 1- 81
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 4.	
Tax Year:	2019
Calculated Land Value:	$1,999,800.00
Calculated Improvement Value:	$157,800.00
Calculated Total Value:	$2,157,600.00
Assessed Total Value:	$2,157,600.00
Assessor's Parcel Number:	1-5-6- 1- 81
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 5.	
Tax Year:	2018
Calculated Land Value:	$1,999,800.00
Calculated Improvement Value:	$236,400.00
Calculated Total Value:	$2,236,200.00
Assessed Total Value:	$2,236,200.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 6.	
Tax Year:	2017
Calculated Land Value:	$1,866,500.00
Calculated Improvement Value:	$62,900.00
Calculated Total Value:	$1,929,400.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Assessed Total Value:	$1,929,400.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 7.	
Tax Year:	2016
Calculated Land Value:	$1,566,500.00
Calculated Improvement Value:	$116,300.00
Calculated Total Value:	$1,682,800.00
Assessed Total Value:	$1,682,800.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 8.	
Tax Year:	2015
Calculated Land Value:	$1,466,600.00
Calculated Improvement Value:	$102,700.00
Calculated Total Value:	$1,569,300.00
Assessed Total Value:	$1,569,300.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Historical Tax Assessor Record: 9.	
Tax Year:	2014
Calculated Land Value:	$1,327,000.00
Calculated Improvement Value:	$200,200.00
Calculated Total Value:	$1,527,200.00
Assessed Total Value:	$1,527,200.00
Assessor's Parcel Number:	1-5-6- 1- 81
Homestead Exempt:	HOMEOWNER EXEMPTION
Absentee Owner:	OWNER OCCUPIED
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 10.	
Tax Year:	2013
Calculated Land Value:	$1,327,000.00
Calculated Improvement Value:	$216,800.00
Calculated Total Value:	$1,543,800.00
Assessed Total Value:	$1,543,800.00
Assessor's Parcel Number:	1-5-6- 1- 81
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 11.	
Tax Year:	2012
Calculated Land Value:	$1,270,500.00
Calculated Improvement Value:	$108,600.00
Calculated Total Value:	$1,379,100.00
Assessed Total Value:	$1,379,100.00
Assessor's Parcel Number:	1-5-6- 1- 81
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

ADDITIONAL PROPERTIES POSSIBLY CONNECTED TO OWNER may have been located. The owner's mailing address is associated with other properties as indicated by tax assessor records. Additional charges may apply.
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End of Document
To Summary

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Real Property Tax Assessor Record

Source Information

Tax Roll Certification Date:	02/01/2023
Owner Information Current Through:	01/30/2024
County Last Updated:	02/17/2024
Current Date:	02/20/2024
Source:	TAX ASSESSOR

Owner Information

Owner(s):	PONTIN DUKE H & BRANDI A
Ownership Rights:	TENANTS BY ENTIRETY
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 39
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Zoning:	U/05/00
Lot Size:	36586
Lot Acreage:	0.8399
Subdivision:	MAP 22
Legal Description:	SELLER-NAGY RONALD S & BEVERLY C
Lot Number:	249

Tax Assessment Information

Tax Year:	2011
Valuation Method:	ASSESSED
Tax Amount:	$4,622.10

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Tax Code Area:	1

Building/Improvement Characteristics

Building Type:	RESIDENTIAL
Number of Buildings:	1
Year Built:	19560000
Total Area:	9000036586IMPROVED RESIDENTIAL
Living Square Feet:	1254
Total Number of Rooms:	3
Number of Bedrooms:	2
Number of Bathrooms:	2.00
Full Baths:	2
Garage Type:	WOOD FRAME GARAGE
Number of Stories:	1.00
Style/Shape:	CONTEMPORARY
Improvement Type:	SINGLE FAMILY
Exterior Wall Type:	MASONRY
Roof Type:	GABLE
Foundation Type:	CONCRETE
A/C Type:	NONE

Last Market Sale Information

Sale Date:	10/25/2000
Seller Name:	GRAY JAMES S
Sale Price:	$850,000.00
Deed Type:	GRANT DEED
Type of Sale:	RESALE
Mortgage Amount:	$600,000.00
Mortgage Loan Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	MORTGAGE DEED
Lender Name:	AMERICAN SVGS BK FSB
Recording Date:	10/30/2000
Document Number:	2660755
Title Company:	TITLE GUARANTY

Previous Transaction Information

Previous Document Number:	1303470
Sale Date:	06/05/1985

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Sale Price:	$300,000.00
Mortgage Amount:	$140,786.00
Recording Date:	06/1985

Historical Tax Assessor Information

Historical Tax Assessor Record: 1.	
Tax Year:	2011
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 2.	
Tax Year:	2010
Calculated Land Value:	$1,224,600.00
Calculated Improvement Value:	$96,000.00
Calculated Total Value:	$1,320,600.00
Assessed Total Value:	$1,320,600.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H & BRANDI A
Property Address:	56 0000000211 KUUKAMA ST KAILUA, HI 96734
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 3.	
Tax Year:	2009
Calculated Land Value:	$1,700,800.00
Calculated Improvement Value:	$128,400.00
Calculated Total Value:	$1,829,200.00
Assessed Total Value:	$1,829,200.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 KUUKAMA ST KAILUA, HI 96734
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 4.	
Tax Year:	2009

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Calculated Land Value:	$1,496,700.00
Calculated Improvement Value:	$153,700.00
Calculated Total Value:	$1,650,400.00
Assessed Total Value:	$1,650,400.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 KUUKAMA ST KAILUA, HI 96734
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 5.	
Tax Year:	2009
Calculated Land Value:	$1,700,800.00
Calculated Improvement Value:	$128,400.00
Calculated Total Value:	$1,829,200.00
Assessed Total Value:	$1,829,200.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 0000000211 KUUKAMA ST KAILUA, HI 96734
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 6.	
Tax Year:	2008
Calculated Land Value:	$1,700,800.00
Calculated Improvement Value:	$128,400.00
Calculated Total Value:	$1,829,200.00
Assessed Total Value:	$1,829,200.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 KUUKAMA ST KAILUA, HI 96734
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 7.	
Tax Year:	2007
Calculated Land Value:	$1,768,900.00
Calculated Improvement Value:	$111,000.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Calculated Total Value:	$1,879,900.00
Assessed Total Value:	$1,879,900.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 KUUKAMA ST KAILUA, HI 96734-2948
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 8.	
Tax Year:	2006
Calculated Land Value:	$2,645,700.00
Calculated Improvement Value:	$91,200.00
Calculated Total Value:	$2,736,900.00
Assessed Total Value:	$2,736,900.00
Assessor's Parcel Number:	1-5-6- 1- 39
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 0000000211 KAM HWY HI
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717
Historical Tax Assessor Record: 9.	
Tax Year:	2002
Calculated Land Value:	$680,400.00
Calculated Improvement Value:	$48,700.00
Calculated Total Value:	$729,100.00
Assessed Total Value:	$729,100.00
Assessor's Parcel Number:	1-5-6- 1- 39
Absentee Owner:	ABSENTEE (MAIL AND SITUS NOT=)
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	211 KAM HWY
Mailing Address:	911 W INDIES DR RAMROD KEY, FL 33042-5455
Historical Tax Assessor Record: 10.	
Tax Year:	2001
Calculated Land Value:	$536,800.00
Calculated Improvement Value:	$50,800.00
Calculated Total Value:	$587,600.00
Assessed Total Value:	$587,600.00

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Assessor's Parcel Number:	1-5-6- 1- 39
Absentee Owner:	YES
Owner:	PONTIN DUKE H, PONTIN BRANDI A
Property Address:	56 211 KAM HWY HAUULA, HI 96717
Mailing Address:	911 W INDIES DR RAMROD KEY, FL 33042-5455
Historical Tax Assessor Record: 11.	
Tax Year:	2000
Calculated Land Value:	$529,200.00
Calculated Improvement Value:	$50,400.00
Calculated Total Value:	$579,600.00
Assessed Total Value:	$579,600.00
Assessor's Parcel Number:	1-5-6- 1- 39
Absentee Owner:	YES
Owner:	GRAY JAMES S
Property Address:	56 211 KAM HWY HAUULA, HI 96717
Mailing Address:	HONOLULU, HI 96815

ADDITIONAL PROPERTIES POSSIBLY CONNECTED TO OWNER may have been located. The owner's mailing address is associated with other properties as indicated by tax assessor records. Additional charges may apply.
TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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Real Property Transactions (13)

To Summary

Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	BUREAU OF CONVEYANCES

Transaction Information

Transaction Date:	08/25/2023
Seller Name:	PONTIN DUKE H & BRANDI A
Deed Type:	QUIT CLAIM DEED
Document Type:	QUIT CLAIM DEED
Type of Transaction:	NOMINAL
Recording Date:	09/01/2023

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Ownership Rights:	TENANTS IN COMMON
Property Address:	56-970 KAMEHAMEHA HWY KAHUKU, HI 96731-2305
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Document Number:	T12296141
	ATTORNEY ONLY
Construction Type:	SALE IS A RE-SALE
InterFamily Transaction:	RELEASE OF DEED OF TRUST/MTG

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 5- 5
Property Type:	WAREHOUSE
Land Use:	WAREHOUSE
Building Square Feet:	50750

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	BUREAU OF CONVEYANCES

Transaction Information

Transaction Date:	05/12/2021
Deed Type:	TRUST DEED/ MORTGAGE
Document Type:	MORTGAGE
Type of Transaction:	REFINANCE
Mortgage Amount:	$822,375.00
Mortgage Type:	CONVENTIONAL

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Ownership Rights:	TENANTS BY ENTIRITY
Absentee Owner:	SITUS FROM SALE (OCCUPIED)
Property Address:	56-211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	56-211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218

Mortgage Term:	15 YEARS
Mortgage Deed Type:	MORTGAGE DEED
Mortgage Date:	05/12/2021
Mortgage Due Date:	06/01/2036
Lender Name:	AMERISAVE MTG CORPAMERISAVE MTG CORP
Address:	ATLANTA, GA 30305
Recording Date:	03/16/2022
Document Number:	T11762374
	TITLE ORDER NBR ONLY
Refinance Loan:	LOAN TO VALUE IS MORE THAN 50%

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 81
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1254

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024

Transaction Information

Transaction Date:	09/22/2017

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Absentee Owner:	SITUS FROM SALE (OCCUPIED)
Property Address:	56-211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Mailing Address:	56-211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218

Deed Type:	TRUST DEED/ MORTGAGE
Document Type:	MORTGAGE
Type of Transaction:	REFINANCE
Mortgage Amount:	$1,450,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	MORTGAGE DEED
Mortgage Date:	09/22/2017
Mortgage Due Date:	10/01/2047
Lender Name:	AMERICAN SVGS BK FSBAMERICAN SVGS BK FSB
Address:	HONOLULU, HI 96804-2300
Recording Date:	09/29/2017
Document Number:	T10133057
	FIRST AMERICAN TITLE
Refinance Loan:	LOAN TO VALUE IS MORE THAN 50%

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 81
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1254

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Real Property Transaction Record

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Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	PONTIN DUKE H & BRANDI A
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	TENANTS BY ENTIRETY
Additional Owner:	PONTIN DUKE H & BRANDI A
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	TENANTS BY ENTIRETY
Property Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731

Transaction Information

Transaction Date:	07/07/2003
Deed Type:	DEED OF TRUST
Type of Transaction:	REFINANCE
Mortgage Amount:	$200,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	MORTGAGE DEED
Mortgage Date:	07/07/2003
Mortgage Due Date:	07/01/2033
Interest Rate:	ADJUSTABLE
Lender Name:	HORIZON NAT'L BK
Address:	OVERLAND PARK, KS 66211
Recording Date:	07/11/2003
Document Number:	2955430
Title Company:	TITLE GUARANTY
Refinance Loan:	LOAN TO VALUE IS LESS THAN 50%

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 39
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1254

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN DUKE H
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN BRANDI A
Property Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	56 KAMEHAMEHA HWY KAHUKU, HI 96731

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 39
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE

Transaction Information

Transaction Date:	07/02/2004
Deed Type:	DEED OF TRUST
Type of Transaction:	REFINANCE
Mortgage Amount:	$249,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Deed Type:	MORTGAGE DEED
Mortgage Date:	07/02/2004
Interest Rate:	ADJUSTABLE
Lender Name:	BANK OF HI
Address:	HONOLULU, HI 96803
Recording Date:	07/09/2004
Document Number:	3134032
Title Company:	TITLE GUARANTY
Equity Loan:	SECOND

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Building Square Feet:	1254

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	DUKE & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Ownership Rights:	TENANTS BY ENTIRITY
Property Address:	211 KAM HWY HI
Mailing Address:	56-211 KAM HWY KAHUKU, HI 96731

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 81
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE

Transaction Information

Transaction Date:	02/06/2008
Deed Type:	TRUST DEED/ MORTGAGE
Document Type:	EQUITY OR CREDIT LINE
Type of Transaction:	REFINANCE
Mortgage Amount:	$500,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	EQUITY OR CREDIT LINE
Mortgage Date:	02/06/2008
Mortgage Due Date:	04/06/2038
Interest Rate:	ADJUSTABLE INT RATE LOAN
Lender Name:	CITIBANK NA
Address:	LAS VEGAS, NV 89109
Recording Date:	04/02/2008
Document Number:	3729370
	FIDELITY NATIONAL TITLE INSURA
Equity Loan:	SECOND

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1254

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Ownership Rights:	JOINT TENANTS
Property Address:	970 KAMEHAMEHA HWY KAHUKU, HI 96731
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 5- 5
Property Type:	AGRICULTURAL
Land Use:	AGRICULTURAL (NEC)

Transaction Information

Transaction Date:	07/30/2009
Seller Name:	CONTINENTAL PACIFIC LLC
Sale Price:	$1,050,000.00
Deed Type:	GRANT DEED
Document Type:	LIMITED WARRANTY DEED
Type of Transaction:	RESALE
Mortgage Amount:	$750,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Deed Type:	MORTGAGE DEED
Mortgage Date:	08/06/2009
Lender Name:	CONTINENTAL PACIFIC LLC
Address:	SANTA ROSA BEACH, FL 32459
Recording Date:	08/06/2009
Document Number:	3886123
	TITLE GUARANTY & ESCROW SVCS
Seller Carryback:	YES
Construction Type:	SALE IS A RE-SALE
Purchase Payment:	MORTGAGE

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Foreclosure Sale:	REO SALE - SALE FROM GOVERNMENT TO PRIVATE PARTY

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TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	BUREAU OF CONVEYANCES

Owner Information

Owner(s):	DUKE H & BRANDI A PONTIN
Owner Relationship:	HUSBAND AND WIFE
Ownership Rights:	TENANTS BY ENTIRITY
Additional Owner #1:	PONTIN DUKE H
Owner Relationship:	HUSBAND/WIFE
Owner Rights:	TENANTS BY ENTIRITY
Additional Owner #2:	PONTIN BRANDI A
Property Address:	211 KAM HWY HI
Mailing Address:	211 KAM HWY KAHUKU, HI 96731

Transaction Information

Transaction Date:	02/06/2008
Deed Type:	TRUST DEED/ MORTGAGE
Document Type:	EQUITY OR CREDIT LINE
Type of Transaction:	REFINANCE
Mortgage Amount:	$500,000.00
Mortgage Type:	CONVENTIONAL
Mortgage Term:	30 YEARS
Mortgage Deed Type:	EQUITY OR CREDIT LINE
Mortgage Date:	02/06/2008
Mortgage Due Date:	04/06/2038
Interest Rate:	ADJUSTABLE INT RATE LOAN
Lender Name:	CITIBANK NA
Address:	LAS VEGAS, NV 89109
Recording Date:	04/02/2008
Document Number:	3729370
	FIDELITY NATIONAL TITLE INSURA
Equity Loan:	SECOND

Property Information

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

County:	HONOLULU
Assessor's Parcel Number:	1-5-6- 1- 39
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1254

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

End of Document

To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	02/05/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	BUREAU OF CONVEYANCES

Transaction Information

Transaction Date:	07/10/2003
Seller Name:	MURAKAMI LESLENE L
Sale Price:	$360,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	07/21/2003
Document Number:	148389
Title Company:	FHTC
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	PONTIN DUKE & BRANDI
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	TENANTS BY ENTIRETY
Additional Owner:	PONTIN DUKE & BRANDI
Owner Relationship:	HUSBAND/WIFE
Ownership Rights:	TENANTS BY ENTIRETY
Property Address:	HI
Mailing Address:	PO BOX 717 KAHUKU, HI 96731-0717

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Property Information

County:	HONOLULU
Assessor's Parcel Number:	1-5-5- 2- 31
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	864

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	CLERK OF THE CIRCUIT CT

Owner Information

Owner(s):	WALTER FAMILY TRUST
Ownership Rights:	REVOCABLE TRUST
Corporate Owner:	CORPORATE OWNER
Absentee Owner:	SITUS FROM SALE (ABSENTEE)
Property Address:	971 INDIES DR

Transaction Information

Transaction Date:	12/29/2017
Seller Name:	PONTIN DUKE & BRANDI
Sale Price:	$1,200,000.00
Deed Type:	GRANT DEED
Document Type:	WARRANTY DEED
Type of Transaction:	RESALE
Recording Date:	12/29/2017
Document Number:	2149286
Recording Book/Page:	BOOK 2885, PAGE 766
	ATTORNEY ONLY
Construction Type:	SALE IS A RE-SALE
Purchase Payment:	CASH
Multiple Parcel Sale:	MULTIPLE PARCEL SALE

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	RAMROD KEY, FL 33042-5455
Mailing Address:	30 BAYVIEW BLVD FORT MYERS BEACH, FL 33931-4506

Property Information

County:	MONROE
Assessor's Parcel Number:	1270008
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	SINGLE FAMILY RESIDENCE
Building Square Feet:	1920

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	CLERK OF THE CIRCUIT CT

Owner Information

Owner(s):	DUKE H & BRANDY A PONTIN

Transaction Information

Transaction Date:	07/21/2004
Seller Name:	THOMPSON MICHAEL & GRACE E
Sale Price:	$250,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	08/03/2004
Document Number:	1461245
Recording Book/Page:	BOOK 2031, PAGE 1428
Title Company:	TRUETITLE AGENCY INC
Construction Type:	RESALE

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner Relationship:	HUSBAND/WIFE	**Purchase Payment:**	CASH
Additional Owner:	PONTIN DUKE H		
Owner Relationship:	HUSBAND/WIFE		
Additional Owner:	PONTIN BRANDY A		
Property Address:	FL		
Mailing Address:	N/AVAIL BIG PINE KEY, FL 33043		

Property Information

County:	MONROE
Assessor's Parcel Number:	1256421
Property Type:	SINGLE FAMILY RESIDENCE - TOWNHOUSE
Land Use:	MOBILE HOME PP
Building Square Feet:	564

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Transaction Date:	02/24/2000
Seller Name:	GALLINATTI JOHN B
Sale Price:	$31,100.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	03/03/2000
Recording Book/Page:	BOOK 1620, PAGE 2031
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE & BRANDI PONTIN

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN DUKE
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN BRANDI
Property Address:	FL
Mailing Address:	911 INDIES DR RAMROD KEY, FL 33042-5455

Property Information

County:	MONROE
Assessor's Parcel Number:	00206680 326629
Property Type:	MISCELLANEOUS

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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To Summary

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Real Property Transaction Record

Source Information

Filings Current Through:	01/26/2024
County Last Updated:	02/15/2024
Frequency of Update:	WEEKLY
Current Date:	02/20/2024
Source:	CLERK OF THE CIRCUIT CT

Transaction Information

Transaction Date:	02/24/2000
Seller Name:	MESSENGER JANET M
Sale Price:	$369,000.00
Deed Type:	GRANT DEED
Type of Transaction:	RESALE
Recording Date:	03/03/2000
Recording Book/Page:	BOOK 1620, PAGE 2034
Construction Type:	RESALE
Purchase Payment:	CASH

Owner Information

Owner(s):	DUKE & BRANDI PONTIN
Owner Relationship:	HUSBAND/WIFE
Additional Owner:	PONTIN DUKE
Owner Relationship:	HUSBAND/WIFE

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Additional Owner:	PONTIN BRANDI
Property Address:	FL
Mailing Address:	911 INDIES DR RAMROD KEY, FL 33042-5455

Property Information

County:	MONROE
Assessor's Parcel Number:	00206670 326629
Property Type:	MISCELLANEOUS

TAX ASSESSOR RECORD may be available for this property. The record contains information from the office of the local real property tax assessor office. In addition to identifying the current owner, the record may include tax assessment information, the legal description, and property characteristics. Additional charges may apply.

TRANSACTION HISTORY REPORT may be available for this property. The report contains details about all available transactions associated with this property. The report may include information about sales, ownership transfers, refinances, construction loans, 2nd mortgages, or equity loans based on recorded deeds. Additional charges may apply.

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Vehicle Registrations (4)

To Summary

Motor Vehicle Record

Source Information

Coverage Begin Date:	01/01/2001
Information Current Through:	02/06/2024
Database Last Updated:	02/10/2024
Update Frequency:	2X MONTHLY
Current Date:	02/20/2024
Source:	DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES

Vehicle Information

VIN:	FLZT7632A770
Vehicle Type:	UNKNOWN
Model Year:	1970
Make:	99900

Title Information:

Original Title Date:	05/15/2001
Title Number:	0001988083

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Name:	MARCELLA R. DAVIS
Interest:	OWNER
Title Transaction Date:	05/15/2001
Mailing Address:	446 CROTON LN BIG PINE KEY, FL 33043-4615
County:	MONROE

Historical DMV Record 1

Registration Renewal Date:	12/19/2000
Expiration Date:	01/24/2002
Issuing State:	FL
Plate Type:	BOAT
Previous Plate Number:	FL4525HK
Previous Plate State:	FL
Name:	BRANDY ANNE PONTIN
Approximate Date of Birth:	01/XX/1956
Interest:	REGISTRANT
Mailing Address:	PO BOX 244 244 BIG PINE KEY, FL 33043
County:	MONROE

End of Document

To Summary

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Motor Vehicle Record

Source Information

Coverage Begin Date:	01/01/2001
Information Current Through:	02/06/2024
Database Last Updated:	02/10/2024
Update Frequency:	2X MONTHLY
Current Date:	02/20/2024
Source:	DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES

Vehicle Information

VIN:	TME678V610648
Vehicle Type:	UNKNOWN
Model Year:	1978
Make:	GMC

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Body Style:	TK

Registration Information

License Plate Number:	M2526W
Decal Number:	34374287
Issuing State:	FL
Plate Type:	FORESTRY
Previous Plate Number:	M2526W
Previous Plate State:	FL
Registration Renewal Date:	01/15/2002
Expiration Date:	12/31/2002
Registrant(s) Since:	03/22/1999
Name:	BRANDY ANNE PONTIN
Approximate Date of Birth:	01/XX/1956
Interest:	REGISTRANT
Mailing Address:	PO BOX 244 244 BIG PINE KEY, FL 33043
County:	MONROE
Registration Renewal Date:	01/15/2002
Expiration Date:	12/31/2002
Registrant(s) Since:	03/22/1999
Name:	DALE HANCOCK PONTIN
Approximate Date of Birth:	08/XX/1953
Interest:	REGISTRANT
Mailing Address:	PO BOX 244 244 BIG PINE KEY, FL 33043
County:	MONROE

Historical DMV Record 1

Title Transfer Date:	07/06/2004
Name:	AA ACCURATE TRUCK & TIRE REPAIR INC
Interest:	OWNER
Mailing Address:	1644 N US1 ORMOND BEACH, FL 32174
County:	VOLUSIA

End of Document

To Summary

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The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Motor Vehicle Record

Source Information

Coverage Begin Date:	01/01/2001
Information Current Through:	02/06/2024
Database Last Updated:	02/10/2024
Update Frequency:	2X MONTHLY
Current Date:	02/20/2024
Source:	DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES

Vehicle Information

VIN:	LWNW514PC090
Vehicle Type:	UNKNOWN
Model Year:	1990
Make:	99900

Registration Information

Decal Number:	20358983
Issuing State:	FL
Plate Type:	BOAT
Previous Plate Number:	FL2357HR
Previous Plate State:	FL
Registration Renewal Date:	01/05/2001
Expiration Date:	01/24/2002
Registrant(s) Since:	01/05/2001
Name:	BRANDY ANNE PONTIN
Approximate Date of Birth:	01/XX/1956
Interest:	REGISTRANT
Mailing Address:	PO BOX 244 244 BIG PINE KEY, FL 33043
County:	MONROE

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To Summary

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Motor Vehicle Record

Source Information

Coverage Begin Date:	01/01/2001

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Information Current Through:	02/06/2024
Database Last Updated:	02/10/2024
Update Frequency:	2X MONTHLY
Current Date:	02/20/2024
Source:	DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES

Vehicle Information

VIN:	FLZY2403G994
Vehicle Type:	UNKNOWN
Model Year:	1994
Make:	999 0
Body Style:	VS

Registration Information

License Plate Number:	FL4890LB
Decal Number:	00552333
Issuing State:	FL
Plate Type:	BOAT
Registration Renewal Date:	07/26/1999
Expiration Date:	08/07/2000
Registrant(s) Since:	07/26/1999
Name:	DALE HANCOCK PONTIN
Approximate Date of Birth:	08/XX/1953
Interest:	REGISTRANT
Mailing Address:	911 W INDIES DR SUMMERLAND KEY, FL 33042-5455
County:	MONROE
Registration Renewal Date:	07/26/1999
Expiration Date:	08/07/2000
Registrant(s) Since:	07/26/1999
Name:	BRANDY ANNE PONTIN
Approximate Date of Birth:	01/XX/1956
Interest:	REGISTRANT
Mailing Address:	PO BOX 430244 430244 BIG PINE KEY, FL 33043-0244
County:	MONROE

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The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Motor Vehicle Service & Warranty Records (1)

To Summary

Motor Vehicle Service & Warranty Record

Source Information

Database Last Updated:	02/12/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024
Source:	MOTOR VEHICLE SERVICE & WARRANTY RECORDS

Vehicle Information

VIN:	5XYZU3LA5DG108051
Model Year:	2013
Make:	HYUNDAI
Body Style:	SUV
Model/Series:	SANTA FE SPORT 2.0T

Associated Person Information

Name:	BRANDY PONTIN
Address:	56-211 KAMEHAMEHA HWY KAHUKU, HI 96731-2218
Address Type:	STREET RECORD
Deliverable Address:	Y
County:	HONOLULU

End of Document

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Criminal & Infraction Records (1)

To Summary

Administrative Office of the Courts Record

Source Information

Coverage Begin Date:	01/01/1991
Information Current Through:	12/31/2023
Database Last Updated:	12/31/2023

Offense 1

Offense Number:	1
Case Number:	TRK9811967

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Update Frequency:	MONTHLY
Current Date:	02/20/2024
Source:	FL MONROE CLERK OF COURTS

Defendant Information

Offender Name:	PONTIN, BRANDY A
Date of Birth:	01/XX/1956

Case Comment:	UNIFORM CASE NUMBER: 441998TR011967000AKW
Charges Filed Date:	12/01/1998
Statute Violated:	320.07
Offense Charged:	EXP OF REG (CRIMINAL)
Date of Offense:	12/01/1998
Case Type or Category:	MOTOR VEHICLE REGISTRATION OFFENSE
Disposition:	VOLUNTARY PAYMENT
Disposition Date:	12/15/1998
Court:	CIRCUIT
Jurisdiction County:	MONROE

Order Documents

Call Westlaw CourtExpress at 1-877-DOC-RETR (1-877-362-7387) for on-site manual retrieval of documents related to this or other matters. Additional charges apply.

End of Document

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Corporate Records & Business Registrations (1)

To Summary

Corporate Records & Business Registrations

Source Information

Information Current Through:	01/19/2024
Database Last Updated:	02/16/2024
Update Frequency:	QUARTERLY
Current Date:	02/20/2024
Source:	AS REPORTED BY THE SECRETARY OF STATE OR OTHER OFFICIAL SOURCE

Principal Information

Name:	BRANDY PONTIN
Title:	FICTITIOUS NAME OWNER
Address:	PO BOX 244 BIG PINE KEY, FL 33043
Name:	DUKE PONTIN
Title:	FICTITIOUS NAME OWNER
Address:	PO BOX 244 BIG PINE KEY, FL 33043

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Company Information

Name:	SPIRIT MARINE TOWING & ASSISTANCE
Address:	PO BOX 244 BIG PINE KEY, FL 33043

Filing Information

Identification Number:	G96323000182
Filing Date:	11/18/1996
Expiration Date:	12/31/2011
Status:	ACTIVE
Business Type:	FICTITIOUS NAME
Address Type:	MAILING
Where Filed:	FICTITIOUS NAME DIVISION
	409 E GAINES ST TALLAHASSEE, FL 32301

Additional Detail Information

Additional Details:	COUNTY IN WHICH FILING RESIDES: MONROE

The preceding public record data is for information purposes only and is not the official record. Certified copies can only be obtained from the official source.

The public record items reported above may have been paid, terminated, vacated or released prior to today's date.

Order Documents

Call Westlaw CourtExpress at 1-877-DOC-RETR (1-877-362-7387) for on-site manual retrieval of documents related to this or other matters. Additional charges apply.

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DMI (1)

To Summary

Decide with Confidence

D&B Market Identifiers

Source Information

D&B Completed Analysis:	02/19/2024
Information Current Through:	02/19/2024
Database Last Updated:	02/19/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024

Sales Information:

Annual Sales Revision Date:	06/03/2023
Annual Sales (US):	$140,000 -ESTIMATED
1-Yr-Ago:	$ NOT AVAILABLE
3-Yr-Ago:	$ NOT AVAILABLE
Sales Territory:	LOCAL

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Source:	Copyright © 2024 by Dun & Bradstreet, Inc.

Company Information

DUNS:	61-274-4607
Name:	SPIRIT MARINE TOWING & ASSISTANCE
Address:	25123 OVERSEAS HWY SUMMERLAND KEY, FL 33042-4627
County:	MONROE
Telephone:	305-923-5458
Year Started:	1985

Executive(s) Information

1.	**Executive Name:**	BRANDY PONTIN
	Executive Title:	PARTNER
2.	**Executive Name:**	DUKE PONTIN
	Executive Title:	PARTNER

Business Description:

Line of Business:	TOWING/TUGBOAT SERVICES WATER TRANSPORT SERVICES
Industry Group:	TRANSPORATION, COMMUNICATION, ELECTRIC, GAS, AND SANITARY SERVICES
Primary SIC:	4492 TOWING AND TUGBOAT SERVICE 4492 9902 MARINE TOWING SERVICES
Secondary SIC(s):	4499 WATER TRANSPORTATION SERVICES, NEC, NSK

Employee Information

Employees Total:	3
1-Yr-Ago:	3
3-Yr-Ago:	3
Employees Here:	3 -ACTUAL

Company History/Operations/Relationships & Other Information

This Company's Specifics:	
DUNS:	61-274-4607
Business Is A:	SINGLE LOCATION SMALL BUSINESS PARTNERSHIP
Establishment Is:	US OWNED
Latest Update to Record:	02/04/2024
	D&B Decide with Confidence

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

	4499 0101 MARINE SALVAGING	

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Business Profile (1)

To Summary

Business Profile Record

Source Information

Information Current Through:	02/13/2024
Database Last Updated:	02/13/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024

Business Information

Business Name:	SPIRIT MARINE TOWING & SALVAGE
Legal Business Name:	SPIRIT MARINE TOWING & SALVAGE
Primary Address:	PO BOX 244 BIG PINE KEY, FL 33043
County:	MONROE
Country:	USA
Business Phone:	305-872-2752
Business Fax:	305-872-2752
Year Established:	1987
Employees at Location (Year):	1
Sales from Location (Year):	$100,000 (2001)

Business Description:

Primary SIC Code:	7549 AUTOMOTIVE SERVICES, EXCEPT REPAIR AND CARWASHES
Primary NAICS Code:	811198 ALL OTHER AUTOMOTIVE REPAIR AND MAINTENANCE
Business Legal Status:	INDIVIDUAL/SOLE PROPRIETOR

Executive Information

Contact:	BRANDI PONTIN
Contact's Title:	OWNER

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The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Household Records (3)

To Summary

People Finder Household-Centric Record

Source Information

Information Current Through:	12/21/2023
Database Last Updated:	02/10/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024
Source:	Data by Data Axle, Copyright © 2024, All Rights Reserved.

Household Information:

Address:	911 W INDIES DR SUMMRLND KEY, FL 33042-5455
County:	MONROE
Latitude/Longitude:	24.650746/-81.403373
Residence Type:	SINGLE FAMILY DWELLING
Address First Reported:	2001

Head of Household Information

Head of Household:	MR DALE H PONTIN
Gender:	MALE
Date of Birth:	08/XX/1953
Name/Address Confirmed:	01/2011
Marital Status:	MARRIED

Additional Individuals In This Household

Name:	MS BRANDY A PONTIN (Spouse)
Gender:	FEMALE
Date of Birth:	01/XX/1956
Name/Address Confirmed:	03/2012
Marital Status:	MARRIED
Name:	MR KEAL T PONTIN
Gender:	MALE
Date of Birth:	07/XX/1990
Name/Address Confirmed:	02/2012
Name:	MR DUKE PONTIN
Gender:	MALE
Name/Address Confirmed:	08/2012

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To Summary

People Finder Household-Centric Record

Source Information

Household Information:

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Information Current Through:	12/21/2023	**Address:**	PO BOX 717 KAHUKU, HI 96731-0717
Database Last Updated:	02/10/2024	**County:**	HONOLULU
Update Frequency:	MONTHLY	**Latitude/Longitude:**	-157.949965/21.678337
Current Date:	02/20/2024	**Address First Reported:**	2001
Source:	Data by Data Axle, Copyright © 2024, All Rights Reserved.		

Head of Household Information

Head of Household:	MS BRANDY A PONTIN
Gender:	FEMALE
Date of Birth:	01/XX/1956
Name/Address Confirmed:	05/2015
Marital Status:	SINGLE

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To Summary

People Finder Household-Centric Record

Source Information

Information Current Through:	12/21/2023
Database Last Updated:	02/10/2024
Update Frequency:	MONTHLY
Current Date:	02/20/2024
Source:	Data by Data Axle, Copyright © 2024, All Rights Reserved.

Head of Household Information

Head of Household:	MR DUKE H PONTIN
Gender:	MALE
Date of Birth:	08/XX/1953
Name/Address Confirmed:	03/2021

Household Information:

Address:	PO BOX 717 KAHUKU, HI 96731-0717
County:	HONOLULU
Latitude/Longitude:	-157.949827/21.678227
Address First Reported:	2001

Additional Individuals In This Household

Name:	KEAL PONTIN
Date of Birth:	07/XX/1990
Name/Address Confirmed:	05/2021

The data provided to you by WESTLAW may not be used as a factor in establishing a consumer's eligibility for credit, insurance, employment, or for any other purpose authorized under the FCRA.

Marital Status:	SINGLE

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Associate Analytics

Associate Analytics Chart

Association	Possible OFAC?	Possible Global Sanctions?	Possible Arrest Records?	Possible Criminal Records?	Possible Bankruptcy?
Possible Relatives					
PONTIN, DUKE H	No	No	No	Yes	No
PONTIN, KEAL	No	No	No	Yes	No
PONTIN, COVE K	No	No	No	Yes	No
PONTIN, COVE K	No	No	No	No	No
PONTIN, DALE	No	No	No	No	No
PONTIN, KEAL	No	No	No	No	No
PONTIN, BRANDI A	No	No	No	No	No
Possible Associates					
JACKSON, SUMIKO	No	No	No	No	No
SMITH, EVETTE M	No	No	No	No	No
SMITH, JOSHUA A	No	No	No	No	Yes
JACKSON, JUNEKO C	No	No	No	No	No

Possible Relatives & Household Members

Household Records

911 W INDIES DR SUMMRLND KEY, FL 33042-5455 | Full-Text

Address First Reported:	2001	**Confidence Score:**	99

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Name	Role	Date of Birth	Name/Address Confirmed:
MR DALE H PONTIN	Head of Household	08/XX/1953	01/2011
MS BRANDY A PONTIN	Spouse	01/XX/1956	03/2012
MR KEAL T PONTIN	Other	07/XX/1990	02/2012
MR DUKE PONTIN	Other	N/A	08/2012

PO BOX 717 KAHUKU, HI 96731-0717 | Full-Text

Address First Reported:	2001	Confidence Score:	99
Name	**Role**	**Date of Birth**	**Name/Address Confirmed:**
MS BRANDY A PONTIN	Head of Household	01/XX/1956	05/2015

PO BOX 717 KAHUKU, HI 96731-0717 | Full-Text

Address First Reported:	2001	Confidence Score:	99
Name	**Role**	**Date of Birth**	**Name/Address Confirmed:**
MR DUKE H PONTIN	Head of Household	08/XX/1953	03/2021
KEAL PONTIN	Other	07/XX/1990	05/2021

Relatives Analysis

DUKE H PONTIN

Relative of:	BRANDI A PONTIN	Degree of Separation:	1
SSN:	265-06-XXXX - issued in FL in 1966	**DOB:**	08/XX/1953 (Age: 70)

Possible AKA	SSN	DOB
DUKE HANCOCK PONTIN	265-06-XXXX	08/XX/1953
DALE H PONTIN	265-06-XXXX	08/XX/1953
DUKE PONTIN		
DALE PONTIN		
DALE HANCOCK PONTIN		08/XX/1953

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 09/27/2023 - 09/27/2023	* 56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	N/A

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Date Range	Address	Phone
Reported 03/03/2008 - 08/08/2023	* 56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	808-293-2458
Reported 01/01/2001 - 03/31/2021	* PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	305-872-2752
Reported 05/07/2009 - 07/09/2020	* 56211 KAM HIGH WAY, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 05/24/2002 - 05/31/2017	29404 LOUISE ST, BIG PINE KEY, FL 33043-6214 | MONROE County	N/A
Reported 01/01/1995 - 08/31/2012	* 911 W INDIES DR, RAMROD KEY, FL 33042-5455 | MONROE County	305-872-2400
Reported 04/01/2011 - 04/30/2011	1234 KAM DR, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 05/12/2009 - 05/12/2009	* PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	N/A
Reported 01/01/1992 - 01/23/2003	1501 W INDIES DR, SUMMERLAND KEY, FL 33042-5452 | MONROE County	872-2752
Reported 11/13/2000 - 01/23/2003	* PO BOX 244, SUMMERLAND KEY, FL 33042-0001 | MONROE County	872-2752
Reported 03/07/2002 - 03/07/2002	56-212 KAMEHAMEHA HWY, LAIE, HI 96762 | HONOLULU County	808-293-2458
Reported 10/22/2001 - 10/22/2001	* 56 211 KAM HWY, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 01/01/1987 - 09/11/2001	* PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County	N/A

KEAL PONTIN

Relative of:	BRANDI A PONTIN	Degree of Separation:	1
SSN:	589-02-XXXX - issued in FL in 1990	DOB:	07/1990 (Age: 33)

Possible AKA	SSN	DOB
PONTIN KEAL		
KEAL T PONTIN	589-02-XXXX	07/XX/1990
KEAL THOMAS PONTIN		07/XX/1990
MR KEAL T PONTIN		07/1990

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* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 08/24/2019 - 08/19/2022	* 56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	808-375-8605
Reported 01/01/2001 - 05/31/2021	* PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	N/A
Reported 01/01/2005 - 10/31/2020	25081 OVERSEAS HWY, SUMMRLND KEY, FL 33042-4626 | MONROE County	N/A
Reported 01/01/2001 - 05/30/2014	* 911 W INDIES DR, RAMROD KEY, FL 33042-5455 | MONROE County	305-872-2752
Reported 12/01/2008 - 12/31/2008	* PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	N/A

COVE K PONTIN

Relative of:	BRANDI A PONTIN	Degree of Separation:	1
SSN:	589-48-XXXX - issued in FL in 1987	DOB:	03/XX/1987 (Age: 36)

Possible AKA	SSN	DOB
K PONTIN COVE	589-48-XXXX	03/XX/1987
COVE PONTIN		
K PON COVE		

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 09/21/2023 - 09/21/2023	2424 W CAITHNESS PL APT 425, DENVER, CO 80211-3783 | DENVER County	N/A
Reported 01/11/2023 - 04/20/2023	1919 MILE HIGH STADIUM CIR APT 425, DENVER, CO 80204-2759 | DENVER County	N/A
Reported 07/01/2021 - 02/06/2023	2424 W CAITHNESS PL APT 320, DENVER, CO 80211-3779 | DENVER County	N/A
Reported 07/01/2021 - 07/31/2021	2424 W CAITHNESS PL APT 107, DENVER, CO 80211-3775 | DENVER County	N/A

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Date Range	Address	Phone
Reported 11/01/2009 - 01/16/2020	PO BOX 426, KAHUKU, HI 96731-0426 | HONOLULU County	N/A
Reported 11/30/2015 - 11/16/2019	* 56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	305-942-3978
Reported 10/24/2019 - 10/28/2019	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
Reported 05/20/2016 - 05/20/2016	* 56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	N/A
Reported 07/09/2009 - 12/22/2015	* PO BOX 717, KAHUKU, HI 96731-0717 | HONOLULU County	N/A
Reported 03/01/2011 - 03/31/2011	13109 LITTLE BLUFF DR, VANCLEAVE, MS 39565-6513 | JACKSON County	N/A
Reported 08/28/2010 - 09/30/2010	4200 AUDUBON WAY, MOSS POINT, MS 39563-2723 | JACKSON County	N/A
Reported 02/26/2010 - 03/31/2010	2049 CURLEW RD, PALM HARBOR, FL 34683-6820 | PINELLAS County	N/A
Reported 07/09/2009 - 11/03/2009	717, KAHUKU, HI 96731-0717 | HONOLULU County	N/A
Reported 07/20/2005 - 04/06/2007	* 911 W INDIES DR, RAMROD KEY, FL 33042-5455 | MONROE County	N/A
Reported 06/02/2005 - 02/13/2007	951 W INDIES DR, SUMMERLAND KEY, FL 33042-5455 | MONROE County	N/A

COVE KIRKWOOD PONTIN

Relative of:	BRANDI A PONTIN	**Degree of Separation:**	1
SSN:		**DOB:**	03/XX/1987 (Age: 36)

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 03/18/2010 - 10/21/2011	* PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	N/A

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DALE PONTIN

Relative of:	BRANDI A PONTIN	Degree of Separation:	1
SSN:		DOB:	08/1953 (Age: 70)

Possible AKA	SSN	DOB
DALE H PONTIN		

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 01/01/2001 - 05/30/2014	911 W INDIES DR, SUMMERLAND KEY, FL 33042-5455 | MONROE County	305-872-2752

KEAL PONTIN

Relative of:	BRANDI A PONTIN	Degree of Separation:	1
SSN:	589-02-XXXX - issued in FL in 1990	DOB:	07/XX/1990 (Age: 33)

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 10/08/2010 - 10/08/2010	* 56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	808-375-8605

BRANDI A PONTIN

Relative of:	BRANDI A PONTIN	Degree of Separation:	1
SSN:	257-50-XXXX - issued in GA in 1934-1951	DOB:	01/XX/1956 (Age: 68)

* Match with one of the subject's addresses

Date Range	Address	Phone
Reported 01/01/1996 - 04/06/2001	* PO BOX 430244, BIG PINE KEY, FL 33043-0244 | MONROE County	N/A
Reported 01/01/1987 - 12/31/1987	* PO BOX 244, BIG PINE KEY, FL 33043 | MONROE County	N/A
Reported 01/01/1987 - 12/31/1987	* PO BOX 244, SUMMERLAND KEY, FL 33042 | MONROE County	N/A

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Other Address Associations

56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

JOSHUA A SMITH

SSN:	576-33-XXXX - issued in HI in 1986-1987	**DOB:**	04/XX/1986 (Age: 37)

Date Range	Address	Phone
Reported 05/08/2023 - 07/13/2023	1311 ALA KAPUNA ST APT 106, HONOLULU, HI 96819-1307 | HONOLULU County	808-780-6532
Reported 03/21/2021 - 02/26/2022	3161 ALA ILIMA ST APT 1616, HONOLULU, HI 96818-3014 | HONOLULU County	N/A
Reported 12/04/2018 - 12/04/2018	95 KAHELA ST, MILILANI, HI 96789 | HONOLULU County	N/A
Reported 01/01/2018 - 11/30/2018	95-158 KAHELA ST, MILILANI, HI 96789-1012 | HONOLULU County	N/A
Reported 01/01/2016 - 07/15/2017	1321 LOKO DR APT B, WAHIAWA, HI 96786-2379 | HONOLULU County	808-780-6532
Reported 01/01/2006 - 10/31/2015	PO BOX 493, KAHUKU, HI 96731-0493 | HONOLULU County	N/A
Reported 10/24/2012 - 08/31/2015	56-149 KAHANA ST, KAHUKU, HI 96731-2014 | HONOLULU County	808-780-6532
Reported 08/06/2010 - 08/06/2010	56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2218 | HONOLULU County	N/A
Reported 09/11/2007 - 01/19/2009	493, KAHUKU, HI 96731-0493 | HONOLULU County	N/A
Reported 02/01/2008 - 02/29/2008	1112 STREAMDALE PT E, ANTIOCH, TN 37013-4265 | DAVIDSON County	N/A
Reported 03/10/2007 - 10/31/2007	53-356 KAMEHAMEHA HWY APT G, HAUULA, HI 96717-8704 | HONOLULU County	N/A
Reported 05/06/2005 - 02/11/2007	608 SEASCAPE AVE, ORLANDO, FL 32828-8458 | ORANGE County	N/A

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Date Range	Address	Phone
Reported 12/12/2006 - 12/12/2006	4763 N GOLDENROD RD APT 4 APT 4, WINTER PARK, FL 32792-9096 | ORANGE County	N/A
Reported 05/17/2006 - 11/02/2006	231 LEWFIELD CIR, WINTER PARK, FL 32792-1148 | SEMINOLE County	N/A
Reported 06/01/2005 - 05/10/2006	4763 N GOLDENROD RD APT H, WINTER PARK, FL 32792-9096 | ORANGE County	N/A
Reported 04/29/2005 - 05/06/2005	1 WESTGRILL PL, PALM COAST, FL 32164-7764 | FLAGLER County	N/A
Reported 10/01/2004 - 02/21/2005	56-111 KEAWEMAUHILI PL, KAHUKU, HI 96731-2015 | HONOLULU County	N/A

56-211 KAMEHAMEHA, KAHUKU, HI 96731

EVETTE M SMITH

SSN:	576-82-XXXX - issued in HI in 1977-1979	DOB:	08/XX/1969 (Age: 54)

Date Range	Address	Phone
Reported 12/18/2021 - 01/31/2022	91-1305 KEKAHILI ST, KAPOLEI, HI 96707-4130 | HONOLULU County	N/A
Reported 09/01/2011 - 09/10/2018	2148 AUMAKUA ST, PEARL CITY, HI 96782-1356 | HONOLULU County	N/A
Reported 06/16/2015 - 09/30/2016	242 KAIULANI AVE APT 8, HONOLULU, HI 96815-3052 | HONOLULU County	N/A
Reported 01/29/2006 - 04/22/2014	61-104 IKUWAI PL, HALEIWA, HI 96712-1319 | HONOLULU County	N/A
Reported 04/01/2013 - 05/01/2013	1650 PIIKOI ST APT 602, HONOLULU, HI 96822-2714 | HONOLULU County	293-8160
Reported 03/21/2013 - 03/21/2013	51-006 LAU PL, KAAAWA, HI 96730-9817 | HONOLULU County	N/A
Reported 10/01/2012 - 12/08/2012	PO BOX 84, KAAAWA, HI 96730-0084 | HONOLULU County	293-8160

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Date Range	Address	Phone
Reported 12/01/2007 - 11/02/2010	PO BOX 110, KAHUKU, HI 96731-0110 | HONOLULU County	N/A
Reported 09/03/2009 - 04/28/2010	56-211 KAMEHAMEHA, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 04/05/2006 - 09/20/2006	5710 BRENTWOOD MEADOWS CIR, BRENTWOOD, TN 37027-4416 | DAVIDSON County	N/A
Reported 03/24/2006 - 06/10/2006	5710 BRENTWOOD TRCE, BRENTWOOD, TN 37027-4608 | DAVIDSON County	N/A
Reported 12/29/2005 - 12/29/2005	61 104 IKUWAI, HALEIWA, HI 96712 | HONOLULU County	N/A
Reported 01/01/1996 - 01/30/2004	56-111 KEAWEMAUHILI PL, KAHUKU, HI 96731-2015 | HONOLULU County	293-8160
Reported 01/05/2004 - 01/05/2004	56 KEAWEMAUHILI PL 116, KAHUKU, HI 96731 | HONOLULU County	N/A
Reported 01/23/2003 - 01/23/2003	PO BOX 626, KAHUKU, HI 96731-0626 | HONOLULU County	293-8160
Reported 01/01/1996 - 01/23/2003	PO BOX 182, KAHUKU, HI 96731-0182 | HONOLULU County	293-8160
Reported 02/01/1999 - 02/01/1999	111, KAHUKU, HI 96731 | HONOLULU County	293-8160
Reported 01/01/1991 - 12/31/1991	27 LIN B DR, EGLIN AFB, FL 32542 | OKALOOSA County	N/A
Reported N/A	220 REYNOLDS AVE, NICEVILLE, FL 32578-2582 | OKALOOSA County	N/A
Reported N/A	20 WRIGHT, EGLIN AFB, FL 32542 | OKALOOSA County	N/A

Possible Neighbors

Neighbors of Current & Previous Addresses

56-211 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County

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Name	Address	Phone
FUATINO S KOAHOU	56-350 KAMEHAMEHA HWY, KAHUKU, HI 96731-2213 | HONOLULU County	N/A
DONG MIN LI	56-350 KAMEHAMEHA HWY, KAHUKU, HI 96731-2213 | HONOLULU County	N/A
ANASTACIO R POSTRANO	56-350 KAMEHAMEHA HWY, KAHUKU, HI 96731-2213 | HONOLULU County	808-293-1737
ALBERTA N AU	56-350 KAMEHAMEHA HWY, KAHUKU, HI 96731-2213 | HONOLULU County	N/A
WYATT CHING	56-666 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
PATRICIA Y BRUBAKER	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
CHARLOTTE R LEITUPO	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
SARAH L ARNOLD	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	808-293-7555
HEPERONA MATATUMUA	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
AARON M SCHWEITZER	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	808-293-7196
SIERRA SANTIAGO	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
KEVIN W YUNG	56-460 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
CONCHITA S WATERS	56-460 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A

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Name	Address	Phone
HASSAN F JUBRAN	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
SAU L CHAN	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
ROSEMARY TONE	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
MR JOSEPH LEAL	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
SITANILEI TONA	56-931 KAMEHAMEHA HWY, KAHUKU, HI 96731-2300 | HONOLULU County	N/A
DIANE U HUDDY	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
RUTH N PATOC	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
SAMUEL A KELIIHOOMALU	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
HENRY K FONG	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
GEMMA V PASION	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
HANA LOPES	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
TRENT KELIIHOOMALU	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
NOEL GARVIDA	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A

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Name	Address	Phone
CHINA K FONG	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
KAWEHIO M PASCUAL	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
KUULEIALOHA JENKS	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
CHANTAL KELIIHOOMALU	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
JULIE I KELIIHOOMALU	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
KATHY L SMITH	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
NOENOE KEKAUOKALANI	56-1079 KAMEHAMEHA HWY, KAHUKU, HI 96731-2303 | HONOLULU County	N/A
ROWENA P REID	56-485 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
JEROME B TABELISMA JR	56-485 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
AIRDEE SYBOUNMY	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
CINDY STINE	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
CHOMPHANH HONGPHAO	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
MICHAEL STINE	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A

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Name	Address	Phone
MACNOY SYBOUNMY	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
TOUY SYBOUNMY	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	808-293-9446
NORA N SISOUNTHONE	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
CAROLYN PIASOURAPANYA	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
PHONEXAY OULAYRACK	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
SOMSAK KHAEPHUTCHA	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
PHEN KHAEPHUTCHA	56-664 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
DONALD PIASOURAPANYA	56-665 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County	N/A
SURIWONG CHAIYACHET	56-665 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County	N/A
TANIELA MAPU	56-565 KAMEHAMEHA HWY APT A1, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
ELAINE VINCENT	56-669 KAMEHAMEHA HWY, KAHUKU, HI 96731 | HONOLULU County	N/A
ANTONIO ESQUIVIA	56-565 KAMEHAMEHA HWY UNIT 167, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
GREGORY S LOPEZ	56-470 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A

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Name	Address	Phone
CHANNING P HAWKINS	56-470 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
APANA NATE AGUINALDO	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
ROMULO F AGUINALDO	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
THERESA L AGUINALDO	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
DESIREA AGUINALDO HELSHAM	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
JOSEPH APANA	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
KAYLENE K AGUINALDO ARNESON	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
GIOVANI D MANECLANG	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
PETER PAUL HELSHAM	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
VALENTINO M VASQUEZ	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
JC CALULOT	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
MR JOSEPH APANA	56-781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
MR JUDAH LUM	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A

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Name	Address	Phone
KYLIE T MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
MELVIN K MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
TORIE MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
CAROLINE L MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
MR JUDAH LUM	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
MS KALYN MATSUDA	56-800 KAMEHAMEHA HWY, KAHUKU, HI 96731-2302 | HONOLULU County	N/A
SALETILI PONGI	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
SIAOSI VAIFOOU	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
MR FRANCIS A MAEDONOCHI	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
KALINA PONGI	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
TEVITA P VAIFOOU	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
SIMIONE MAPU	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
SAMIUELA HAEANE	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A

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Name	Address	Phone
MR DAVID MAEDONOCHI	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
VILIAMI S VAIFOOU	56-463 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
CHARLOTTE R LEITUPO	56-660 KAMEHAMEHA HWY, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
ELEANOR L LAMADORA	56-576 KAMEHAMEHA HWY, KAHUKU, HI 96731-2211 | HONOLULU County	N/A
LEONE SAAGA	56-449 KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
ARONA T TUFAGA	56-335 KAMEHAMEHA HWY, KAHUKU, HI 96731-2212 | HONOLULU County	N/A
EURICA CALIFORRNIAA	56-335 KAMEHAMEHA HWY, KAHUKU, HI 96731-2212 | HONOLULU County	N/A
EURICA CALIFORRNIAA	56-335 KAMEHAMEHA HWY, KAHUKU, HI 96731-2212 | HONOLULU County	N/A
LONNIE SANDERS	56-1207 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
NORA N SISOUNTHONE	56-664 KAMEHAMEHA HWY # A, KAHUKU, HI 96731-2210 | HONOLULU County	N/A
DESIREA AGUINALDO HELSHAM	56781 KAMEHAMEHA HWY, KAHUKU, HI 96731-2301 | HONOLULU County	N/A
COVE PONTIN	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	N/A
KATHERINE NEVILLE	56-970 KAMEHAMEHA HWY, KAHUKU, HI 96731-2305 | HONOLULU County	N/A

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Name	Address	Phone
ETUINI AKINA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
RON DARLINGTON	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
MS LEILA A EVANGELISTA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
AARON B CAMPBELL	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
SARIAH HOWARD	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
DAISY AKINA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
JOSHUA T SCHATZ	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
MICHAEL VILLANUEVA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
ANDRICKSON AMADE BORDONADA II	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
AUSTIN HITE	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
JUDAH KEKUA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
ELIAS K GARRIGAN	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
TAYLOR VOLLRATH	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A

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Name	Address	Phone
KEUMA JAMESON FAFARD	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
KEANU IKAIKA KEALOHA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
MS CHLOE GOUVEIA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
LINDY BEE SOUKHASEUM	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
KEVIN HO XU	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
RICHARD I K RAMSEYER	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
MR JESS MAIAVA	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
LARRY J AU	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
KEES J ANDERSON	56-490 KAMEHAMEHA HWY, KAHUKU, HI 96731-2200 | HONOLULU County	N/A
AARON T WATENE	56-505 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
JAMES P HIX	56-505 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
BOUATHONG KHEMMANIVONG	56-505 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
MR SANG I LEE	56-505 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A

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Name	Address	Phone
CHRIS D MOODY	56-1211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
RUSSELL L JENKS	56-1211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
MS JAMIE L MOODY	56-1211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
BEAU MOODY	56-1211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
MS TIA HAWORTH	56-1211 KAMEHAMEHA HWY, KAHUKU, HI 96731-2304 | HONOLULU County	N/A
ANA L TUPOU	56-565 KAMEHAMEHA HWY APT C, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
LEONE SAAGA	56-449B KAMEHAMEHA HWY, KAHUKU, HI 96731-2201 | HONOLULU County	N/A
RUSSELL K KIM	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
ALFRED S LOSBANOS JR	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	808-293-9885
NITIN SINGH	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
KALINE TAUFA	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
MICHAEL D VINCENT	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
SHUUJIN VANCHIG	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A

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Name	Address	Phone
ANA L TUPOU	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
OLA M FALE	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
VALERIE D BARLEY	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
SIPUELI FALE	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
RANDY L BOTT	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
JASON B BENNETT	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
RENE TAKEMOTO	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
MR JAMES R TAKEMOTO	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
NOELANI P TAIPIN	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
JAMES A BARLEY	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
MARIAM MAPU	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
TANIELA MAPU	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
ERICMASA TACHIBANA	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A

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Name	Address	Phone
SARA NIELSEN	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
HELLEN K FALE	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
VAOKAKALA FALE	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A
KALOLAINE P TUPOU	56-565 KAMEHAMEHA HWY, KAHUKU, HI 96731-2202 | HONOLULU County	N/A

56-211 KAMEHAMEHA, KAHUKU, HI 96731

Name	Address	Phone
MS MARILYN RADZAT	57-435 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	293-5859
GARY RADZAT	57-435 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-5859
KATHI ALBIAR	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	808-637-4139
HUGH B SHOWE	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
STEVEN G DUFFY	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
JOSEPH P STEINMETZ	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
MS BRYNN THURSTON	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	626-1551

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Name	Address	Phone
ROBERT W THURSTON	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
SUSAN I WHALEN	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	637-0534
JAMES M MCDERMOTT	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
RUSSELL H WHALEN	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
JOSEPH P SULLIVAN	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
WYATT THURSTON	57-357 PAHIPAHIALUA ST, KAHUKU, HI 96731-2110 | HONOLULU County	N/A
CHRIS GODWIN	57-451 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-9087
DEBRA R GODWIN	57-451 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-9087
DR LANCE M BLAISDELL	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
ROCHELLE HAGEDORN	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
MS MARY E WILLIAMS	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
MIRIAM SCHAEFER	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
GARY L PINKSTON	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A

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Name	Address	Phone
LOUIS D LEBEAU	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
LISA M HUFFMAN	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
JANICE C PINKSTON	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
SEAN T MAKRA	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
CINDY L CASTRO	57-360 PAHIPAHIALUA ST, KAHUKU, HI 96731-2112 | HONOLULU County	293-5947
SCOTT BLUM	57-445 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
MS MARILYN RADZAT	57-435 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-5859
GARY L PINKSTON	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
JANAY WYSS	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
GARY L PINKSTON	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
SEAN T MAKRA	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
RICHARD JESS SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-293-4255
OLGA GILLILAND	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A

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Name	Address	Phone
MR MARK K GILLILAND	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
ANNIE SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
ILIKEA SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-293-4255
RYDER SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
JENNIFER M ANTONY	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
LINDA SWISHER	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	949-388-3831
ASHLEY TRISLER	57-469 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
GARY RADZAT	57-435 HONOKAWELA DR APT 435, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
RICHARD D HESS	57-431 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	530-629-2862
DARREN L WESEMANN	57-431 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-312-1000
GARY RADZAT	57-435 HONOKAWELA DR APT 435, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
MS MARILYN RADZAT	57-435 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	293-5859
SISSI SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-293-4255

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Name	Address	Phone
RICHARD JESS SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-293-4255
ELIZABETH M SNOW	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	808-293-4255
SHONA P COMPOC	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
MICHAEL DOLPH	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
SIONA TEJADA	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
DAVID DEXTER	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
ROLAND LORENZO LUCERO	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
CHRISTIAN DANIEL LOEZA	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
PENISIMANI PASI	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
ANDREW M KARAYA	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
RICHARD SPENCER	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
WENDY L HALL	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
SCOTT J DADY	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
CHRIS GHOSH	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
CHRISTOPHER GHOSH	GENERAL DELIVERY, KAHUKU, HI 96731-9999 | HONOLULU County	N/A
MS TANYA BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
SEAN T MAKRA	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A

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Name	Address	Phone
MEGAN SHOJI	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
ANJULI S SANCHEZ	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
CHARLES J BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
ROBERT S BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
MS MAUREEN M BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
MEADE C BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
CONSTANCE ANN BRIDGMAN	57-427 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-638-7193
FRANKLIN TOKIOKA	57-421 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
RICHARD D HESS	57-431 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-9017
CHRIS GODWIN	57-451 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	808-293-9087
JANAY WYSS	57-457 HONOKAWELA DR, KAHUKU, HI 96731-2107 | HONOLULU County	N/A
MERVIN GILLILAND	57-465 HONOKAWELA DR, KAHUKU, HI 96731-2108 | HONOLULU County	N/A
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Healthcare Sanctions	Hunting & Fishing Licenses
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Liens & Judgments	Marijuana Related Businesses
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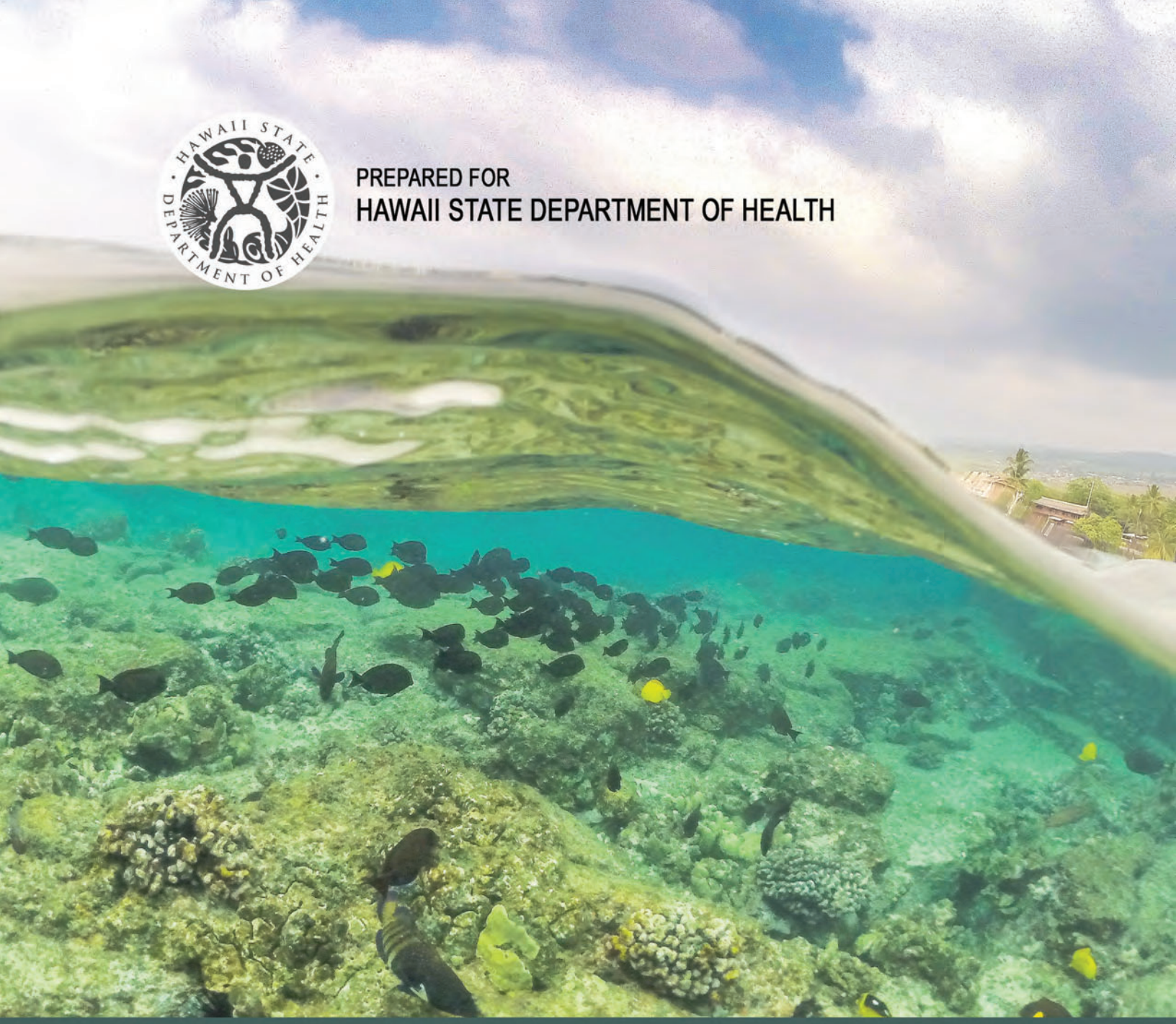
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PREPARED FOR
HAWAII STATE DEPARTMENT OF HEALTH

CESSPOOL CONVERSION FINANCE RESEARCH SUMMARY REPORT

FINAL | JANUARY 2021

Prepared by

carollo
Engineers...Working Wonders With Water®

in association with

Harris & Associates

State of Hawai`i Department of Health

CESSPOOL CONVERSIONS FINANCE RESEARCH
Summary Report

FINAL | JANUARY 2021



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Example Homeowner's Information Packet

Introduction

Act 125 requires the conversion of all cesspools in Hawai'i to approved wastewater treatment systems by 2050. The purpose of this study is to assist the Department of Health (DOH) with the evaluation of the funding, financing, and affordability of cesspool conversions.

LEGISLATIVE ACTIONS TO BAN CESSPOOLS IN HAWAI'I

Throughout the State of Hawai'i, there are approximately 88,000 cesspools, releasing an estimated 53 million gallons per day (mgd) of wastewater to the environment. Most of the existing cesspools provide wastewater disposal for single family residences, as opposed to large-capacity systems serving multiple residences or commercial areas. Given that over 90 percent of the State's drinking water supplies are from groundwater sources, cesspools pose a potential environmental and public health risk.

In 2017, the Hawai'i State Legislature passed Act 125, which mandates that by January 1, 2050, all cesspools in the State, unless granted exemption, shall upgrade or convert to a septic or aerobic treatment unit, or connect to a sewer system (Act 125, 2017). The Legislature subsequently passed Act 132 in 2018, which established a Cesspool Conversion Working Group (Working Group) to develop a long range, comprehensive plan and commission a statewide study of sewage contamination in nearshore marine areas (Act 132, 2018).

As a result of Act 125, homeowners will be required to upgrade their existing cesspools to a wastewater technology that complies with environmental and public health regulations. Historical costs of cesspool upgrades to approved systems range widely from approximately $9,000 to $60,000 or more depending on the wastewater system capacity (based on bedroom count), technology, and location or site constraints.[1] Assuming an average conversion cost of $23,000, the potential magnitude of the financial burden to convert all 88,000 cesspools is over two billion dollars.[2] Cesspool conversion costs will likely be a financial burden to many residential owners in a state where the cost of living is already high. The Legislature tasked the Working Group to develop a strategy to aid the funding and financing of the cesspool upgrades.

Assuming an average conversion cost of $23,000, the potential magnitude of the financial burden to convert all 88,000 cesspools is approximately two billion dollars.

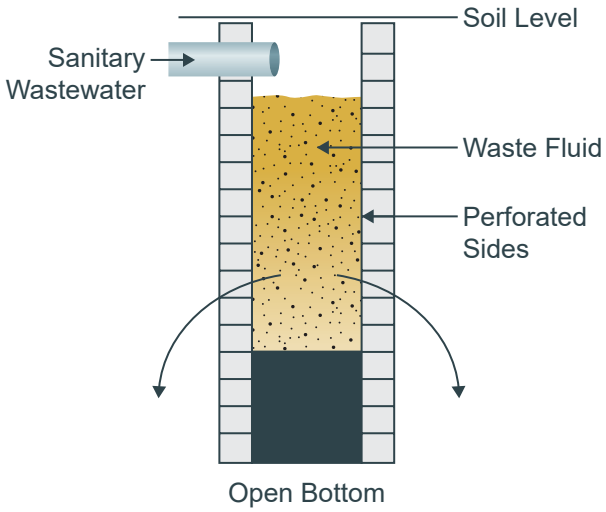


FIGURE 1. Cesspool Schematic
Cesspools are underground excavations that receive sanitary wastewater from bathrooms, kitchens, and washers. The structure usually has an open bottom and perforated walls. Domestic wastewater flows into the structure and the solid waste collects at the bottom of the cesspool. The liquid waste flows out of the perforations and percolates into the subsurface.

1. Based on cost data from DOH.
2. Costs shown in 2020 dollars.

SCOPE OF FINANCIAL EVALUATION OF CESSPOOLS CONVERSIONS

The scope of this study is primarily focused on the funding and affordability challenges associated with cesspool conversions using new or upgraded, single family onsite treatment and disposal systems. Although conversions can also take place via the construction of a new decentralized system, handling wastewater from multiple homes, or connection to an existing treatment plant, the specific financing of these approaches was beyond the scope of this effort.

Given the magnitude of the potential financial burden of cesspool conversions, this report includes the following information to support future planning and considerations for the Working Group:

- Preliminary affordability analysis.
- Potential funding and financing options.
- Lessons learned from conversion programs in other states.
- Other factors which may inhibit cesspool conversions in Hawai'i.

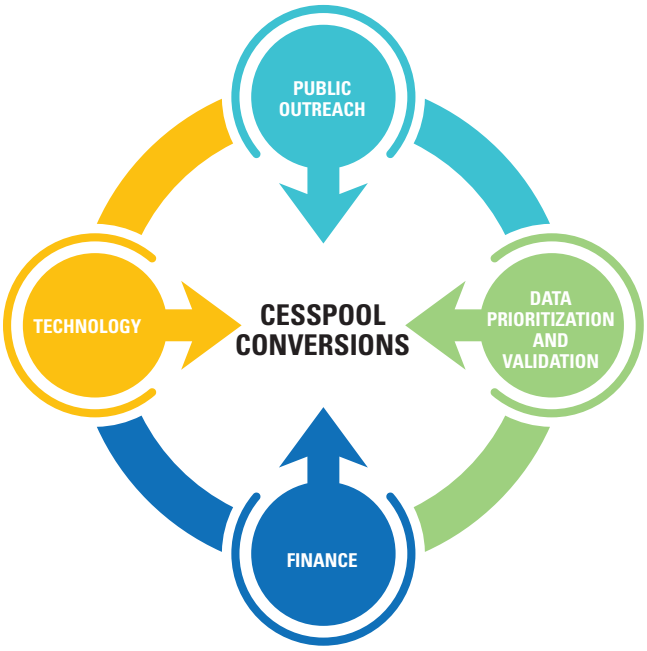


FIGURE 2. Four Aspects of Cesspool Conversion
The working group is engaged in four aspects of cesspool conversions—conversion technologies, finance and funding needs, data prioritization and validation , and public outreach and education.

The details of this effort were presented in a series of the following previously prepared technical memoranda (TMs):

- TM 1 – Cesspool Conversion Funding Mechanisms
- TM 2 – Affordability Evaluation for Cesspool Conversions

Each of these TMs are presented in their entirety in Appendices A and B of this report.

Besides financial considerations, it should be noted that the Working Group is engaged in other areas critical to the success of cesspool conversions, including evaluation of onsite system technologies, public outreach and education, and data validation and prioritization.

LIMITATIONS

The cesspool conversion financial evaluation summarized in this report was prepared specifically for use by the Working Group and was completed based on publicly available information.

Factors that may impact the affordability evaluation include exemptions to cesspool conversion, or changes to the priority areas. Granting exemptions to cesspool conversions are at the discretion of the DOH per Act 125. Ongoing efforts are underway to study available cesspool data validation and prioritization and that new information may result in a new prioritization or even exemption. If new information or guidance results from either of these two efforts, the affordability evaluation should be revisited.

Affordability Evaluation

Homeowners will need to invest significant funds to upgrade their cesspools and maintain their new onsite systems. This study provides a high-level evaluation of the affordability of cesspool conversions for homeowners.

METHODOLOGY

"Affordability" refers to the ability of a household to pay for wastewater services without facing economic hardship. For example, costs would be considered unaffordable, or the household "financially burdened", if they had to consider forgoing medically necessary prescriptions or doctors' visits, sacrifice meals, face the inability to pay for child care, energy bills, or rent/mortgage to pay for a cesspool conversion (Raucher et al, 2019).

A preliminary affordability analysis was performed to estimate the potential financial impacts of cesspool conversions on homeowners. The analysis compared estimated average conversion costs to commonly used measures of affordability, including federal poverty and median household income levels. Figure 3 presents a summary of the approach to affordability used in this study.

Data Sources and Analysis

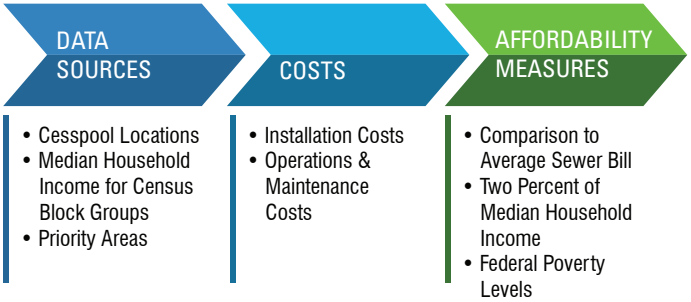


FIGURE 3. Data Sources, Cost, and Affordability Measures Included in Affordability Analysis

The primary data sources for the affordability analysis included:

- Maps of cesspool locations gathered from the Hawai'i Statewide Geographic Information System (GIS) Program.
- Median household income data from the United States Census Bureau (U.S. Census Bureau, 2018).
- Priority areas for cesspool conversions based on environmental and public health risks (DOH, 2018).

KEY AFFORDABILITY QUESTIONS

The affordability analysis aimed to answer some of the following key questions of the Working Group:

- What percent of income should a typical household be expected to spend on cesspool conversion?
- How likely is it that a cesspool owner either lives below the poverty level or is significantly income-constrained?
- How much financial aid is required for those who are financially burdened so a cesspool conversion is affordable?
- How does the conversion cost compare to the monthly sewer bill for existing county sewered areas?

A geospatial analysis of the Hawai'i cesspool locations was performed to assign economic and prioritization data to each cesspool site. For each household with a cesspool, a corresponding median household income was assigned using the median household income data from the United States Census Bureau (U.S. Census Bureau, 2018). Cesspool conversion priority levels were based on those identified in the 2018 Legislative Report and are defined as follows, with Priority 1 being the highest priority and Priority 4 being the lowest.

- **Priority 1:** Significant risk of human health impacts, drinking water impacts, or draining to sensitive waters.
- **Priority 2:** Potential to impact drinking water.
- **Priority 3:** Potential impacts on sensitive waters.
- **Priority 4:** Impacts not identified.

Table 1 summarizes the current priority areas by geographic regions. DOH may revisit the cesspool prioritization methods, and as a result, priority areas could be revised.

TABLE 1. Initial Priority Upgrade Areas Established by DOH Wastewater Branch (DOH, 2018)

GEOGRAPHIC AREA	PRIORITY LEVEL ASSIGNED	NUMBER OF CESSPOOLS	ESTIMATED EFFLUENT DISCHARGE (MGD)
Upcountry area of Maui	1	7,400	4.40
Kahalu'u area of O'ahu	1	740	0.44
Kea'au area of Hawai'i Island	2	9,300	4.90
Kapa'a/Wailua area of Kaua'i	2	2,900	2.20
Poipu/Koloa area of Kaua'i	2	3,600	2.60
Hilo Bay area of Hawai'i Island	3	8,700	5.60
Coastal Kailua/Kona area of Hawai'i Island	3	6,500	3.90
Puako area of Hawai'i Island	3	150	0.60
Kapoho area of Hawai'i Island	3	220	0.12
Hanalei Bay area of Kaua'i	3	270	0.13
Diamond Head area of O'ahu	3	240	0.17
'Ewa area of O'ahu	3	1,100	0.71
Waialua area of O'ahu	3	1,080	0.75
Waimanalo area of O'ahu	3	530	0.35
	TOTAL ASSIGNED	42,730	26.87
Hawai'i Island Un-Assigned	NA	24,430	12.18
Kaua'i Un-Assigned	NA	6,930	4.57
Maui Un-Assigned	NA	4,800	3.50
O'ahu Un-Assigned	NA	7,610	5.08
Moloka'i Un-Assigned	NA	1,400	0.80
	TOTAL UN-ASSIGNED	45,170	26.13
	OVERALL TOTALS	87,900	53.00

Cost Impact of Cesspool Conversions on Homeowners

Depending on the financing source and onsite system required, conversion costs could range from approximately $94 to $339 per month as shown in the Table 2. The table summarizes the potential costs to homeowners for a range of cesspool upgrade options. The "low" scenario represents the simplest and most straightforward upgrade. The "average" and "high" scenarios represent typical and more complex cesspool upgrades, respectively for the purposes of this analysis. More complex onsite systems may be required if a higher level of treatment is needed due to the potential risks to the environment or human health or if individual site conditions such as size and topography warrant a more complex system.

TABLE 2. Summary of Potential Monthly Financial Impacts to Homeowners

COST DESCRIPTION	CESSPOOL CONVERSION COST SCENARIOS		
	LOW	AVERAGE	HIGH
Installation Cost[1]	$10,000	$23,000	$38,000
Monthly Installation Repayment Cost[2]	$61	$139	$230
Monthly O&M Cost[3]	$33	$71	$109
Estimated Total Monthly Cost	$94	$210	$339

Notes:
(1) Installation costs are based on historical costs for septic tank and aerobic treatment unit treatment and disposal systems from DOH. The low costs represent the 10th percentile, and the high costs represent the 90th percentile. All conversion costs are site specific and these costs may not be representative for more complex sites/installations.
(2) Assumes a 20-year loan at 4.0 annual interest rate.
(3) Assumed monthly operations and maintenance (O&M) costs for different levels of onsite treatment.

It is important to note that the costs shown in Table 2 are based on a limited data set of historical costs. Actual conversion costs for homeowners could be greater or less than the scenarios shown. Homeowners, or entities implementing cesspool conversions, should contact a licensed engineer or contractor for a site-specific estimate or price quote.

Affordability Measures

Median Household Income and Federal Poverty Levels

Historically, affordability for water and wastewater service has been benchmarked as a percentage of median household income. The United States Environmental Protection Agency (USEPA) has advanced this metric in the past, stating that wastewater service should be less than 2 percent of income to be considered "affordable" for customers (USEPA, 1997).

Shortcomings of using median household income data from the U.S. Census and federal poverty level data are that the data do not differentiate between renters and homeowners, which may provide further levels of income stratification. The income data used for this analysis is that of the "resident." Renters may report income that is then reflected in the census data but ultimately, they may not be directly paying for the cesspool conversion. However, considering the available information, median household income was considered the best data available for the affordability analysis.

Comparison to Local Sewer Rates

Many communities across the United States are served by centralized wastewater collection and treatment systems. While these are less prevalent in Hawai'i compared to other states, there are county owned and operated wastewater systems across the State that can offer a comparative monthly cost for residential households. While comparing cesspool conversion costs with county sewer service charges does not measure affordability (as the monthly sewer bills may exceed 2 percent of income for some customers), it does provide a local benchmark for sewer utility costs.

AFFORDABILITY RESULTS

Assuming the estimated average monthly cost to convert a cesspool to an onsite wastewater treatment system is $210 and a homeowner is financially burdened if this cost exceeds 2 percent of their annual income, homeowners with an annual income of less than $126,000 would realize a financial hardship by the cost to convert. If a hypothetical $10,000 rebate for the conversion were provided to homeowners, the estimated average monthly cost to convert would drop to $150, and homeowners with an annual income of less than $90,000 per year would be financially burdened.

Statewide Affordability

Figure 4 summarizes the household income for all residents with cesspools across the State. Approximately 97 percent of all residents with cesspools have an income less than $126,000 and thus would be financially burdened by the cost to convert. If a $10,000 rebate were provided to each household, approximately 85 percent would be financially burdened.

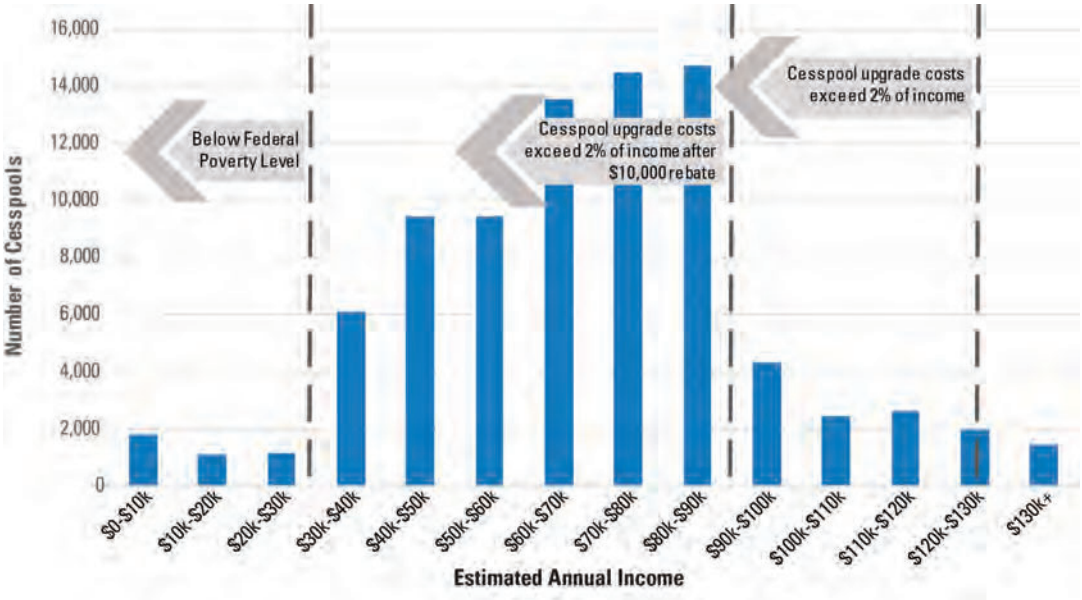


FIGURE 4. State of Hawai'i Annual Estimated Household Income Levels for Residents with Cesspools [1]

Notes:
(1) Assumes average cesspool conversion cost of $210 per month.
(2) Assumes $10,000 rebate reduces average cesspool conversion cost to $150 per month.
(3) Estimated annual income is based on the census block median household income.

County-by-County Affordability

The data were also evaluated at the county level to determine if certain counties or areas of counties were financially burdened more than others. Figure 5 summarizes the household income for all residents with cesspools across the State by county.

The County of Hawai'i has the largest number of cesspools and the most residents that would be financially burdened by the cesspool conversion cost.

The following sections summarize the affordability results determined for each county. The results include:

- Maps that indicate the location and associated relative median household income of each cesspool, as well as priority areas for cesspool upgrades.
- Graphs summarizing the annual estimated household income levels for residents with cesspools.
- Discussion of the fraction of households who would be financially burdened by cesspool upgrade costs and the fraction of cesspools that are a high priority to upgrade (those classified as Priority Levels 1, 2, or 3).

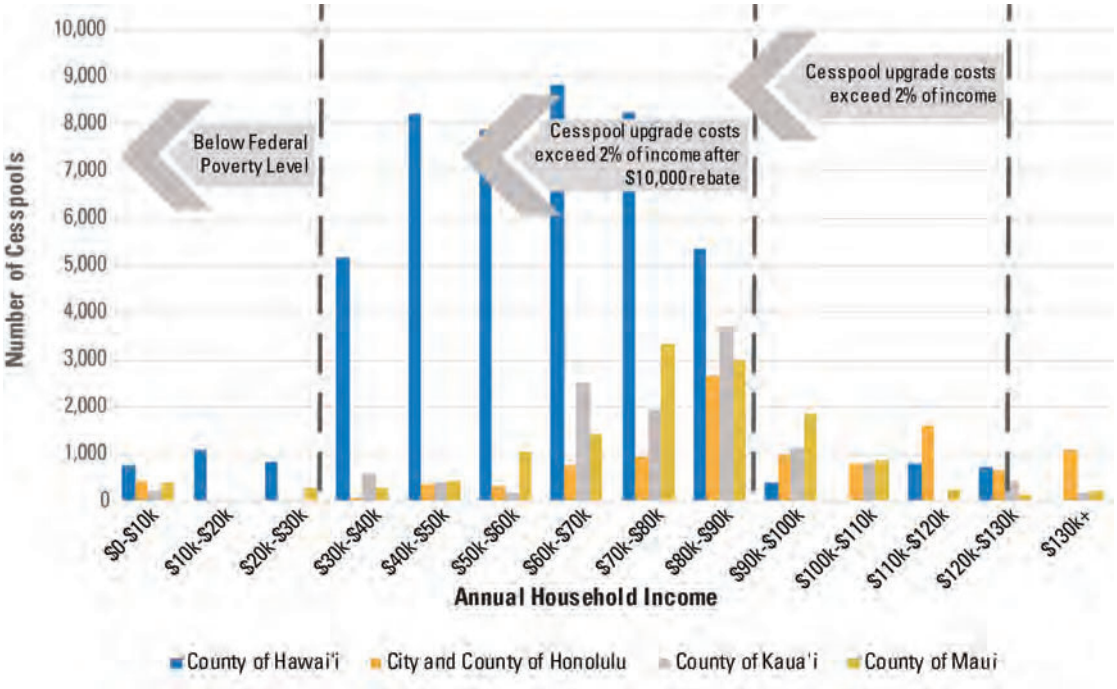


FIGURE 5. Annual Median Household Income of Residents with Cesspools Across the State

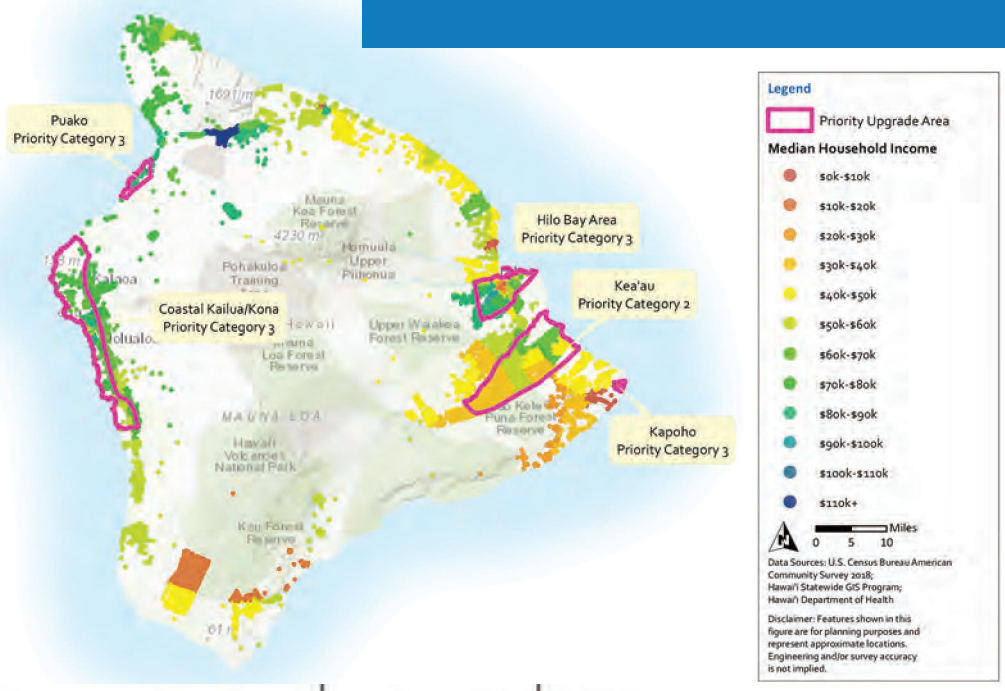
Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.
(2) Assumes $10,000 rebate reduces average cesspool conversion cost to $150 per month.
(3) Estimated annual income is based on the census block median household income.

97 percent of households with cesspools would be financially burdened by the cost to convert their cesspool to an onsite wastewater treatment system.

County of Hawai'i

The County of Hawai'i has the largest number cesspools with 48,303, including approximately 9,300 categorized as Priority 2 with potential impacts to drinking water, and 15,570 Priority 3 cesspools with potential impacts to sensitive waters. Hawai'i County also has the most residents facing affordability challenges. Hawai'i County also has the greatest proportion of households without centralized sewers than any other county (71 percent), indicating that connection to a centralized sewer system is unlikely to be available for most properties. Without options to connect to an existing sewer, the only option for many cesspool owners in Hawai'i County is likely the installation of an approved onsite system.

Hawai'i County has the greatest affordability challenges, the most cesspools of all counties, and a large proportion with potential impacts to drinking water and sensitive coastal waters.



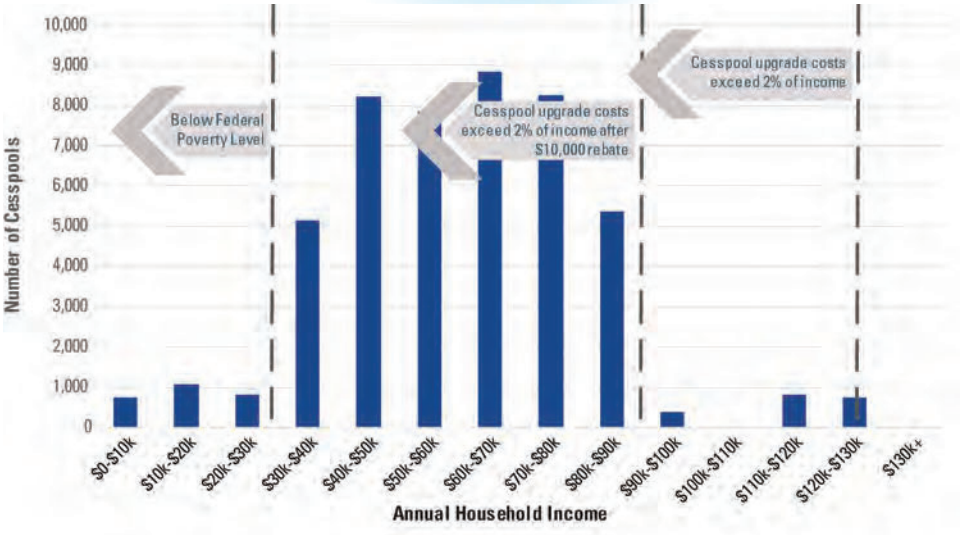


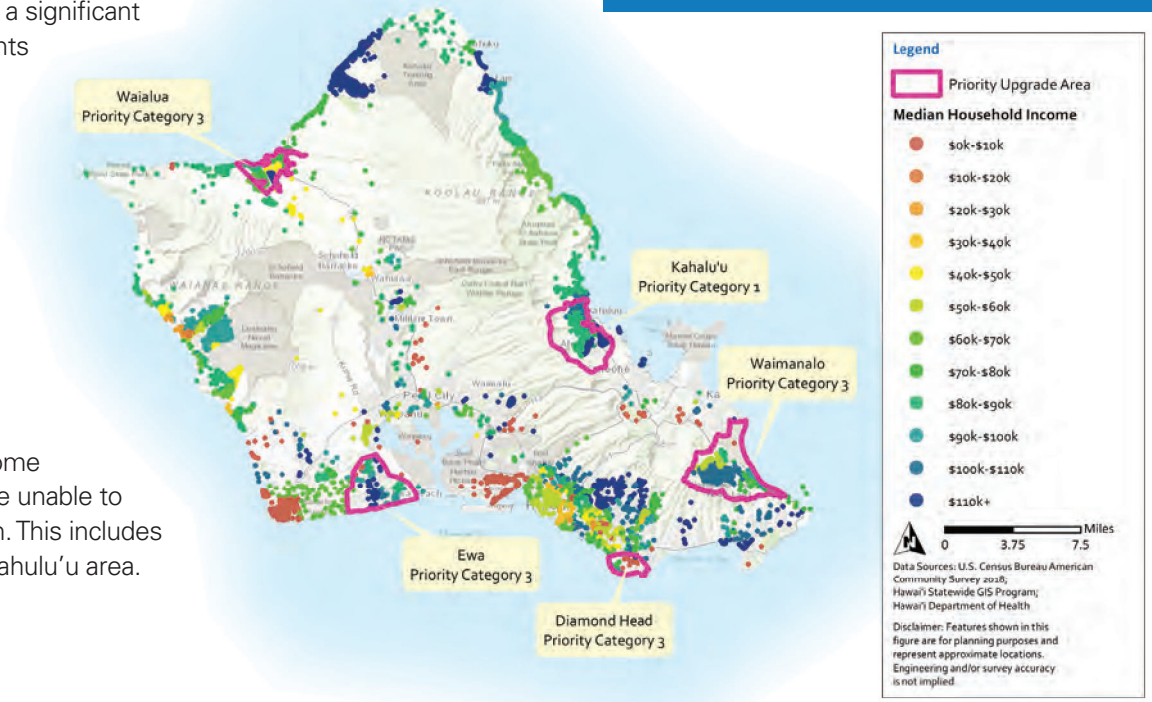
FIGURE 6. Hawai'i County Cesspools and Estimated Household Income Levels

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.
(2) Federal Poverty Level: $30,718 annual income or less.
(3) Cesspool upgrade costs exceed 2 percent of income if the annual household income is less than $126,000.
(4) If a household is provided a $10,000 rebate, cesspool upgrade costs exceed 2 percent of income if the annual household income is less than $90,000.

City and County of Honolulu

The City and County of Honolulu has 10,749 cesspools. This includes 740 in the Kahulu'u area that are categorized as Priority 1 with significant risk to public health and the environment, and approximately 2,910 Priority 3 cesspools with potential impacts to sensitive waters. Most homeowners are connected to a regional sewer system. As a result, the City and County of Honolulu has the lowest percentage of households with a cesspool at 3 percent. Honolulu's residents have a higher income on average compared to the other counties, but Honolulu also has a significant number of residents with incomes below $10,000 per year. Therefore, while the county as a whole may not have the same broad affordability challenges as other counties, some households will be unable to pay for conversion. This includes residents in the Kahulu'u area.

The City and County of Honolulu has 740 Priority 1 cesspools in the Kahulu'u area, many of which will require financial assistance for conversions.



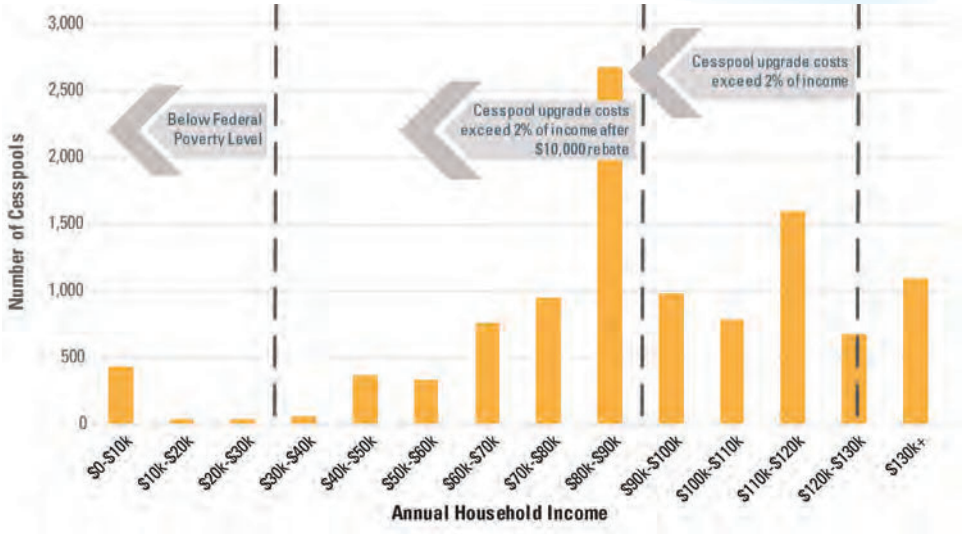


FIGURE 7. City and County of Honolulu Cesspools and Estimated Household Income Levels

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.
(2) Federal Poverty Level: $30,718 annual income or less.
(3) Cesspool upgrade costs exceed 2 percent of income if the annual household income is less than $126,000.
(4) If a household is provided a $10,000 rebate, cesspool upgrade costs exceed 2 percent of income if the annual household income is less than $90,000.

County of Kaua'i

The County of Kaua'i has 12,085 cesspools, including 5,211 categorized as Priority 2 with potential impacts to drinking water, and 160 Priority 3 cesspools with potential impacts to sensitive waters. Approximately 54 percent of all households on Kaua'i have cesspools. More than 11,000 households located in Kaua'i County, or 95 percent, are expected to face affordability challenges for cesspool conversions without some form of financial assistance.

The County of Kaua'i has 12,085 cesspools. Approximately 11,507 households in Kaua'i County, or 95 percent, are expected to face affordability challenges with conversions.

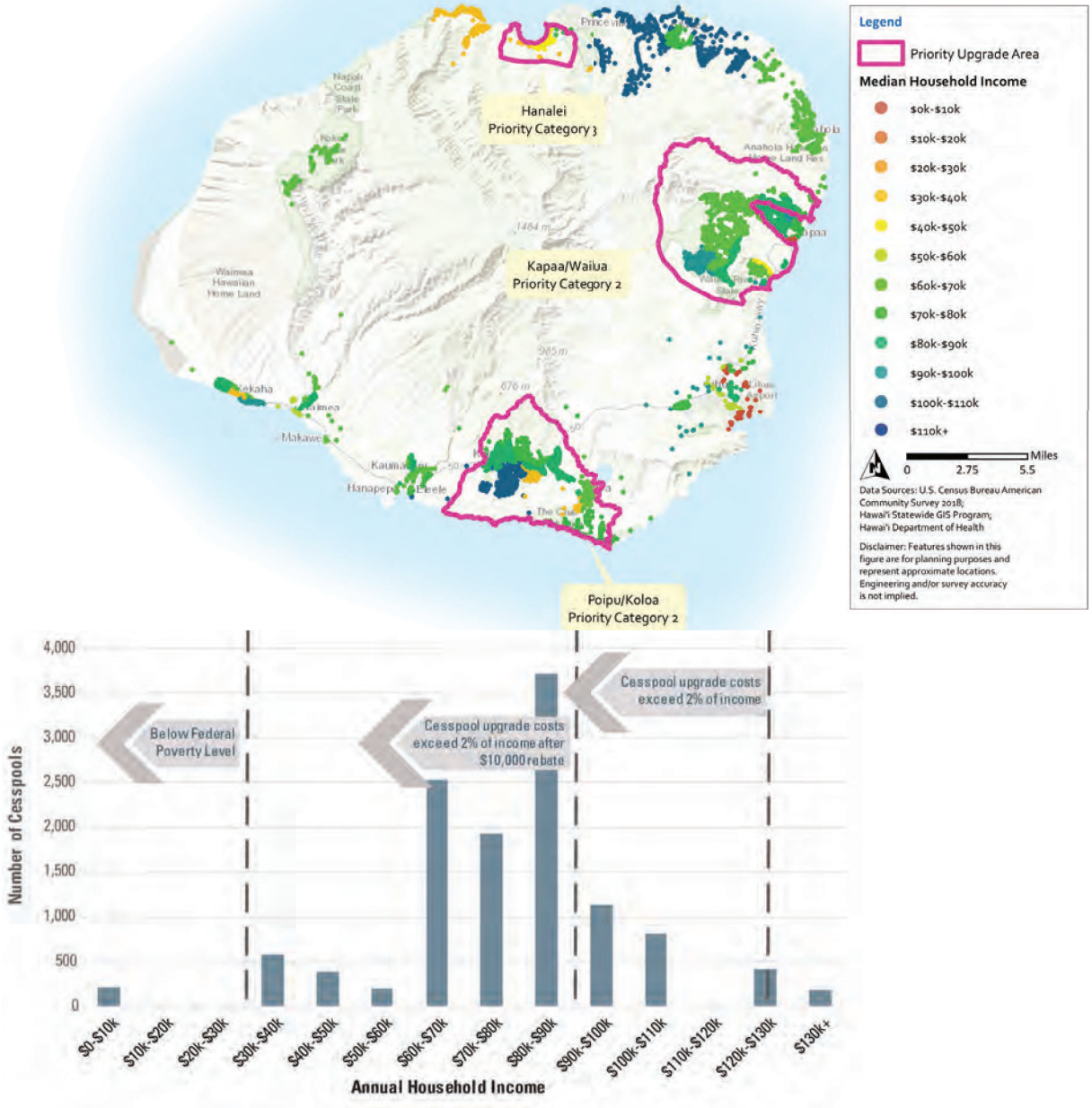


FIGURE 8. County of Kaua'i Cesspools and Estimated Household Income Levels

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.
(2) Federal Poverty Level: $30,718 annual income or less.
(3) Cesspool upgrade costs exceed 2 percent of income if the annual household income is less than $126,000.
(4) If a household is provided a $10,000 rebate, cesspool upgrade costs exceed 2 percent of income if the annual household income is less than $90,000.

County of Maui

The County of Maui has 12,085 cesspools on the island of Maui, and 1,439 cesspools on the island of Moloka'i. The Upcountry Maui region has the most Priority 1 cesspools in the State, with 5,777 that are predicted to have significant impacts to public health. Approximately 22 percent of all households in Maui County have cesspools. About 98 percent of Maui cesspool homeowners (11,888), and 100 percent of Moloka'i cesspool homeowners will be challenged to afford cesspool conversions without financial assistance.

Upcountry Maui has the most Priority 1 cesspools in the State. Approximately 98 percent of Maui cesspool homeowners (11,888), and 100 percent of Moloka'i cesspool homeowners will be challenged to afford cesspool conversions without financial assistance.

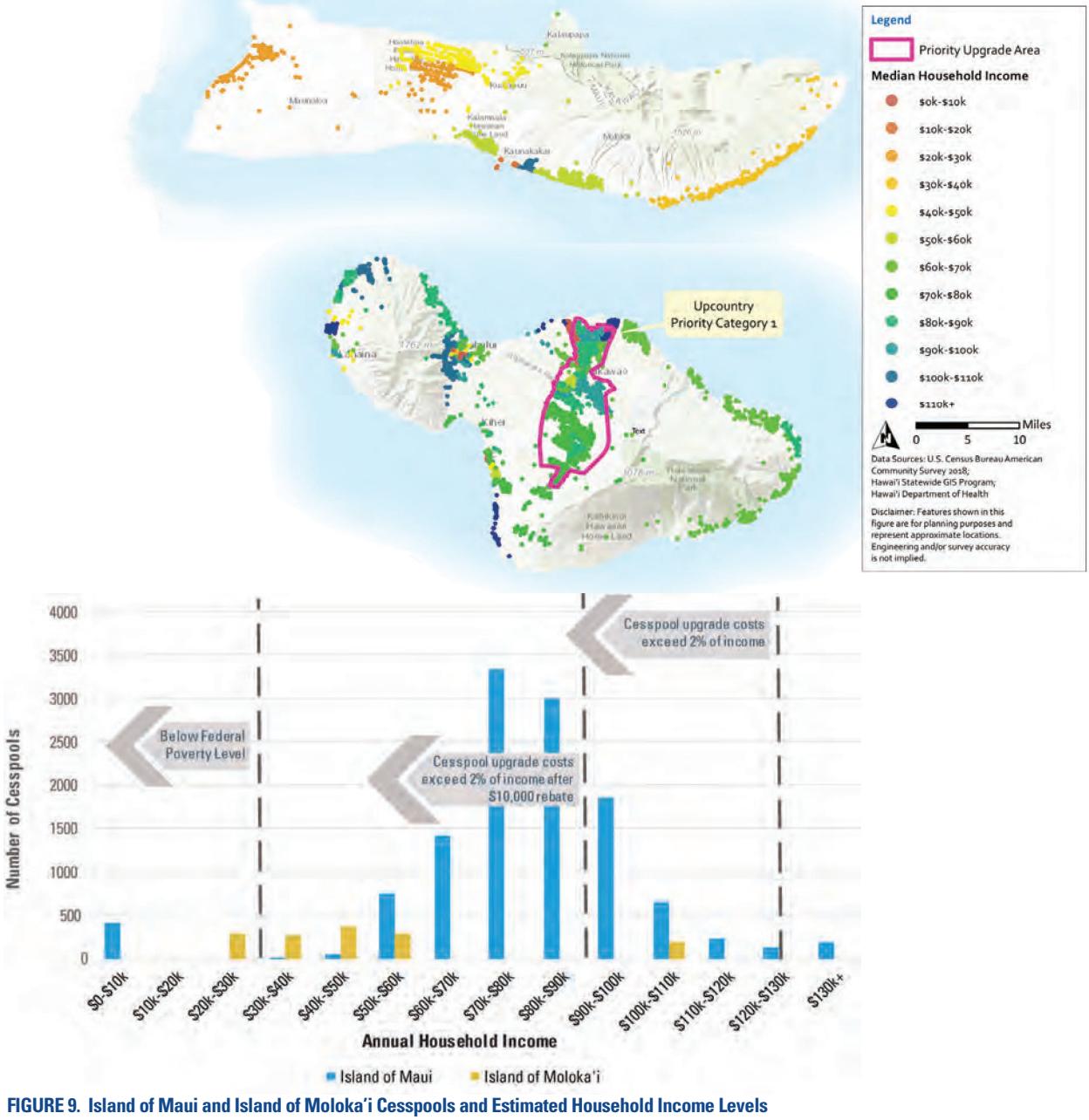


FIGURE 9. Island of Maui and Island of Moloka'i Cesspools and Estimated Household Income Levels

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.
(2) Federal Poverty Level: $30,718 annual income or less.
(3) Cesspool upgrade costs exceed 2 percent of income if the annual household income is less than $126,000.
(4) If a household is provided a $10,000 rebate, cesspool upgrade costs exceed 2 percent of income if the annual household income is less than $90,000.

Comparison to Local Sewer Rates

Figure 6 shows typical average monthly sewer service charges for wastewater collection and treatment for the various counties compared to the monthly cost for cesspool conversion for the low, average, and high cost conversion scenarios. In general, monthly conversion costs are estimated to be higher than monthly sewer bills. Hawai'i County has the lowest monthly wastewater bill at $40 per month on average, while the City and County of Honolulu has the highest at $111 per month. As a percent of median household income for each county, the monthly wastewater bills range from 0.8 percent (Hawai'i County) to 1.6 percent (City and County of Honolulu). Given monthly conversion costs are estimated to be higher than monthly sewer bills, and in some cases substantially higher, it is reasonable to assume that additional funding will be required to make conversions affordable for most residents.

On average, monthly cesspool conversion costs are estimated to be higher than monthly sewer bills.

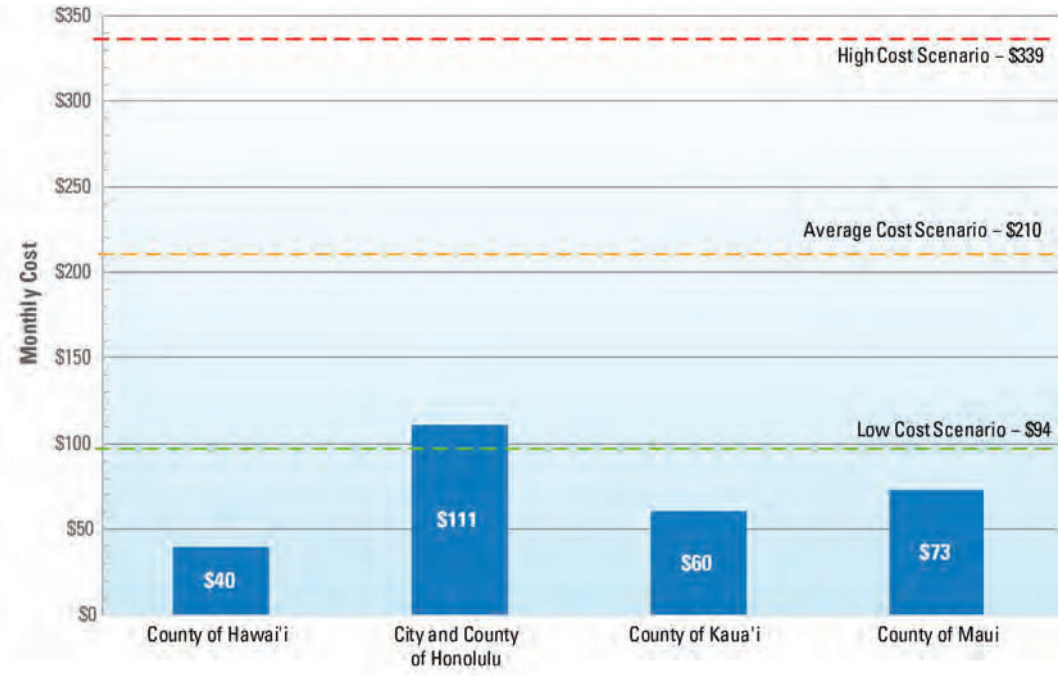


FIGURE 10. Typical Monthly Sewer Bill Compared to Monthly Cesspool Conversion Costs for Low, Medium, and High Cost Scenarios

Notes:
(1) County of Hawai'i – single family monthly flat rate of $40.00.
(2) City and County of Honolulu – based on estimated single family water usage of 9,000 gal/month. Wastewater bill is 80 percent of water usage$4.63/kgal + base fee of $77.55 = $110.89.*
(3) County of Kaua'i – single family monthly flat rate of $60.09.
(4) County of Maui – based on estimated single family water usage of 9,000 gal/month. Wastewater bill is based on all water usage up to 9,000 gals at $4.50/kgal + base fee of $32.50 = $73.00.

Cost and Affordability Relative to Priority Levels

With limited funds available to directly support conversions, the State may need to prioritize how available financial assistance is allocated. Table 3 presents the estimated cost to upgrade all cesspools in the State broken down by priority area and affordability based on two percent of the median household income. The average conversion cost of $23,000 was assumed to estimate the total funding required for complete conversions.

To fully fund all cesspool conversions for those who are financially burdened, an estimated $1.9 billion in funding is required.

TABLE 3. Estimated Cost to Convert All Cesspools by Priority Level and Median Household Income

PRIORITY LEVEL	NUMBER OF CESSPOOLS	TOTAL CONVERSION COST ($ MILLIONS)[1]
Replacement Costs are Considered Affordable (Costs are Less than 2 percent of Estimated Household Income[2])		
1	98	$2.3
2	179	$4.1
3	589	$13.5
4	1,427	$32.8
SUBTOTAL	2,293	$52.7
Replacement Costs are Considered Unaffordable (Costs are Greater than 2 percent of Estimated Household Income[3])		
1	8,434	$194.0
2	14,321	$329.4
3	17,717	$407.5
4	41,952	$964.9
SUBTOTAL	82,424	$1,895.8
TOTAL	84,717[4]	$1,948.5

Notes:
(1) Based on average conversion cost of $23,000.
(2) Includes residents who may be able to afford cesspool conversions without financial assistance.
(3) Includes residents who are financially burdened by cesspool conversion costs and may require financial assistance.
(4) Total number of cesspools by Priority Level comes from the Hawai'i Statewide GIS Program. Note this is slightly lower than the 87,900 estimate from the Legislative Report (DOH, 2018).

Private Financing and What Can Be Afforded

Another way to determine the amount of financial assistance needed is to consider the portion of the cesspool conversions costs that can be afforded by homeowners. With the exception of those with estimated annual income below the FPL, it was assumed that households could afford to privately finance an amount that results in a monthly payment less than or equal to 2 percent of their estimated monthly income less the average monthly maintenance cost for the selected replacement technology. If that amount is less than the average of conversion costs, it is assumed the difference would require financial aid.

Table 4 summarizes the estimated amount of conversion costs that can be afforded or privately financed versus the amount of financial aid that may be required. It is anticipated that more than $1 billion in financial aid is required to support cesspool conversions for homeowners who are financially burdened.

TABLE 4. Estimated Private Financing and Financial Aid Required for Cesspool Conversions[1]

PRIORITY	TOTAL PRIVATE FINANCING[2] ($ MILLION)	TOTAL FINANCIAL AID REQUIRED[3] ($ MILLION)
1	$89.8	$106.5
2	$94.2	$239.3
3	$164.7	$256.3
4	$312.4	$685.3
TOTAL	$661.1	$1,287.4

Notes:
(1) Based on average conversion cost of $23,000.
(2) Assumes residents can afford up to 2 percent of estimated household income for cesspool conversions, financed at 4 percent interest over 20 years.
3) Assumes cesspool conversion costs in excess of 2 percent of estimated household income will require financial aid. Residents with income levels below the federal poverty limit are assumed to require financial support for all conversion costs.

Cesspool Conversion Funding Mechanisms

There are a limited number of financing mechanisms available to achieve the level of funding necessary to make all cesspool conversions affordable.

CESSPOOL CONVERSION FUNDING CHALLENGES

There are several challenges associated with identifying viable funding mechanisms for Hawai'i's cesspool conversion program. First, the magnitude of the potential amount of funding that the program requires is significant, whereas, based on the average cost of cesspool conversions, it is estimated that the total cost of the conversions within the State is on the order of $2 billion, this cost may range from $880 million to more than $5.3 billion.[2] While there are low interest loan and grant funding opportunities from federal, state, and local financing sources, all of these combined fall significantly short of that required to fully fund all conversions. In addition, most of the financing programs are available only to government entities such as the state or counties, or non-profit organizations, and are not targeted at private, residential property owners. This is further complicated by the fact that the State and the counties do not currently have the staff or the administrative capabilities to receive grant or loan funds, review and process individual applications, disperse the funds to homeowners, and, in the case of loans, conduct follow-up payment collection. Lastly, most of these financing programs provide a reimbursement for incurred cost, requiring the individual homeowners to first pay upfront the cost associated with planning, design, and construction of the new onsite wastewater treatment system, and then be reimbursed.

Due to the varying demographics, socio economics, implementation timeline, and system costs, there is not a "one size fits all solution" for the financing mechanism across all counties in Hawai'i.

The ideal cesspool conversion funding program will need to meet several objectives.

KEY OBJECTIVES OF THE CESSPOOL CONVERSION FUNDING PROGRAM

- Consider equitability and affordability issues.
- Incentivize individual homeowners to convert existing cesspools.
- Provide funding support for upfront cesspool conversion costs.
- Consider the funding recipient (e.g., cesspool homeowner, agency, etc.)
- Balance the need for immediate-, near-, and long-term expenditures.
- Potentially fund a variety of onsite wastewater treatment technology options.
- Minimize the administrative burden on the DOH while leveraging support from existing or new local agencies to administer cesspool conversion funding responsiblities.

There is a need to identify or develop a mechanism that can funnel federal, state, or other funding or incentives to individual homeowners through existing or new organizations such as the counties, non-profits, or financial institutions. The proposed financing program will also likely need additional funding for state and/or local governments to administer and fund the program options.

2. Historical cesspool replacement costs range from $9,000 to $60,000 per conversion. The range shown is for conversion of all 88,000 cesspools in Hawai'i.

FINANCING OPTIONS

Financing options may include tax credits or rebates, federal, state, or county grants, and private/mortgage loans. A notable difference between grants and loans are that grants do not need to be repaid, while loans are borrowed funds that require repayment, typically with interest. These financing options and potential funding agencies are summarized below.

Private/Mortgage Loans

It will be a challenge and likely infeasible for financial support to be provided to all cesspool owners for the conversions. Thus, it will likely be necessary for homeowners to seek private or mortgage loans to finance the conversions. There are several private financing options available to homeowners including: personal loans, home equity loans, or the use of personal savings. Given the economic turmoil caused by the global COVID-19 pandemic in 2020, the current, low interest rates provided by private lending options may be an economical option for some residents.

State Tax Credits or Rebate Programs

The State of Hawai'i's temporary tax credit program (Act 120), which provides up to $10,000 in incentives for individual homeowners to convert cesspools to septic systems or aerobic treatment units, is set to expire on December 31, 2020. Legislation which would extend the term of the credits did not pass in the most recent legislative session. Given that less than 100 applications have been filed for this credit to date, tax credits may have limited appeal and application and there may be a need to re-evaluate the tax credit mechanism and identify opportunities to make the program more enticing. A rebate program may have broader appeal and applicability for cesspool conversions.

Grants and Loans

Federal, state, and local grant and loan funding sources should also be considered as potential funding mechanisms. While these sources do not provide a reliable long-term solution for financing cesspool upgrades, they can help with the implementation of portions of the program.

Funding agencies with potential financing mechanisms include:

- United States Environmental Protection Agency
- United States Department of Interior, Bureau of Reclamation
- United States Department of Agriculture
- United States Department of Housing and Urban Development
- United States Department of Commerce - Economic Development Administration
- State of Hawai'i Clean Water State Revolving Fund (CWSRF)
- State of Hawai'i - Non-Point Source (319) (NPS) Grants
- State of Hawai'i Rural Community Assistance Corporation
- State of Hawai'i Rural Water Association
- Proposed – Hawai'i Cesspool Remediation and Conversion Loan Program

Potential CWSRF Funding Mechanisms

There may be opportunities within the State of Hawai'i's CWSRF program for non-profits or public entities to pursue funding or to create a pilot program to provide loans or grants to residential homeowners. The CWSRF program provides low interest loans for a wide range of water quality infrastructure projects. Loans to finance non-point source projects, including cesspool conversions, can be provided through several funding mechanisms, depending on type of project, repayment source, and on agreement by the state program.[3] Typically, CWSRF funding can only be provided to public entities, however the State of Hawai'i's program allows for funding to be provided to individuals for cesspool conversions or can be provided via the counties, other federal/state agencies, non-profits, or financial institutions. These institutions can act as the broker to make sub-loans to individual homeowners for the cesspool upgrades.

In a survey of other cesspool funding programs, funding is provided by the state or the CWSRF program to a local intermediary agency that is then fiscally responsible for the loan and the overall administration, thereby reducing the burden on the CWSRF staff. Cesspool financing programs in other states, have been funded with CWSRF funds, USEPA grants, state bonds, legislative funding or other state funding sources. Mechanisms that have been utilized successfully include: Conduit Lending (Pass Through), Linked Deposits, Sub-state Revolving Funding, and Direct Loans.

It is estimated that $5 million per year is the maximum financing that can currently be obtained through the CWSRF program. This level of funding represents less than 10 percent of the average annual cost of all conversions to meet the 2050 deadline.

3. A non-point source is a source of pollution that originates from widely distributed elements (such as runoff from agricultural or residential areas) as opposed to a single point source (such as a wastewater treatment plant or a factory). In the 2015-2020 Hawai'i Nonpoint Source Management Plan, cesspool wastewater runoff was identified as a non-point source impacting the State's resources and therefore may be eligible for NPS Grant funding.

Other Funding Models and Partnerships

Funding approaches and partnerships employed by the energy sector or other utilities may serve as a model. While other utilities have different drivers and payback periods, some of their funding models may be applicable to funding a portion of cesspool conversions.

On-Bill Financing Program – Example: Hawai'i Green Infrastructure Authority

Two funding models previously utilized in Hawai'i are on-bill financing and on-bill repayment programs. On-bill financing allows the electric utility (e.g., Hawaiian Electric, Maui Electric, or Hawai'i Electric Light) to incur the cost of a clean energy upgrade to a home, which is then repaid by the homeowner through their monthly utility bill. Upfront capital is provided by a third party, by the Hawai'i Green Infrastructure Authority, not the electric utility. In some on-bill repayment programs, the loan is transferable to the next owner of the home, building, or property. The idea of an on-bill financing program could be adapted to finance cesspool conversions with the assistance of county or local agencies (e.g. water or wastewater utilities) that could assist in the billing administration function similar to electric utilities.

An on-bill financing model that currently exists in Hawai'i is the Green Energy Money $aver On-bill (GEM$) program whose purpose is to deploy clean infrastructure. The program enables ratepayers to finance clean energy improvements through an on-bill financing model that spreads the initial capital costs of installing green infrastructure up to 20 years.

Property Assessments – Example: Property Assessed Clean Energy Program

Another energy-based funding model that could be adapted to finance cesspool conversions is the Property Assessed Clean Energy (PACE) program. This is a mechanism used by local governments to allow property owners to finance the up-front cost of energy efficiency and renewable energy improvements (such as solar) and then pay the costs back over time through a voluntary assessment. A PACE program could be modified as a viable financing option for cesspool conversion to allow a property owner to pay back costs over time at an agreed upon interest rate and length of loan term. Funding would occur through private lenders, e.g., private banks, or the issuance of municipal bonds.

Property Assessments – Example: Community Facilities District and Special Improvement Districts

The use of Community Facilities Districts or Special Improvement Districts, which are independent, local special-purpose financing districts that levy taxes and assessments and issue bonds to provide infrastructure to develop communities of all types, could be another mechanism by which to fund cesspool conversions. A special improvement district specifically created to address the USEPA's requirement to close large-capacity cesspools is the Lono Kona Sewer Improvement District in North Kona in the County of Hawai'i. This program funds the connection of 110 parcels to the county wastewater system. A similar funding mechanism could be applied to the funding of onsite systems for a neighborhood of current cesspool owners.

Public Private Partnerships

Another potential funding mechanism is the development of Public-Private Partnerships (P3s) that encourage private investment in public infrastructure projects. P3s are contractual arrangements in which governments or public entities form partnerships with the private sector to design, finance, build, and operate and/or maintain infrastructure such as toll roads, water supply facilities, and wastewater treatment plants. Public agencies are in charge of financing and theoretically pass risks related to operating costs and project revenues to the private partner. However, P3s also have some negative aspects including potential local opposition, loss of public control and flexibility, potential need for in-house expertise or outside consultants, complicated contracts and complex negotiations, as well as significant effort to enforce and monitor contracts.

LESSONS FROM FUNDING OF CESSPOOL CONVERSIONS IN OTHER STATES

Cesspool conversion mechanisms used in eleven other states were reviewed with the focus on those with programs funding the conversion of cesspools with onsite systems. These states incentivized individual residential or commercial owners to convert failing systems by providing financial support, in the form of loans, grants or incentives, to defray the costs associated with the implementation of the new technology.

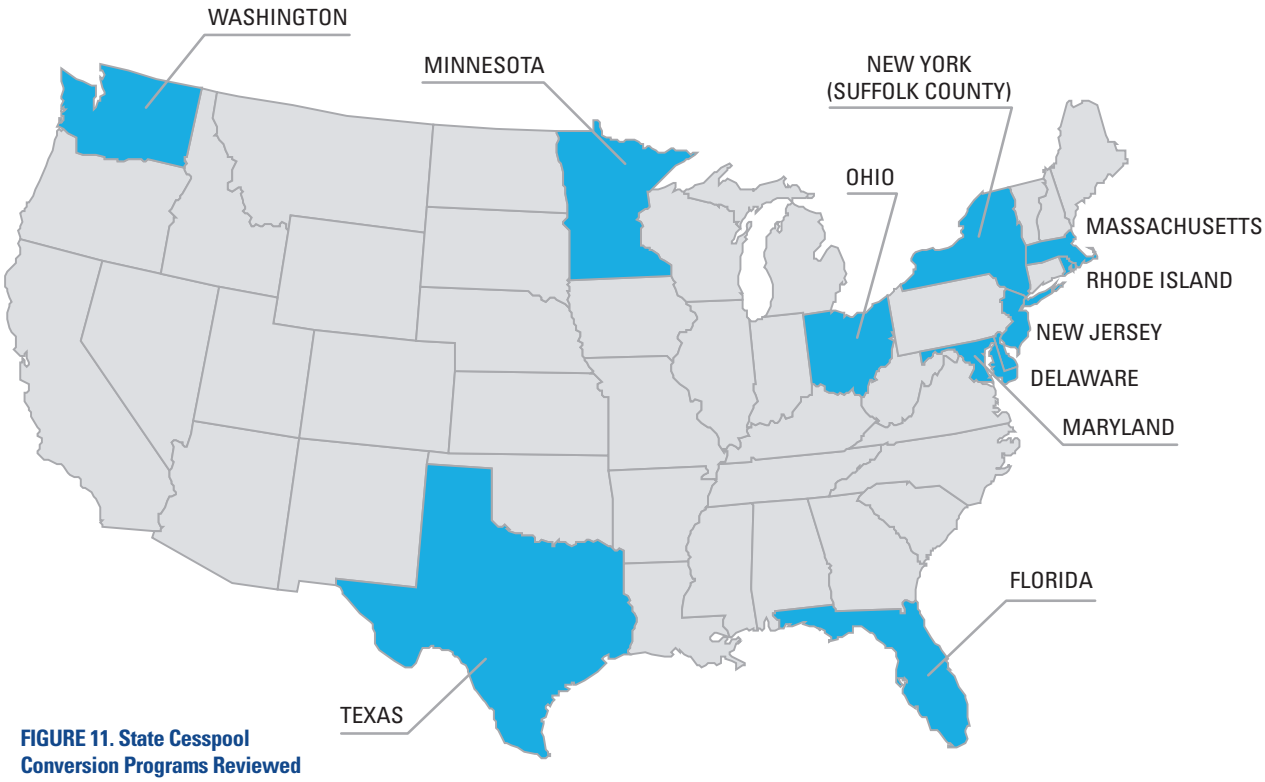


FIGURE 11. State Cesspool Conversion Programs Reviewed

Each state's cesspool conversion financing mechanism varies and is adapted to the individual state's demographics, technologies, and needs. However, there are lessons to be learned from each program as to what has worked and what has needed improvement. Some key takeaways from other states include:

Long-term Effort. The conversion process is a long-term effort that is generally slow moving. This requires all aspects of the program to be sustainable for an extended period of time (over 20 – 30 years), including but not limited to public outreach, funding, and administration.

Funding. Cesspool financing programs were funded through state funding, CWSRF, and the USEPA, with CWSRF funding being the primary source.

- Maryland's Bay Restoration Fund is unique in that they charge an annual user fee for onsite wastewater treatment systems and a monthly sewer connection fee to cover the program administration and grant costs.

Financing. Given the long implementation timeline, a suite of sustainable long-term financing mechanisms are required.

- While the financing programs of each state varied, most provided low interest loans to individual homeowners utilizing CWSRF or other state funds through a conduit/pass through mechanism. Utilizing this approach, the CWSRF programs funnel funding to individual homeowners through a "conduit" or intermediate agency which assumed responsibility for the loan and all administrative activities – thereby reducing administrative demands on the CWSRF program. Conduit agencies included other state programs, financial institutions or non-profit organizations.
- In addition to low interest loans, some states offer grants. New York, Maryland, and Rhode Island offer grants to individual homeowners, while Texas provides competitive grants to support applied research of onsite wastewater treatment systems.
- Massachusetts provides an ongoing tax credit program to cesspool homeowners if they convert/upgrade their cesspool.
- Washington provides a regional loan program (RPL) managed by Craft3 (a non-profit financial institution) to manage lending activities for onsite sewage system repair or replacement.

WASHINGTON'S REGIONAL ONSITE SEWAGE SYSTEM LOAN PROGRAM

- Partnership between state and local agencies and Craft3 (a non-profit third-part lender).
- Established in 1990.
- $15 million in CWSRF funding provided since establishment.
- Craft3 provides program management, approves or denies loan requests, and manages all loan disbursement and activity tracking.
- Craft3 assumes financial risk associated with lending and is obligated to repay the CWSRF funds.
- CWSRF loans provided to both residential and commerical owners to replace failing onsite sewage systems or to connect to existing sewer systems.
- 15-year loans with interest rates ranging from 1.99 to 4.99 percent dependent on household income.

Common Upgrade/Conversion Mechanisms. The most common upgrade and conversion mechanisms instituted by states were the requirements that the upgrade occur at the time of the property sale or property transfer, if the system failed during inspections, or as required by a blanket cesspool phase-out program (as is being implemented in Hawai'i).

Eligibility. Project costs eligible for financing included planning, design, implementation/construction, and permitting costs associated with converting failing or existing cesspool system or connecting to a sewer system. Additional financing eligibility requirements are as follows:

- Although there is no minimum income requirement, individual homeowners are required to have good standing credit and the loan must be secured by a mortgage lien or some other similar mechanism. Two programs provided alternative funding for applicants who could not qualify due to credit issues.
- Individual homeowners are required to secure approval of the proposed onsite system and design prior to start of construction in order to be eligible for financing. Approval was typically provided by the county or local permitting agency.

Homeowner Loans. Individual homeowner loans ranged from $1,000 to $35,000, with interest rates ranging from zero interest to low interest (3 to 6 percent), and loan periods ranging from 10-20 years or the useful life of the system.

- Several programs provided incentives for disadvantaged communities, low income households, or the elderly.
- There was no pre-payment penalty for programs reviewed.
- In several programs the homeowner was required to repay the loan upon sale or transfer of property.
- Loan repayment mechanisms included, but were not limited to: monthly payments, interest only/balloon payment, deferred payment, annual payment, and charge on property tax bill.

Disbursements. Most programs required construction to be completed prior to the disbursement of funds, therefore homeowners were required to pay the project costs upfront and then be reimbursed.

- Method of monetary disbursements varied, with most programs directly compensating the homeowner. In two programs, the states directly compensated the contractor for construction costs.
- Repayment mechanisms included monthly payments or annual line item in property tax bill.

Program Administration. Program administration efforts need to be covered with a sustainable financing mechanism.

- Most programs recovered administrative costs through the interest rate on the loan; while one state program utilized state funds to cover administrative costs.
- Several programs have established partnerships with non-profits, counties, or financial institutions to serve as a conduit agency responsible for administrative loan activities.

Public Outreach. States with successful programs had implemented extensive public outreach programs to educate residents on the public health and water quality benefits of converting cesspools and provided information on incentives and state programs homeowners could leverage to help cover the conversion cost.

As the Working Group develops a recommended approach to financing the cesspool conversions, its is recommended that discussions be conducted with various funding agencies as well as the lessons learned from other statewide mechanisms be investigated further, especially programs in New York, Washington, Maryland, and Massachusetts.

Other Factors Inhibiting Cesspool Conversions

Besides affordability and funding challenges, there are other obstacles to cesspool conversions in Hawai'i.

OVERVIEW AND OBJECTIVES

Previous discussion presented herein highlighted the affordability and funding challenges associated with the implementation of a program of this magnitude in the State. In this section, other factors which may inhibit the conversion of cesspools to a more appropriate technology and/or jeopardize the long-term success of the program are explored. In many cases, these factors were identified based on the experiences from conversion programs implemented in other states. Additional insight was gained from stakeholder input received as part of the Investigation of Cesspool Upgrade Alternatives in Upcountry Maui (Babcock et al, 2019).

PUBLIC ACCEPTANCE AND EDUCATION

Successful cesspool conversion programs implemented in other states have all included an aggressive public outreach and education effort. Getting homeowners to invest tens of thousands of dollars to upgrade their onsite system without a direct and visible benefit will be difficult. As a result, providing education and examples of tangible benefits such as reducing pollution and preserving sensitive ecosystems will be important for long-term success. Efforts should initially focus on public understanding and acceptance of the key underlying premise of the problem and the basis of area prioritizations. Subsequent and on-going outreach plans can be designed to inform the public of methods of conversion, available technical and financial resources, as well long-term operations, maintenance, and/or reporting requirements for onsite systems. Consideration should be given to the development of a centralized program-focused website along with other diverse methods of communication tailored to a public audience.

PERCEPTION OF INEQUITY

As presented previously, the cost of cesspool conversions can vary widely based on specific site conditions and level of treatment needed. In addition, it is expected that the cost of conversion to a more advanced onsite technology will generally exceed that paid by those currently connected to a county-owned wastewater collection system and treatment plant. These differences give rise to the potential perceptions of inequity between various homeowners within a given county or within the state as whole. Questions such as: Why should I pay more for sewer service than my neighbors?; Why should I have to pay more just because I don't have the good fortune to be connected to the county sewer system?; have been raised in previous stakeholder settings. Concerns have also been expressed that groundwater quality in some areas has been significantly impacted by legacy sources such as agriculture and that these past operations should also contribute their fair share to the solution of the problem. These issues of potential inequity should be clearly addressed to assist in gaining public acceptance and support.

NEAR-TERM INCENTIVES

Act 125 requires the conversion of all 88,000 in the State by 2050, or an average conversion rate of about 3,000 per year. Of the conversion programs evaluated in other states, most moved at a very slow pace, converting about 2,000 or less cesspools per year. Therefore, Hawai'i will to need to move at an aggressive pace compared to other states to meet the 2050 deadline required by the Act. Should the pace of near-term conversions lag, the task to convert all cesspools by 2050 becomes even more challenging. Development of an effective plan to identify and implement incentives to homeowners for complete conversions in the near-term would greatly assist in meeting program goals. The plan should consider the benefits of focusing incentives on the highest priority areas.

AVAILABLE WORKFORCE AND RESOURCES

It has been estimated that the overall conversion program will cost about $2 billion to implement. This represents an average annual cost of about $70 million. It is unknown if there is adequate qualified engineering, materials supply chains, and construction contractors currently available to meet program needs. If the number of conversions becomes more concentrated in the later part of the compliance period, workforce and resource concerns could dramatically increase. An assessment of available resources within the State should be performed to determine if this will be a factor which will inhibit cesspool conversions.

RESPONSIBLE MANAGEMENT ENTITY

Successful programs implemented by other states identified a single management entity to be responsible for obtaining, organizing, and managing the large amount of data required to assess ecosystem impacts, inventory and permit onsite systems, and conduct follow-up inspections and reporting. The role of this entity may also include the development of comprehensive regional or watershed management plans which outline strategies and implementation measures to insure compliance with water quality objectives through proper management, inspection, and regulatory enforcement. Without a single management entity, with a comprehensive long-term management approach, the overall effectiveness of the cesspool conversion program could suffer and ultimately negatively impact water quality improvement goals. This effort requires a source of significant ongoing funding for staff time and support services.

STABLE SOURCE OF REVENUE

Municipal water and wastewater programs rely on a stable source of revenue in the form of user fees or general taxing authority to fund system capital and on-going operations and maintenance (O&M) efforts. However, many major non-traditional projects, such as the cesspool conversion program, lack a reliable, dedicated revenue stream to cover the long-term costs associated with project implementation such as special financial assistance plans, data gathering, permitting, monitoring, regulatory enforcement, and general program administration. Consideration should be given to leveraging existing available and potential new revenue sources to assist with the financing of the conversion program. An example of such a program is the Bay Area Restoration Fund created by the State of Maryland which charges a fee of $2.50 to $5.00 per month to all municipal sewer customers and $60 per year to all those served by an onsite system. Resulting revenue is used to assist with the conversion of onsite systems, finance wastewater treatment plant upgrades, and cover on-going administrative costs.

Findings and Recommendations

As the State continues to develop the cesspool conversion strategy, there are several issues that warrant further investigation. This section summarizes findings, recommendations, and identifies the need for future studies and other early actions.

THE BURDEN OF AFFORDABILITY

Significant affordability challenges are anticipated for cesspool conversions across the State. It is projected that 97 percent of cesspool homeowners will pay more than 2 percent of their income for the conversions. As a result, there is likely to be a significant financial burden at the household level. Measures of poverty and income constraints show that most homeowners have little room in their household budgets for such a significant expense.

The affordability analysis breaks down the cesspools by priority levels and households with the greatest financial needs. Considering the limited potential funding available, homeowners with cesspools in priority areas and with the greatest financial need should be targeted.

THE FUNDING GAP

Because of the magnitude of the funding needs (an estimated total of about $2 billion), the State will likely need to develop a suite of funding sources to support cesspool conversions. While there are low interest loan and grant funding opportunities from federal, state, and local financing sources, the combination of these falls significantly short of what is required to fully fund all conversions. The example presented in Figure 12 illustrates that the potential funding gap could be as large as $1.1 billion given certain funding option assumptions.

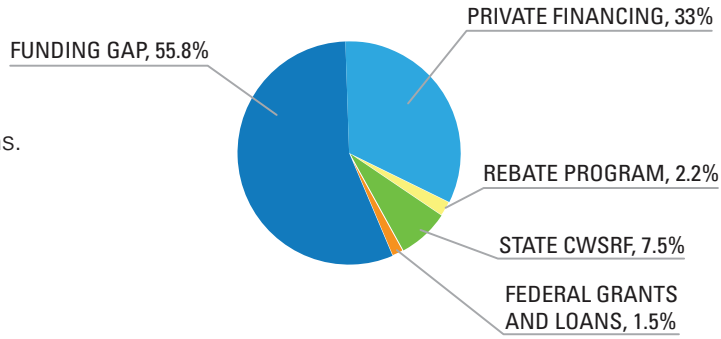


FIGURE 12. Hypothetical Distribution of Funding Sources and Potential Funding Gap.

DEFINING THE PIECES OF THE CESSPOOL CONVERSION "FUNDING PIE"

Figure 12 is a hypothetical financing scenario to estimate the remaining funding gap for cesspool conversions in Hawai'i.

ASSUMPTIONS:

- Total Conversion Cost: $2 billion
- Federal Grants/Loans: $30 million (@$1 million per year for 30 years)
- State CWSRF: $150M (@$5 million per year for 30 years)
- Rebate Program: $43 million ($10,000 rebate for those below the federal poverty level)
- Private Financing: $661 million (Based on households paying up to 2 percent of estimated monthly income)
- **Remaining Funding Gap: $1.1 billion**

RECOMMENDATIONS AND POTENTIAL NEXT STEPS

Recommendations and potential next steps to support cesspool conversions include:

Coordinate state legislative efforts to establish and facilitate a cesspool conversion program. Potential efforts include:

- Create a rebate program to incentivize conversions.
- Create legislation to require that cesspools are disclosed as part of real estate property inspections/ transactions.
- Evaluate legislation for establishment and funding of a cesspool conversion financing program.
- Evaluate potential federal legislative actions.

Identify viable financing mechanisms. Potential actions include:

- Conduct additional research into preferred options identified by the Working Group.
- Conduct outreach to federal and state funding programs to confirm applicability, program requirements, and timing.
- Follow-up with other states' financing programs to discuss program details to understand the "nuts and bolts" of the programs. Identify lessons learned, successes and failures, and what program elements could work in Hawai'i.

Identify administrative resources. Identify and contact potential agencies, non-profits, and financial institutions within the State to determine technical expertise, ability and willingness to conduct administrative activities, what financial mechanisms they could help implement, and other functions they can perform (e.g., technical support, permitting, etc).



FIGURE 13. Cesspool Upgrades.
Most homeowners will need significant financial support to upgrade their cesspools.

Coordinate with and leverage federal, state, and local entities. Conduct discussions with the following entities to assess and understand available resources (staff/financial), technical expertise, level of engagement/responsibility desired, and resource requirements:

- State
- Private lenders
- CWSRF Administrators
- U.S. Department of Housing and Urban Development
- U.S. Department of Agriculture
- USEPA
- Other identified agencies/non-profits

Determine distribution of financial aid. Distribution of financial aid should consider both the homeowner's ability to pay and the priority area of the cesspool to ensure funding is allocated to the highest needs.

Conduct public outreach. Work with the public outreach subgroup to establish comprehensive and extensive public outreach. Public outreach should be conducted to:

- Gain public understanding and acceptance of the key underlying issues and need for cesspool conversions.
- Inform the public of available conversion methods, technical information, financial resources, and long-term O&M and/or reporting requirements for their upgraded onsite wastewater system.
- Inform the public through various communication mediums including a program-focused website.

Overcome other factors inhibiting cesspool conversions. In addition to gaining public acceptance and educating cesspool owners through public outreach these include:

- Address perception of inequity. Clearly address these perceptions to gain public acceptance and support.
- Implement near-term incentives. Implement incentives that encourage homeowners to convert their cesspools in the near term, with a focus on homeowners within the highest priority areas.
- Identify available workforce resources and shortfalls. Assess available resources to implement the program (administration, engineering, construction, etc.) to determine if resource limitations will be an issue. If resources are limited, work to identify and/or develop additional workforce resources.
- Establish responsible management entity. Establish a single management entity to be responsible for comprehensive long-term implementation of the program so efforts are well coordinated and effective. Given this requires significant staff time and support services, identify an on-going source of funding for this entity.
- Establish stable source of revenue. Consider leveraging existing available and potential new revenue sources to provide a stable, long-term source of revenue to support the program.

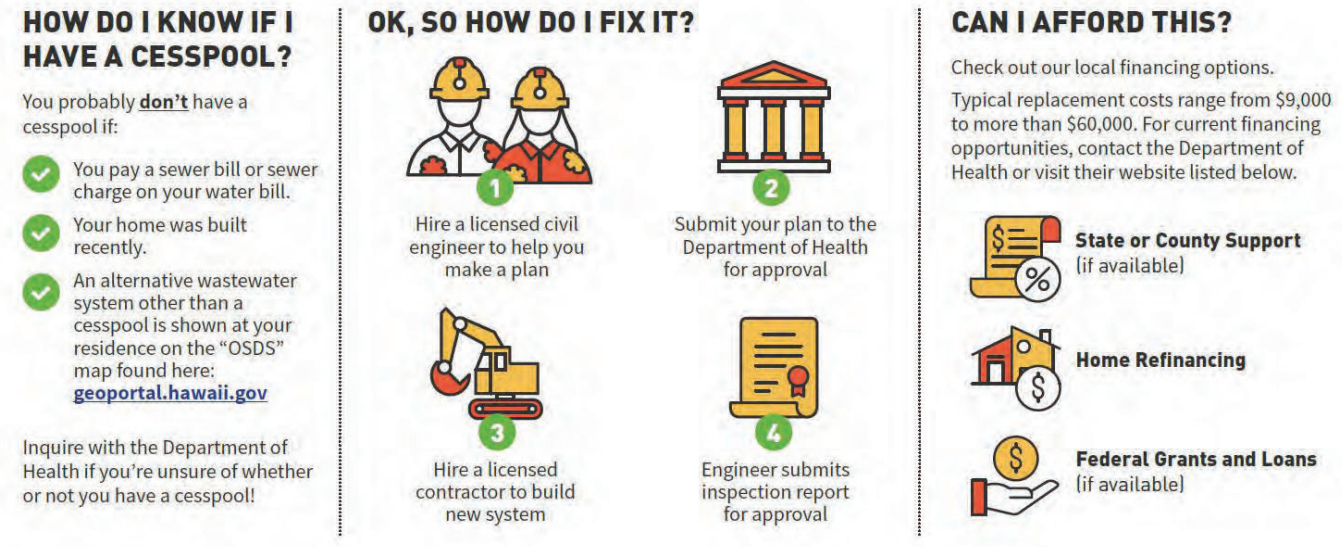


FIGURE 14. Example Public Outreach Handout
See Appendix C for the full page example handout.

References

Act 125 of 2017 (House Bill No. 1244). 2017. *Hawaii Revised Statutes, Section 342D Cesspools; mandatory upgrade, conversion, or connection.*

Act 132 of 2018 (Senate Bill No. 696). 2018. *Relating to Cesspools; Cesspool Conversion Working Group.*

Babcock, R., Barnes, M.D., Fung, A., Godell, W., and Oleson, K.L.L. 2019. *Investigation of Cesspool Upgrade Alternatives in Upcountry Maui (Final Report)*. Prepared for the Hawaii Department of Health, Safe Drinking Water Branch.

Department of Health. 2018. *Report to 29th Legislature, State of Hawaii, Relating to Cesspools and Prioritization for Replacement*.

Raucher, R., Clements, J., Rothstein, E., Mastracchio, J., and Green, Z. 2019. *Developing a New Framework for Household Affordability and Financial Capability Assessment in the Water Sector*. Prepared for The American Water Works Association, the National Association of Clean Water Agencies, and Water Environment Federation.

U.S. Census Bureau. 2018. *2018 American Community Survey 5-year Public Use Microdata Samples*. Retrieved from https://data.census.gov/mdat/#/.

USEPA (US Environmental Protection Agency). 1997. *Combined Sewer Overflows—Guidance for Financial Capability Assessment and Schedule Development.* USEPA Office of Water (EPA 832-B-97-004).

Appendix A

Technical Memorandum 1:
CESSPOOL CONVERSION FUNDING MECHANISMS
(October 2020)



Hawai'i State Department of Health
Cesspool Conversion Finance Research

Technical Memorandum 1
CESSPOOL CONVERSION FUNDING MECHANISMS

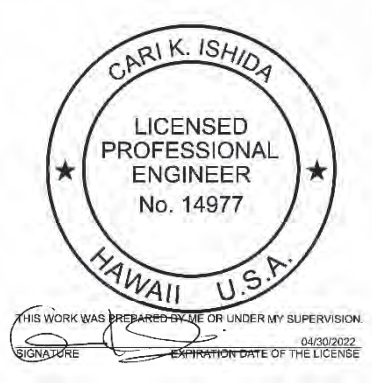
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Hawai'i State Department of Health
Cesspool Conversion Finance Research

Technical Memorandum 1
CESSPOOL CONVERSION FUNDING MECHANISMS

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Abbreviations

AIE	alternative, innovative, or emerging
ATU	aerobic treatment unit
AWIA	America's Water Infrastructure Act
BMAP	Basin Management Action Plan
BRF	Bay Restoration Fund
Carollo	Carollo Engineers, Inc.
CCWG	Cesspool Conversion Working Group
CDBG	Community Development Block Grants
CFD	Community Facilities District
C-PACE	Commercial Property Assessed Clean Energy properties
CSSLP	State of Rhode Island Community Septic System Loan Program
CWCA	Clean Water Commerce Act
CWMP	Cooperative Watershed Management Program
CWSRF	State of Hawaiʻi Clean Water State Revolving Fund
DAC	disadvantaged community
DBEDT	Department of Business, Economic Development and Tourism
DBOM	design-build-operate-maintain
DCA	Department of Community Affairs
DEM	Rhode Island Department of Environmental Management
DEP	Department of Environmental Protection
DNREC	Delaware Department of Natural Resources and Environmental Control
DOE	Department of Energy
DOH	Department of Health
EDA	Department of Commerce Economic Development Administration
EFC	New York Environmental Facilities Corporation
EPA	United States Environmental Protection Agency
FFY	federal fiscal year
FHA	Federal Housing Administration
FSCAA	First State Community Action Agency
FY	fiscal year
GEM$	Green Energy Money $aver On-bill Program
GO	general obligation (bonds)
gpd	gallons per day
HCF	Hawaii Community Foundation
HELOC	home equity line of credit
HGIA	Hawaiʻi Green Infrastructure Authority
HRS	Hawaiʻi Revised Statutes

HUD	U.S. Department of Housing and Urban Development
Hui	Hanalei Watershed Hui
HVAC	heating, ventilation, and air conditioning systems
ID	Lono Kona Sewer Improvement District
LCC	large capacity cesspool
LDP	linked deposit program
LHD	Local Health District
LLP	Local Loan Program
MACOG	Missouri Association of Councils of Government
MDA	Maryland Department of Agriculture
MDE	Maryland Department of Environment
mgd	million gallons per day
MGP	New Jersey Municipal Grant Program
NEPA	National Environmental Policy Act
NJDEP	New Jersey Department of Environmental Protection
NJWB	New Jersey Water Bank
NPDES	National Pollutant Discharge Elimination System
NPS	nonpoint sources
OHA	Office of Hawaiian Affairs
OSWT	Onsite wastewater treatment
OSSF	on-site sewage facility
P3	Public-Private Partnership
PACE	Property Assessed Clean Energy
PAYGO	pay-as-you-go
PCA	Minnesota Pollution Control Agency
PFA	Minnesota Public Facilities Authority
PPL	Project Priority List
PRC	Polluted Runoff Control
Program	Septic Upgrade Incentive Program
RCAC	Hawai'i Rural Community Assistance Corporation
RI Housing	Rhode Island Housing and Mortgage Financing Corporation
RI-I	Rhode Island Infrastructure
RLF	Revolving Loan Funds
RLP	Regional On-site Sewage System Loan Program
R-PACE	Residential Property Assessed Clean Energy properties
RWLF	Rural Water Loan Fund
S.A.F.E.	Save, Accelerate, Fill and Expedite
SCADA	supervisory control and data acquisition
SEFO	Septic Extended Funding Option

SEP	Supplemental Environmental Project
SID	Special Improvement District
SRF	State Revolving Fund
SRLP	Septic Rehabilitation Loan Program
SSTS	Subsurface sewage treatment systems
STILF	Sewer Tie-in Loan Fund Program
TM01	Technical Memorandum 1
TM02	Technical Memorandum 2
TOGP	Texas On-site Sewage Facility Grant Program
Trust	New Jersey Environmental Infrastructure Trust
Ulupono	Ulupono Initiative
USBR	United States Department of Interior, Bureau of Reclamation
USDA	United States Department of Agriculture
VA	Veterans Affairs
WIFA	Water Infrastructure Finance Authority
WIFIA	Water Infrastructure Finance and Innovation Act
WIIN	Water Infrastructure Improvements for the Nation
WPCLF	Ohio Water Pollution Control Loan Fund
WQFA	Water Qualify Financing Administration
WQT	Maryland Water Quality Trading Program
WRRDA	2014 Water Resources Reform and Development Act
WRRSP	Ohio Water Resource Restoration Sponsor Program

Technical Memorandum 1

EXECUTIVE SUMMARY

ES.1 Introduction

Throughout Hawaiʻi, there are approximately 88,000 cesspools that release an estimated 53 million gallons per day (mgd) of wastewater to the environment. Most of the existing cesspools provide wastewater disposal for single-family residences, versus large-capacity systems serving multiple residences or commercial areas. Given that over 90 percent of the state's drinking water supplies are from groundwater sources, it was recognized that cesspools pose an environmental and public health risk.

In 2017, the Hawaiʻi State Legislature passed Act 125, which states that by January 1, 2050 all cesspools in the state, unless granted exemption, shall upgrade or convert to a septic or aerobic treatment unit (ATU), or connect to a sewer system (ACT 125, 2017). Act 132 was passed in 2018 to establish a Cesspool Conversion Working Group (CCWG) to develop a long range, comprehensive plan and commission a statewide study of sewage contamination in nearshore marine areas (ACT 132, 2018). The CCWG retained Carollo Engineers, Inc., (Carollo) to provide expertise on onsite wastewater treatment (OSWT) technologies and cesspool conversion funding and finance options.

As a result of Act 125, homeowners will be required to upgrade their existing cesspools to approved OSWT technologies. The cost associated with cesspool conversions will likely be a financial burden to most residential owners and in a state where the cost of living is already high, many homeowners will be challenged to afford the costs to upgrade. One of the complex challenges tasked to the CCWG is to develop a strategy to aid the funding and financing of the cesspool upgrades. The purpose of this technical memorandum (TM01) is to summarize potential funding mechanisms that may be available to provide financial support to homeowners. A subsequent technical memorandum (TM02) will evaluate affordability issues.

ES.2 Summary of Funding Mechanisms

There are several challenges associated with identifying viable funding mechanisms for Hawaiʻi's cesspool conversion program. First, and likely the most important, is the magnitude of the potential total amount of financing that the program may require. It is estimated that the total cost of the cesspool conversions within the state may range from $880 million to more than $5.3 billion[1]. While there are low interest loan and grant funding opportunities from federal, state, and local financing sources, all of these combined fall significantly short of that required to fully fund all conversions. In addition, most of the financing programs are available only to government entities such as the state or counties, or non-profit organizations, and are not targeted to private, residential property owners. This is further complicated by the fact that the state and the counties do not currently have the staff or the administrative capabilities to receive grant or loan funds, review and process individual applications, disperse the funds to homeowners, and, in the case of loans, conduct follow-up payment collection. Lastly, most of these financing programs provide a reimbursement for incurred cost,

[1] Historical cesspool replacement costs range from $9,000 to $60,000 per conversion. The range shown is for conversion of all 88,000 cesspools in Hawaiʻi.

requiring the individual homeowners to first pay upfront the cost associated with planning, design, and construction of the new OSWT system, and then be reimbursed.

Due to the varying demographics, socio economics, implementation timeline, and geographical terrain, there is not a "one size fits all solution" for both the conversion technology as well as the financing mechanism across all counties in Hawaiʻi. As a result, financing mechanisms implemented for the cesspool upgrades will need to:

1. Consider equitability and affordability issues.
2. Incentivize individual homeowners to convert existing cesspools.
3. Provide funding support for upfront cesspool conversion costs.
4. Consider the funding recipient.
5. Balance the need for immediate, near-, and long-term expenditures.
6. Potentially fund a variety of OSWT technology options.
7. Minimize the administrative burden on Department of Health (DOH) while providing support to existing or new local agencies.

Key to the successful implementation of the program will be to identify or develop a mechanism that can funnel federal and state funding or incentives to the individual homeowner through the DOH or other organizations, such as the counties, non-profits, or financial institutions. The financing program will necessitate additional funding for state and/or local government to administer the program and will likely consist of a mixture of funding options. This may include incentives (e.g. tax credits or rebates), existing federal and state grants/low interest loans, and/or the establishment of a state or county financing program (including funding legislation) targeted at individual cesspool conversions.

ES.2.1 Financing Options

Financing options may include tax credits or rebates, federal, state, or county grants, and private/mortgage loans. A notable difference between grants and loans are that grants do not need to be repaid, while loans are borrowed funds that need to be repaid, typically with interest. These financing options are summarized below.

ES.2.1.1 Private/Mortgage Loans

A subsequent TM will evaluate the relative affordability of cesspool conversions. It will be a challenge and likely infeasible for financial support to be provided to all cesspool owners. Thus, it will be necessary for homeowners to seek private or mortgage loans to pay for the cost of cesspool conversions. Given the economic turmoil caused by the global pandemic (COVID-19) in 2020, the current, low interest rates provided by private lending options may be an economical option for some residents.

ES.2.1.2 State Tax Credits or Rebate Programs

The state of Hawaiʻi's temporary tax credit program (Act 120), which provides up to $10,000 in incentives for individual homeowners to convert cesspools to septic systems or ATUs, is set to expire on December 31, 2020. Legislation which would extend the term of the credits did not pass in 2020. Given that only 47 applications have been filed for this credit to date, this incentive with its current structure, may have limited appeal and application and there may be a need to re-evaluate the tax credit mechanism to identify opportunities to make the program more enticing. A rebate program may have broader appeal and applicability for cesspool conversions.

ES.2.1.3 Grants and Loans

Federal, state, and local grant and loan funding sources should also be considered as potential funding mechanisms. While these sources do not provide a long-term solution for financing cesspool upgrades, they can help with the implementation of portions of the program. While most programs require a public entity or agency as the applicant, there are mechanisms by which money is secured by a public entity, non-profit, or financial institution who act as the broker to make sub-loans to individual homeowners for the cesspool upgrades. Funding agencies with potential financing mechanisms identified in this TM include:

- United States Environmental Protection Agency (EPA)
- United States Department of Interior, Bureau of Reclamation (USBR)
- United States Department of Agriculture (USDA)
- United States Department of Housing and Urban Development (HUD)
- United States Department of Commerce - Economic Development Administration (EDA)
- State of Hawaiʻi - Non-Point Source (319) (NPS) Grants
- State of Hawaiʻi Rural Community Assistance Corporation (RCAC)
- State of Hawaiʻi Rural Water Association
- Proposed – Hawaiʻi Cesspool Remediation and Conversion Loan Program

ES.2.1.4 Potential CWSRF Funding Mechanisms

There may be opportunities within the state of Hawaiʻi's Clean Water State Revolving Fund (CWSRF) program for non-profits or public entities to pursue funding or to create a pilot program to provide loans or grants to residential homeowners.

The CWSRF program provides low interest loans for a wide range of water quality infrastructure projects. Loans to finance non-point source projects can be provided through several funding mechanisms, depending on type of project, repayment source, and on agreement by the state program. Per statute, CWSRF funding can only be provided to public entities, however the state's CWSRF program can funnel funding to individual or private entities via the counties, other federal/state agencies, non-profits, or financial institutions. Typically, funding is provided by the state or the CWSRF program to a local intermediary agency that is then fiscally responsible for the loan and the overall loan administration, thereby reducing the burden on the CWSRF staff. Cesspool financing programs in other states, have been funded with CWSRF funds, EPA grants, state bonds, legislative funding or other state funding sources. Mechanisms that have been utilized successfully include: Conduit Lending (Pass Through), Linked Deposits, Sub-state Revolving Funding, and Direct Loans.

It is estimated that $5 million per year is the maximum financing that can currently be obtained through the CWSRF program. This level of funding represents less than 10 percent of the average annual cost of all conversions over the 30-year period.

ES.3 Lessons from Cesspools Funding Mechanisms in Other States

Cesspool conversion mechanisms used in ten other states were reviewed with the focus on those with programs funding the replacement of cesspools with OSWT systems. These states incentivized individual residential or commercial owners to convert failing systems by providing financial support to defray the

costs associated with the implementation of the new technology. Some key "lessons learned" from other programs include:

- Financial Programs:
  - Eight states have created robust financial programs which provide low to no interest loans and incentives to ease the high cost of upgrading cesspools to alternative, innovative, and emerging (AIE) technologies.
  - The states of New York, Maryland, and Rhode Island offer grants and low interest loans to individual homeowners.
  - Massachusetts provides an ongoing tax credit program as an incentive.
  - Texas provides competitive grants to support applied research of OSWT systems, which is funded from a fee collected for each permit issued.
  - In most states, homeowners are required to upgrade the OSWT system upon sale or property transfer.
- Funding Mechanisms for Cesspool Conversion Financing Programs:
  - Cesspool financing programs were funded through EPA, CWSRF or state funds, with CWSRF funding being the primary source.
    - The primary CWSRF mechanisms utilized to fund individual homeowner programs were Conduit Lending or Linked Deposits.
    - Most CWSRF programs utilize a pass-through entity (e.g. county, local governing body, financial institution or approved non-profit) to administer the loans from loan application to loan repayment.
    - The pass-through entity was ultimately responsible for the loan repayment to the CWSRF program but had mechanisms established to recover loans if there was a default.
  - Maryland's Bay Restoration Fund is unique in that they charge an annual user fee to OSWT systems and a monthly sewer connection fee to cover the program administration and grant costs.
- Program Administration:
  - Several programs have established partnerships with non-profits, counties, or financial institutions to serve as the conduit agency responsible for the administrative loan activities, thereby reducing the administrative burden on the states' CWSRF program.
  - The long timeline for program implementation also required that states establish a sustainable financing mechanism including sources and revenue streams to cover program administration and other costs. Most programs recovered costs through the interest rate on the loan; one program utilized state funds to cover the administrative costs of the program.
- Eligible Project Costs
  - Eligible project costs include converting failing or existing cesspool systems or connecting to sewer systems.
  - Eligible costs include planning, design, implementation/construction, and permit costs.
  - Funding was not applicable to new developments.
- Project Eligibility Criteria
  - All programs required that the applicant have good standing credit and that the loan be secured by a mortgage lien or some other similar mechanism. Two programs provided alternative funding for applicants who could not qualify due to credit issues.
  - Individual homeowners were required to secure approval of proposed AIE technology and design prior to start of construction in order to be eligible to receive financing. Approval was typically provided by the county or local permitting agency.

  - Most programs did not have an income requirement; however, several provided incentives for disadvantaged communities (DACs), low income households, or the elderly.
- Program Funding:
  - Individual homeowner loans ranged from $1,000 to $35,000.
  - Interest rates ranged from no interest loan to low interest (3-6 percent) to individual homeowners.
  - Loan periods ranged from 10-20 years or the useful life of the system.
  - There was no pre-payment penalty for any program.
  - In several programs the homeowner was required to repay the loan upon sale or transfer of property.
- Disbursements:
  - Key issues included the timing of disbursements as well as method of disbursement.
  - The majority of programs required construction to be completed prior to the disbursement of funds, therefore homeowners were required to pay the project costs upfront and then be reimbursed.
  - Method of monetary disbursements varied with most programs directly compensating the homeowner. In two programs, the states directly compensated the contractor for construction costs.
  - Repayment mechanisms included monthly payments or annual line item in property tax bill.

Each state's cesspool conversion financing mechanism varies and is adapted to the individual state's demographics, technologies, and needs. However, there are lessons to be learned from each program as to what has worked and what has needed improvement. As the CCWG develops its recommended approach to financing the program, it is recommended that further outreach be conducted and vetting of identified state-wide funding mechanisms - especially programs in the states of Delaware, New York (Suffolk County), Washington, Maryland, and Massachusetts.

ES.4 Other Funding Models and Partnerships

In addition to evaluating cesspool funding mechanisms in other states, models used by other infrastructure systems were reviewed and are summarized in the following sections.

ES.4.1 On-Bill Financing Program – Example: Hawai'i Green Infrastructure Authority

Two funding models utilized in Hawai'i are on-bill financing and on-bill repayment programs. On-bill financing allows the electric utility (e.g., Hawaiian Electric, Maui Electric, or Hawaiian Electric Light), to incur the cost of a clean energy upgrade to a home, which is then repaid by the homeowner through their monthly utility bill. Upfront capital is provided by a third party, not the electric utility. In some on-bill repayment programs, the loan is transferable to the next owner of the home, building, or property. The idea of an on-bill financing program could be adapted to finance cesspool conversions with the assistance of county or local agencies (e.g. water or wastewater utilities) that could assist in the billing administration function similar to electric utilities.

An on-bill financing model that currently exists in Hawai'i is the Green Energy Money $aver On-bill (GEM$) program whose purpose is to deploy clean infrastructure. The program enables ratepayers to finance clean energy improvements through an on-bill financing model that spreads the initial capital costs of installing green infrastructure of up to 20 years, thus providing an affordable way to invest in green infrastructure that will reduce monthly energy costs.

ES.4.2 Property Assessments – Example: Property Assessed Clean Energy Program

Another energy-based funding model that could be adapted to finance cesspool conversions is the Property Assessed Clean Energy (PACE) program. This is a mechanism used by local governments to allow property owners to finance the up-front cost of energy efficiency and renewable energy improvements (such as solar) and then pay the costs back over time through a voluntary assessment. A PACE program could be modified as a viable financing option for cesspool conversion to allow a property owner to pay back the costs of their cesspool remediation over time at an agreed upon interest rate and length of loan term. Funding would occur through private lenders, e.g., private banks, or the issuance of municipal bonds.

ES.4.3 Property Assessments – Example: Community Facilities District and Special Improvement Districts

The use of Community Facilities Districts (CFDs) or Special Improvement Districts (SIDs), which are independent, local special-purpose financing districts that levy taxes and assessments and issue bonds to provide infrastructure to develop communities of all types, could be another mechanism by which to fund cesspool conversions. An improvement district specifically created to address the EPA's requirement to close large-capacity cesspools is the Lono Kona Sewer Improvement District (ID) in North Kona in the County of Hawaiʻi. This ID funds the connection of 110 parcels to the county wastewater system. A similar funding mechanism could be applied to the funding of on-site treatment systems for a subdivision of current cesspool owners.

ES.4.4 Public Private Partnerships

Another potential funding mechanism is the development of Public-Private Partnerships (P3s) that encourage private investment in public infrastructure projects. P3s are contractual arrangements in which governments or public entities form partnerships with the private sector to design, finance, build, and operate and/or maintain infrastructure such as toll roads, water supply facilities, and wastewater treatment plants. Public agencies are in charge of financing and theoretically pass all the risks related to operating costs and project revenues to the private partner. However, P3s also have some negatives including local opposition,, loss of public control and flexibility, potential need for in-house expertise or outside consultants, complicated contracts and complex negotiations, as well as significant effort to enforce and monitor contracts.

ES.5 Legislative Efforts

Legislative efforts, both at the state and county levels, may help to address cesspool conversion funding options. Political coordination on legislative efforts would help provide consistent and clear messaging to stakeholders and decision makers. This will be particularly important with economic recovery plans during and following the COVID-19 pandemic.

ES.6 Recommendations and Next Steps

Financing options for the cesspool conversions to approved OSWT systems will likely be comprised of a hybrid of financing options depending on several factors including: affordability, overall cesspool identification and prioritization, cost of preferred technologies, funding recipient (individual versus a subdivision versus homeowners' association), financing sources/restrictions, available staffing resources, stakeholder feedback, and other factors that still need to be identified and assessed.

Identification of stable revenue sources will be helpful to fund the cesspool conversion program. Potential revenue sources may include:

- Developer fees.

- Nutrient impact fees.
- Permit fees.
- Property taxes.
- Recreational or license fees.
- Resort taxes/fees.
- General excise tax.
- Special assessments.
- User fees.

The next steps in the initial evaluation of potential funding mechanisms that are within the scope of this study includes:

1. Evaluate affordability issues as well as the equitable distribution of funds (TM02).
2. Present funding options to DOH to solicit input, identify preliminary list of preferred financing mechanism, and identify considerations/concerns.

Recommendations and potential next steps to support cesspool conversions include:

1. Coordination of legislative efforts, such as:
   a. Extension of Act 120 tax credits beyond 2020 or creation of a potential rebate program.
   b. Creation of legislation to require that cesspools are disclosed as part of real estate property inspections/transactions.
   c. Evaluation of legislation for establishment and funding of a cesspool conversion financing program.
   d. Evaluation of potential federal legislative actions.
2. Work towards the identification of potential viable financial mechanism through the following actions:
   a. Conduct additional research into preferred options identified by the CCWG.
   b. Outreach to federal and state funding programs to confirm applicability and program requirements, timing, etc.
   c. Follow-up with financing programs to discuss program details to understand the "nuts and bolts" of the programs. As well as identify lessons learned, successes and failures, and what program elements could work in Hawai'i.
3. Identify and contact potential agencies, non-profits and financial institutions within the state to determine technical expertise, ability and willingness to conduct administrative activities, what financial mechanisms they could help implement, and other functions they can perform.
4. Conduct discussions with DOH, private lenders, CWSRF, counties, HUD, USDA, and other identified agencies/non-profits to assess and understand available resources (staff/financial), technical expertise, level of engagement/responsibility desired, and resource requirements.
5. Link preferred funding options to affordability and equitability distribution considerations to provide a complete picture of options and affordability mitigation measures.
6. Work with public outreach subgroup to develop strategies for presenting technology and financing options to groups of affected cesspool owners to solicit input.

Technical Memorandum 1

CESSPOOL CONVERSION FUNDING MECHANISMS

1.1 Introduction & Background

The 2004 *Clean Watersheds Needs Survey Report to Congress* found that in the state of Hawaiʻi, 62 percent of the residents are served by centralized wastewater treatment facilities and the remaining 38 percent are served by decentralized or OSWT systems. There are approximately 110,000 OSWT systems, including 88,000 cesspools and over 21,000 septic systems in Hawaiʻi. A cesspool is defined by the EPA as an underground excavation that receives sanitary wastewater from bathrooms, kitchens, and washers. Cesspools are not designed to treat wastewater but rather capture solids. The structure usually has an open bottom and perforated sides. Domestic wastewater flows into the structure and the solid waste collects at the bottom and the liquid waste flows out to percolate into the subsurface that may be hydraulically connected to groundwater and surface water.

The majority of the cesspools in Hawaiʻi serve single-family, residential units and are spread out throughout the islands. Table 1.1 summarizes the estimated number of cesspools by island, as well as the estimated total wastewater discharge. Of these, 43,000 cesspools have been identified as posing a risk to the state's water resources of which 31,000 are located within the perennial watersheds on the islands of Hawaiʻi, Kauaʻi, Maui, and Molokaʻi.

Table 1.1 Estimate of Cesspools and Total Anticipated Discharge by Island(1)

Island	Housing Units	Number of Cesspools	Cesspool Effluent (mgd)
Hawaiʻi	82,000	49,300	27.3
Kauaʻi	29,800	13,700	9.5
Maui	65,200	12,200	7.9
Oʻahu	336,900	11,300	7.5
Molokaʻi	3,700	1,400	0.8
Total	**517,600**	**87,900**	**53.0**

Notes:
(1) Confirmation of the actual number of cesspools, locations, and priorities is being conducted under a separate task of the CCWG.

In total, these cesspools are estimated to discharge 53 mgd of untreated sewage to the groundwater system and coastal waters. Untreated wastewater from cesspools contain nutrients (nitrogen and phosphorous) and pathogens such as bacteria, protozoa and viruses which can have an impact on the quality of drinking water, general water quality, the health of the state's reefs and the health of Hawaiʻi's residents and visitors.

To incentivize "early adopter" cesspool conversion, the state of Hawaiʻi established a temporary tax credit program in 2016 (Act 120). Act 120 provided a $10,000 tax credit to homeowners for the upgrade of qualifying cesspools and is set to expire on December 31, 2020.

In 2017, the Hawaiʻi State Legislature passed Act 125, which states that by January 1, 2050 all cesspools in the state of Hawaiʻi, unless granted exemption, shall upgrade or convert to a septic system or aerobic treatment unit, or connect to a sewer system (ACT 125, 2017).

Act 132 was then passed in 2018 to establish the CCWG to develop a long range, comprehensive plan and commission a statewide study of sewage contamination in nearshore marine areas (ACT 132, 2018). Act 132 directed the DOH to evaluate residential cesspools in the state, develop a report to the legislature that includes a prioritization method for cesspool upgrades, and work with the Department of Taxation on possible funding mechanisms to reduce the financial burden on homeowners. The CCWG retained Carollo to provide expertise on OSWT technologies and cesspool conversion funding and finance options.

As a result of Act 125, homeowners will be required to upgrade their existing cesspools to more appropriate technologies. The CCWG recognized that the cost associated with the conversion of these onsite sewage disposal systems will be a significant financial burden to individual residential owners. One of the complex challenges tasked to the CCWG is to develop a strategy to aid the funding and financing of the cesspool upgrades.

Figure 1.1 shows a stepwise approach to guiding homeowners with cesspools through the conversion process. The CCWG and key advisors are developing the overall strategy to the cesspool conversion program, including public outreach, treatment technologies, data validation and prioritization, and finance research. The information on funding mechanisms provided in this TM is to support step #5 shown in Figure 1.1. However, there is a significant amount of strategy, planning, and coordination that will be completed by the CCWG and other over the next few years.

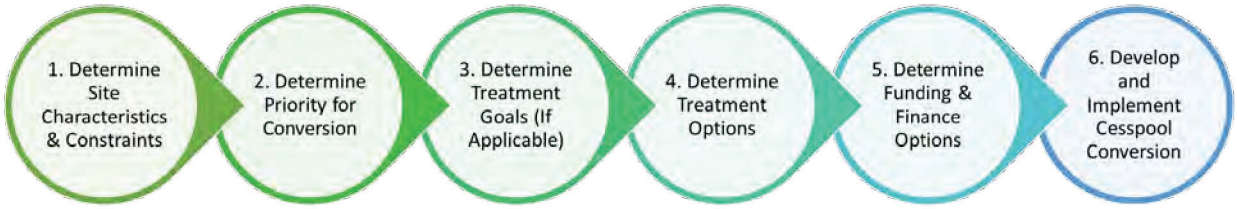


Figure 1.1 Stepwise Approach to Cesspool Conversions for Homeowners

It is estimated that the cost to convert a cesspool to an OSWT system (e.g. septic system or identified AIE technologies) ranges widely from $9,000 to $60,000 or more depending on system capacity, technology, location and size of dwelling unit–a cost that many homeowners cannot afford (Babcock, 2019). With 88,000 cesspools requiring upgrades, total upgrade costs could range between $880 million to more than $5.3 billion[2].

While there are low interest loan and grant funding opportunities from federal, state, and local financing sources, all of these sources combined fall significantly short of that required to fully fund all conversions. In addition, most of the financing programs are available only to government entities, such as state agencies or counties, and are not targeted to private, residential property owners. This is further complicated by the fact that state agencies and the counties do not currently have the staff or the administrative capabilities to receive grant or loan funds, review and process individual applications, disperse the funds to the homeowners, and, in the case of loans, conduct follow-up payment collection.

Motivating residents to implement the conversion of existing cesspools will be challenging. Despite the benefits of improving public health and the environment and the state mandates contained in Act 125, there are few financial incentives for homeowners to convert or upgrade their systems. The cost of cesspools is

[2] Historical cesspool replacement costs range from $9,000 to $60,000 per conversion. The range shown is for conversion of all 88,000 cesspools in Hawai'i.

low and there are minimal maintenance requirements. A major challenge to the successful conversion of the state's cesspools is the identification of individual residential incentives, as well as the identification of a funding mechanisms for the financing of both the capital expenditures and the long-term costs associated with the maintenance and management of OSWT systems and overall program administration. In addition to financial incentives, there is a need to identify and quantify the benefits (e.g. economic, environmental, water quality, etc.) to be gained from converting cesspools that can be communicated to individual homeowners to further incentivize the homeowners to convert.

1.1.1 Method of Cesspool Conversion and Funding Needs

There are generally three options for cesspool conversions including:

- **Connection to existing or new centralized sewer systems.** In the large municipal areas of Hawai'i, homes and businesses are connected to county or privately owned, sewer collection and treatment systems, where the wastewater flows to a centralized treatment facility for treatment and disposal. Centralized sewer collection and treatment systems are generally cost efficient because of economies of scale, treating the water either for discharge or for water reuse applications (e.g., golf course irrigation). However, there are significant capital investments required by counties or private developers, and connections to centralized systems may not be feasible for many cesspool conversions.
- **Connection to decentralized sewer systems.** Decentralized sewer systems (also "cluster" wastewater systems) are similar to centralized sewer systems, but typically have a smaller collection system service area and wastewater treatment facility. Decentralized treatment can range from passive treatment with soil dispersal to more sophisticated, mechanical treatment, such as membrane bioreactors. Within the rural portions of Hawai'i, which are extensive, the costs to excavate and construct long sewer systems from remote locations to a centralized treatment facility are substantial.
- **Conversion of cesspools to approved OSWT and disposal systems.** A 1999 survey conducted by DOH showed that approximately 19 percent of the households in Hawai'i had OSWT and disposal systems, including cesspools. Since many of the cesspools are located in rural areas without centralized wastewater systems, conversion to OSWT and disposal may be the most cost-effective option for some homeowners.

The focus of both the technology and finance research efforts are on technology and finance options for OSWT systems. Thus, this TM is focused on identifying funding mechanisms assuming existing cesspools will be upgraded to OSWT systems.

1.1.2 Purpose

The magnitude of the potential total amount of financing required for the conversions is a challenge and likely infeasible for financial support to be provided to all cesspool owners. The cost to convert all 88,000 cesspools by 2050 will require a consortium of financing solutions including self-financing, state and county incentives, individual loans from financial institutions, federal, state and local financing sources, and potentially establishing a cesspool financing program.

Federal, state, and local financing options, such as grants and low-interest loans were identified as a potential source of financing, however these programs are limited in their funding capacity, with program funding allocated amongst a variety of project types. There are other challenges for these programs including funding program purpose/priority which may limit the programs ability to fund cesspool conversions, other demands/needs on the program, the requirement for repayment, and most require a

public entity be the recipient of the funding and are not targeted to private, residential property owners. Lastly, most of these financing programs provide a reimbursement for incurred cost, requiring the individual homeowners to first pay upfront the cost associated with planning, design, and construction of the approved OSWT system, and then being reimbursed.

The establishment of financing programs requires staff or the administrative capabilities to receive grant or loan funds, review and process individual applications, disperse the funds to homeowners, ensure implementation of projects and, in the case of loans, conduct follow-up payment collection. With a clearer understanding of the economic impacts to convert 88,000 cesspools, identification of responsibilities, and the affordability of these conversions, the CCWG should consider further the establishment of a financing program to incentivize homeowners to convert their system (e.g. financial assistance for planning, design and construction). The funding program must:

1. Be sustainable and address the required governance structure/institutional requirements.
2. Identify and provide mechanisms to fund the program (e.g. CWSRF, EPA, bonds, governmental bill, fees, etc.).
3. Provide equitable distribution of financing to homeowners considering priority, income level, etc.
4. Outline administrative requirements (e.g. DOH, county, other agency or a hybrid) governance, and financing provided.

Other states with similar mandates to convert cesspools have implemented programs with varying degrees of success. Successful implementation of these programs has required agency partnerships, participation of local cities/counties/other government entities to support program implementation/oversight, and allocation of dedicated funding sources. Where staffing resources are limited, some states have partnered with outside lending institutions for overall program administration, however, the interest rates are typically much higher. These financing programs are often complemented with other sources of funding including state incentives, other program financing, and individual resident financing.

The focus of this effort is on identifying potential funding sources and financing mechanisms that are available to private, residential OSWTs. There may be additional source of funding for centralized options or options sponsored by public entities. Funding options to connect to a county or private wastewater system are not included in the scope of this TM. However, a summary of traditional funding mechanisms typically applied to decentralized or centralized sewer options is provided in the following section. Other treatment options will have differing financing mechanisms due to the nature of the borrower, especially if it is a public entity. One of the major challenges in financing the conversion of cesspools will be balancing affordability impacts. The topic of affordability will be explored in a separate, forthcoming technical memorandum (TM02).

This TM also provides an assessment of financial mechanisms used in other states for the funding of cesspool conversion projects; summarizes potential federal and state funding programs, including state of Hawaiʻi funding options, that could be utilized to pay for cesspool conversions; provides a summary of recommendations; and identifies potential next steps.

1.2 Traditional Funding Mechanisms

There are two types of costs associated with cesspool conversions: 1) capital costs required to plan, design, and convert the cesspool to an OSWT system; and 2) re-occurring operational costs required to maintain, operate, and repair the new OSWT system. For projects that connect to centralized systems or decentralized systems, capital costs for the cesspool connection to a sewer or a decentralized system may be funded through a variety of sources that range from traditional funding options, such as revenues from internal user

charges and bond financing, to non-traditional funding sources such as grants, low interest loans, and market-based programs. Operating revenues remaining after operating expenses and debt service obligations have been met can be a significant source of funding for capital expenses or placed in reserves for future projects. In addition, operation and maintenance costs are typically funded through user rates and other recurring annual sources of revenue. Mechanisms available to public utilities include:

- **Pay-as-you-go (PAYGO) financing —** Depending on an agency's existing capital reserves, it can potentially build up its financial capacity to fund expenditures in peak users. Funds are raised through upfront payment of project costs from revenues of existing and new users for future capital improvement projects. It is common for utilities to fund major capital expansions through other methods, particularly bond financing, to avoid the burden that PAYGO's high upfront cash requirement places on rate or reserve funds.
- **Debt financing —** acquisition of funds through borrowing mechanisms (e.g. debt issuance) which enable an agency to lessen the rate payer's upfront burden.
- **Grants and loans —** alternate sources of funds from public agencies at no or minimal interest cost. Examples include federal, state, and local programs that provide funding at zero interest for projects that meet select criteria.
- **Other Mechanisms —** refers to financing through funds obtained from tax credits, purchase agreements, voluntary programs, and trading and offset programs.

Appendix A includes a discussion of each of these mechanisms that traditionally fund centralized or decentralized wastewater treatment systems. Most of these traditional funding mechanisms cannot be used to finance individual residential conversion of cesspools to new OSWT and disposal systems for a variety of reasons including: project fit; eligibility of funding recipient (pubic vs private entity); lack of a dedicated revenue stream; administrative challenges; and state restrictions. However, two traditional mechanisms may potentially be applicable for OSWT systems include: 1) assessment district bonds (if an assessment district can be formed); and 2) federal and state grants and low interest loans (if a mechanism to funnel monies to individual homeowners is established).

1.3 Private Financing Options

It will be a challenge and likely infeasible for financial support to be provided to all cesspool owners for the conversions. Thus, it may be necessary for homeowners to seek private or mortgage loans to pay for the cost of cesspool conversions. There are several private financing options available to homeowners including: personal loans, home equity loans, or the use of personal savings. Given the economic turmoil caused by the global pandemic (COVID-19) in 2020, the current, low interest rates provided by private lending options may be an economical finance mechanism for some cesspool owners. Figure 1.2 shows the historical 30-year fixed rate mortgage interest rate in the United States from April 2, 1971 through July 2, 2020. The lowest interest rate on record is 3.07 percent as of July 2, 2020[3]. The gray shaded areas of the graph indicate U.S. recessions with the latest due to COVID-19. If mortgage rates remain relatively low (in the 3-4 percent range), private loan options are well within the low interest loan (0-6 percent) range of other financing options discussed later in this TM. As there is an increase in private financing options for cesspool conversions, financial institutions may consider developing a specific financing plan for conversions as well as a streamlined application process, as seen with the solar programs. Given the number of cesspools to be converted, financial institutions will need to consider the fiscal ability, as well as staffing needed to issue and manage private loans.

[3] https://fred.stlouisfed.org/series/MORTGAGE30US

Table 1.2 is a summary of the different types of private/mortgage loans that may be used by homeowners to finance their cesspool upgrade costs. The maximum loan amounts and interest rates are subject to change.

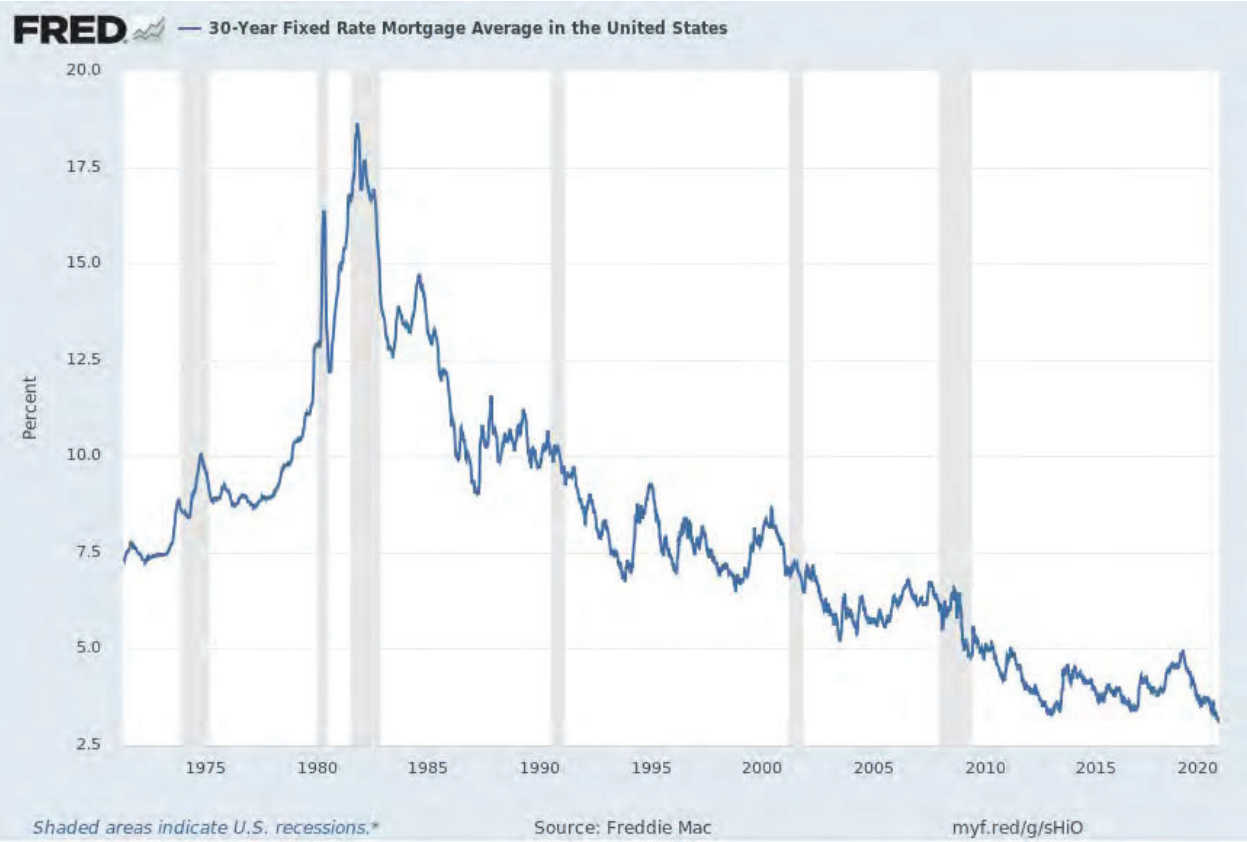


Figure 1.2 30-Year Fixed Rate Mortgage Average in the United States

Table 1.2 Summary of Private Lending Options

Loan Product	Borrowing Power	Notes
Federal Housing Administration (FHA) 203b – Cash out Refinance	Refinance Loan to Value 85%	Rates range from 3.25% - 4.0%
FHA 203K – Rehabilitation	Finance up to $35,000 in Home Rehabilitation	Rates range from 3.25% - 4.0%
FHA 247 – Cash out Refinance Hawaiian Homelands	Up to 85% with documented proposals for work	Rates range from 3.25% - 4.0%
U.S. Department of Housing and Urban Development (HUD) 184a – Cash out Refinance Hawaiian Homelands	Up to 85% no documentation required for proposed work	Rates range from 3.25% - 4.0%
RD- Refinance for Site Work	Restrictions such as income, County lending limits, and type of refinance	Rates range from 3.375% - 4.125%
Veterans Affairs (VA) – Cash out Refinance	Up to 100% of the value	Rates range from 3.25% - 4.0%

Loan Product	Borrowing Power	Notes
Fannie Mae/Freddie Mac – Conventional Cash out Refinance	Up to 80% of the value	Rates range from 3.50% - 4.25%
Lender's Portfolio Cash out Refinance	Up to 80% of the value	Rates range from 3.75% - 4.50%
Home Equity Line of Credit	Up to 85% of the value if a first mortgage is in place. Line Size varies	Interest only for a fixed period of 10 or 15 years with Introductory Rate offered for 2, 3, or 4 years. Rates range from 2.70% - 3.85% for the Introductory Period
Home Equity Loan	Up to 85% of the value if a first mortgage is in place. Line Size varies	Fixed Rate Loan Option Rate 4.50%
Personal Unsecured Loan	Amounts vary depending on Institutions offerings. $35,000 average loan size	Payment depends on Term 36 months with Rates ranging from 7.0% - 14.0% depending upon Credit Score
Personal Flex	Varies by Institution with Line Sizes up to $30,000	Rates range from 11.0% -14.0%
401K Loan	$30,000 - $50,000 with repayment being auto deducted from employee's payroll	Rates range from 4.25% - 5.25% with Loan Terms up to 5 years

1.4 Cesspool Funding Mechanisms in Other States

A review was conducted of funding mechanisms that have been successfully utilized in other states facing similar issues. The ten state programs reviewed were selected based on work previously authorized by the CCWG, identified program successes, as well as in coordination with the Cesspool Conversion Technologies Research. Information was gathered from publicly available, online resources for each state. While each state evaluated maintains websites with pertinent information, it is possible that some information is out of date.

Appendix B includes a discussion of each of the ten states and their funding programs. Table 1.3 summarizes the highlights of the cesspool conversion funding mechanisms of six of these states.

Table 1.3 Summary of State Programs

Program Feature	Delaware	Washington	Rhode Island	New York	Maryland	Massachusetts
Funding Mechanism	Direct Lending	Conduit Lending/Pass Through	Sub-State Revolving Loan	Conduit Lending/Pass Through	Credit and Linked Deposit	Pass Through Lending, Direct Loans and Tax Credits
Type of Financing Assistance Provided	Low Interest Loan	Low-Interest Loan	Low Interest Loans	Grant	Grants and Low Interest Loans	Low interest loans and Tax Credits
Funding Program(s)	• Septic Rehabilitation Loan Program (SRLP) • Septic Extended Funding Option (SEFO) (*if denied SRLP*)	• Local Loan Program (LLP) • Regional On-site Sewage System Loan Program (RLP)	• Community Septic System Loan Program (CSSLP) • Sewer Tie-in Loan Fund (STILF) • (0% interest loans for local sewer connection)	• Septic System Replacement Fund • Counties may have additional programs (e.g. Suffolk County provides an additional grant of $20,000 and low interest loans)	• Bay Restoration Fund (BRF) – Grant • Linked Deposit Program (LDP) – low interest loan	• Community Septic Management Program • Homeowner Septic Loan Program • Tax Credits
Funding Priority/Purpose	Both Programs: Repair or Replace of privately-owned decentralized wastewater treatment systems	• LLP: Repair or replace failing onsite sewage systems • RLP: Abandon septic and connect to sewer	Both Programs: Repair or replacement of substandard or failing septic systems or to replace cesspools with septic systems	Replacement of cesspool with a septic system; installation/ replacement/upgrade of a septic system; or installation of enhanced treatment technologies.	• BRF – WWTP Upgrades to the best available technology for nitrogen removal or to connect to existing public sewer • LDP – Low interest loans for capital improvements to reduce nutrient delivery to the Chesapeake Bay	• Community Septic Management Program Repair, replacement, or upgrade of failed septic systems or the connection to an existing sewer • Homeowner Septic Loan Program Home septic system repairs. • Tax Credits: Septic systems and cesspool upgrades and repairs after January 1997
Funding Source	• Both Programs: – CWSRF Funds – CWSRF Allocation (1% fee charged on CWSRF loans)	• Both Programs: – CWSRF (loan financing) – Centennial Clean Water Fund (administrative costs/loan losses and grants)	Rhode Island Infrastructure Bank (RI Bank) utilizes funds from recycled CWSRF loans	State of New York's State's Clean Water Infrastructure Act 2017 *(including $75 million for Septic System Replacement Fund)*	• BRF – Dedicated fund from Municipal Fees ($2.50 or $5/month); User Fees for OSWT ($60 annual fee) • LDP – Maryland DEP	• Community Septic Management Program CWSRF offers 0% interest via MA Water Pollution Abatement Trust. Trust then provides $5 million a year to municipalities • Homeowner Septic Loan Program Massachusetts DEP
Financial Responsibility	Department of Natural Resources and Environmental Control	• LLP: Program: County serves as Pass Through Entity • RLP: Craft 3	Municipal Agencies apply for a Lending Facility from the RI bank from which to make direct loans to homeowners	New York Environmental Facilities Corporation (EFC) provides funding to Counties/County Health Departments	LDP: Maryland DEP provides participating lender a below-market rate of interest agreement	• Community Septic Management Program Communities are responsible for loans • Homeowner Septic Loan Program Massachusetts DEP
Fund Administrator	First State Community Action Agency	• LLP: County or Local Health Department • RLP: Craft3	Rhode Island Housing and Mortgage Financing Corporation (RI Housing).	Counties/County Health Departments	• BRF: Maryland Water Quality Financing Administration • LDP: Financing Lender executes loans with individual entities and are responsible for administration of program including risk of default	• Community Septic Management Program Local board of Health to local homeowners through Betterment Agreement • Homeowner Septic Loan Program Massachusetts Housing Program

Program Feature	Delaware	Washington	Rhode Island	New York	Maryland	Massachusetts
Amount of Funding	• $1,000 to $35,000 (homeowner) • $250,000 (mobile home parks)	Loan can cover full cost of the conversion project	Maximum of $25,000	50% of cost or maximum of $10,000 per resident	• BRF: Grant of up to $20,000 per household • LDP: Pending financial institution	• Community Septic Management Program – $200,000 to communities to develop Community Inspection Plan/Septic Management Plan – $20,000 grant to first time communities for administrative costs • Homeowner Septic Loan Program $1,000 to $25,000 • Tax Credits: Commonwealth provides a tax credit of up to $6000 over 4 years
Eligibility Requirements	• Residential Owners • Low to moderate income households • Good financial standing/credit (no judgements, collections or serious delinquencies) • Not in bankruptcy • Debt: Income ratio greater than or equal to 41% • New construction on vacant lots are not eligible	• Residential and Commercial owners • New construction on vacant lots are not eligible	• Residential Owners and Non-owner Occupants – Prerequisite: – Approved On-Site Wastewater Management Plan – Municipality is on Project Priority List – Certificate of Approval • Debt: Income ratio greater than or equal to 45% • New construction on vacant lots are not eligible	• Located in participating county/ within a priority geographic area. • Single family, two family and small businesses (design sewage flow < 1,000 gallons per day (gpd) and seasonal or secondary homes may be eligible. • Cannot have any outstanding or open real property tax liens. • New construction on vacant lots are not eligible	• Residential Owners • Credit worthiness of application per lenders underwriting criterion. • New construction on vacant lots are not eligible	• Community Septic Management Program Project on a community's priority list – Prioritized based on environmental/public health impacts, income and funding needs. • Homeowner Septic Loan Program Residential owner with up to 4 family homes
Secured by	Mortgage lien on property	Upon transfer or sale of property, loan to be repaid or transferred to new owner.	Mortgage lien on property	N/A	Bank assumes all risk of default/State and MDE is not liable to reimburse bank for loses or expenses associated with program	• Betterment Agreement with homeowner • Municipal lien on property if default

Program Feature	Delaware	Washington	Rhode Island	New York	Maryland	Massachusetts
Financial Loan Terms	• SRLP: • 20 years loan term • Interest ranges 3%-6% (based on income) • SEFO • 20-year loan • 0% interest rate • No monthly payments.	• 15-year loan term • Interest rate 1.99%-4.99% • Payment options include: No monthly payment, monthly interest only or monthly principal plus interest (based on income and occupancy)	• 10-year loan term • $300 loan origination fee • 1% annual serving fee on outstanding balance	• Grants provided on a reimbursement basis • Property owners are initially responsible for the total cost of their septic system project.	• BRF: – Grants provided on a reimbursement basis – Property owners are initially responsible for the total cost of their septic system project. • LDP: – Terms based on financial lending agency requirements. – Lending institution passes the below-market rate of interest to the borrower; may add fees to cover costs	• Community Septic Management Program – Interest rate ranges between 3% -5% based on affordability – 15-20-year loan term – Repaid through the Community's tax collection (property tax bill line item) – If the property is sold, the payments is assumable by the buyer of a property. • Homeowner Septic Loan Program – 3-20-year loan – Interest rates between 3%-5% based on family size, income and market area. – Min. monthly payment is $27 – Due in full upon sale, transfer or refinancing of the first mortgage
Pre-Payment Penalty	No	No	No	No	No	No
Reimbursement Program	Yes	Yes	Yes	Yes	Yes	Yes
Eligible Costs	Site evaluations, design, permits, impact and connection fees, electrical construction costs, abandonment of septic systems and closing/ recording costs.	Design, permitting, installation of new septic system, maintenance and reserve for ongoing inspections and repairs.	Engineering and system replacement costs	Engineering, construction and system costs	Capital facility, user connection, master plumbing charges, and the purchase of cost-effective nitrogen, phosphorus, or sediment loading reductions	Engineering, Construction and System Costs
Income Requirement	Moderate to low income homeowners,	• No income restrictions • Favorable rates/terms for lower income households	No income restrictions	No income restrictions	• BRF: No income restrictions • LDP: No income restrictions	• Community Septic Management Program No income restrictions • Homeowner Septic Loan Program No income restrictions

1.4.1 Summary/Findings

Recognizing that many residents could not afford to pay for the cost associated with the conversion of individual cesspools, other states have established financing mechanisms to incentivize residents to convert. The states reviewed utilized similar funding mechanisms; however the state programs are tailored to address specific demographic, geography, and selected OSWT systems, thereby helping to achieve the state's program goals. Some programs had greater success than others, and many developed programs in consideration of the successes and lessons learned from other state programs. Key take a ways from other financing programs include:

- Financial Programs:
  - Eight states have created robust financial programs which provide low to no interest loans and incentives to ease the high cost of upgrading cesspools to AIE technologies.
  - The states of New York, Maryland, and Rhode Island offer grants and low interest loans to individual homeowners.
  - Massachusetts provides an ongoing tax credit program as an incentive.
  - Texas provides competitive grants to support applied research of OSWT systems, which is funded from a fee collected for each permit issued.
  - In most states, homeowners are required to upgrade the OSWT system upon sale or property transfer.
- Funding Mechanisms for Cesspool Conversion Financing Programs:
  - Cesspool financing programs were funded through EPA, CWSRF or state funds, with CWSRF funding being the primary source.
    - The primary CWSRF mechanisms utilized to fund individual homeowner programs were Conduit Lending or Linked Deposits.
    - Most CWSRF programs utilize a pass-through entity (e.g. county, local governing body, financial institution or approved non-profit) to administer the loans from loan application to loan repayment.
  - The pass-through entity was ultimately responsible for the loan repayment to the CWSRF program but had mechanisms established to recover loans if there was a default.
  - Maryland's Bay Restoration Fund is unique in that they charge an annual user fee to OSWT systems and a monthly sewer connection fee to cover the program administration and grant costs.
- Program Administration:
  - Several programs have established partnerships with non-profits, counties, or financial institutions to serve as the conduit agency responsible for the administrative loan activities, thereby reducing the administrative burden on the states' CWSRF program.
  - The long timeline for program implementation also required that states establish a sustainable financing mechanism including sources and revenue streams to cover program administration and other costs. Most programs recovered costs through the interest rate on the loan; one program utilized state funds to cover the administrative costs of the program.
- Eligible Project Costs
  - Eligible project costs include converting failing or existing cesspool systems or connecting to sewer systems.
  - Eligible costs include planning, design, implementation/construction, and permit costs.
  - Funding was not applicable to new developments.

- Project Eligibility Criteria
  - All programs required that the applicant have good standing credit and that the loan be secured by a mortgage lien or some other similar mechanism. Two programs provided alternative funding for applicants who could not qualify due to credit issues.
  - Individual homeowners were required to secure approval of proposed AIE technology and design prior to start of construction in order to be eligible to receive financing. Approval was typically provided by the county or local permitting agency.
  - Most programs did not have an income requirement; however, several provided incentives for disadvantaged communities (DACs), low income households, or the elderly.
- Programs Funding:
  - Individual homeowner loans ranged from $1,000 to $35,000.
  - Interest rates ranged from no interest loan to low interest (3-6 percent) to individual homeowners.
  - Loan period ranged from 10-20 years or the useful life of the system.
  - There was no pre-payment penalty for any program.
  - In several programs the homeowner was required to repay the loan upon sale or transfer of property.
- Disbursements:
  - Key issues included the timing of disbursements as well as method of disbursement.
  - The majority of programs required construction to be completed prior to the disbursement of funds, therefore homeowners were required to pay the project costs upfront and then be reimbursed.
  - Method of monetary disbursements varied with most programs directly compensating the homeowner. In two programs, the states directly compensated the contractor for construction costs.
  - Repayment mechanisms included monthly payments or annual line item in property tax bill.

As the CCWG develops the recommended financing approach to the cesspool conversion program, it is recommended that the further outreach and vetting be conducted of identified state-wide funding mechanisms - especially programs in the states of Delaware, New York (Suffolk County), Washington, Maryland, and Massachusetts.

1.5 Federal and State Low Interest Loans and Grants for Cesspool Conversions

Available federal, state, and local funding sources should be considered as potential funding mechanisms to help reduce the overall costs on individual homeowners in the near-term. However, it is important to recognize that with federal and state budget constraints and an overall increased interest in grants and low interest loan programs, sources of low interest loan financing and grant funding are limited and/or are more competitive to secure especially for non-point source projects.

Larger funding programs generally provide some of the best opportunities to obtain sources of funding (e.g. Water Infrastructure Finance and Innovation Act [WIFIA], CWSRF, USDA, etc.). While these programs provide relatively large sources of grant funding, there are limitations. There are numerous factors that should be considered in the pursuit of low interest loan and grant funding, including:

- **Project Specific.** Most programs target a specific type of project or purpose. For a project to be competitive, it needs to meet the intent of the program.
- **Funding Recipient.** Most federal and state programs require that the funding recipient be a public entity or in some cases a qualified non-profit. *For the cesspool conversions, this may require*

partnerships or public entities serving as a conduit agency (resulting in associated increased administration costs) to funnel funding to private homeowners.

- **Established Application Timelines.** Application timing is critical for most grant and loan programs. While some funding agencies accept applications on a rolling basis, many have prescribed submission dates. Grant tracking is critical to align an agency for a funding program.
- **Project Readiness.** Availability of shovel-ready projects is a key consideration for several programs. For example, potential COVID-19 stimulus monies are anticipated to prioritize projects that are ready to be implemented and help kick start the economy.
- **Funding Restrictions.** Most programs do not allow for the retroactive funding of design and construction work, and some programs will only fund activities that are conducted post project approval. *For the cesspool conversions, this may be a consideration for DOH to ensure the technologies that are implemented comply with state performance requirements.*
- **Does not cover the full cost of the project.** Most funding programs do not cover the full cost of the project, requiring the sponsoring entity or funding recipient to provide a minimum cost share ranging from 50-60 percent of the eligible project costs. *This may be another challenge to the conversion of cesspools, as many residents may not even have the financing to cover a portion of the project costs.*
- **Funding award is NOT a promise of grant reimbursement.** Most loans and grants are reimbursements and not cash up front. *This requires that the funding recipient has a source of funding available for the construction of the project, and may be a significant hurdle to cesspool conversions in Hawai'i.*

1.5.1 Potential Grant and Loan Funding Sources for Hawai'i

Current funding options for cesspool conversions for individual homeowners or groups of homeowners are limited and typically consist of property assessments, tax credits, and low-interest loans and grants from various federal, state, and community-based agencies. The following is a summary of federal, state, and county funding options that can be used to fund cesspool conversion projects, but many require a public entity be the primary applicant. Appendix C includes a discussion of each of the federal and state programs presented below. Table 1.4 provides a summary of the key aspects of each of the funding programs.

Table 1.4 Summary of the Federal, State and Local Funding Programs, Models and Initiatives to Consider for the Conversion of Cesspools

Program	Agency	Type	Description
Federal Funding Programs			
Clean Water State Revolving Fund Program (CWSRF)	EPA	Low Interest Loan	CWSRF program is a federal-state partnership that provides communities with a source of low-cost financing for the construction, repair and rehabilitation or replacement of decentralized wastewater treatment systems. There are mechanisms by which the CWSRF funding can be funneled to individual residential owners for cesspool conversions. The state of Hawai'i's CWSRF program details are provided below under State Funding Programs. *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
Water Infrastructure Finance and Innovation Act (WIFIA)	EPA	Low Interest Loan	Financing mechanism for large water/wastewater/infrastructure projects • Project cost > $20 million or $5 million for small community projects (25,000 of fewer) • Eligible projects include a single project, combination of projects or program of projects. • Eligible costs include planning, design and construction activities. • Provides for up to 49% of the project costs ; 51% to be provided by applicant (funds can include entity financing, bonds, SRF, grant, etc.) • Total amount of federal funding <80% • Single Fixed Rate established at loan closing (rate of securities of a similar maturity + basis point (0.01%)) • Loan term is 30 years (or useful life of project). • Payments can be deferred 5 years • Reserve requirement – 1-year repayment • Customized repayment schedule • Application fees apply (average $300,000-$500,000) • Compliance with federal requirements (National Environmental Policy Act [NEPA], AIS, Davis Bacon, etc.) • Project completion in 5 (preferred). *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
Non-Point Source (NPS) Section 319 Program	EPA	Grants	Grants to states to control NPS from variety of sources including agricultural runoff, mining activities, and onsite septic systems. States are required to use 50% of their allocation for watershed projects, and the remaining funds can be used for non-point source projects including cesspools. In Hawai'i, the NPS grants administered through Hawai'i's Clean Water Branch Polluted Runoff Control Program (319 Grant Program). • For implementation projects that control polluted runoff and improve water quality; Projects typically implement a component of a Watershed Management Plan, TMDL or action plan. • Recipient may include counties, educational institutions, state agencies, non-profit entities, watershed groups, for profit organizations and environmental groups. • Program funding varies by year ($600,000 for FY 2018) • Grant match requirement 25% non-federal match • No limit on award. • Prefer projects to be completed with 36 months of NTP. *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*

Program	Agency	Type	Description
Title XVI/WIIN Water Reclamation and Reuse	USBR	Grant	• Eligible projects include recycled water feasibility, demonstration, and construction projects. • Provides 25% construction costs • Maximum grant limit of $20 million. • Requires Congressional Authorization • USBR approved feasibility study, • Comply with NEPA, • Demonstrate the ability to pay the remainder of the construction costs. *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
Drought Resiliency Projects	USBR	Grant	• Funding is for implementation projects building long-term resiliency to drought. • Types of projects include moving pipelines, small recycling, storage reservoir construction, and projects that increase flexibility in drought. • Two Funding: Group 1 $300,000 (complete in 2 years); Group 2 $750,000 (complete in 3 years). • 50% cost share requirement. *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
WaterSMART Small-Scale Water Efficiency Projects	USBR	Grant	• Eligible projects include small on the ground implementation projects (such as canal lining, supervisory control and data acquisition [SCADA], flumes, flow metering, turf irrigation) to support water planning. • The total project cost to be capped at $150,000. • 50 percent cost share. • Total Federal funding limit of $75,000. *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
WaterSMART Water and Energy Efficiency Grants	USBR	Grant	• Eligible projects include projects that result in quantifiable and sustained water savings, increase renewable energy use and improve energy savings, and support broader water quality sustainability benefits. • Requires a 50% cost share. • Two funding limits: – $300,000 (typically for projects completed within a year). – Up to $1,000,000 (for projects to be completed in 3 years). *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
Cooperative Watershed Management Program	USBR	Grant	**Watershed Group Development and Watershed Restoration Planning**: • Provides funding for the development of watershed groups, watershed restoration planning, and watershed management project design (Phase I). • Applicant must be a public entity. • Provides up to $50,000 per year for a period of up to two years (total of $100,000) with no non-Federal cost-share required. **Implementation of Watershed Management Projects**: • Provides cost-shared financial assistance to established watershed groups to implement watershed management projects. • Up to $300,000 per project. • Applicants must contribute at least 50% of the total project costs. *Programs provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*

Program	Agency	Type	Description
Public Works and Economic Adjustment Assistance Programs	U.S. Department of Commerce - Economic Development Administration (EDA)	Grant	• Provides grants for public works projects, including wastewater and stormwater projects that promote economic development. • Provides a 50% percent match in funds up to $5 million based on the number of permanent jobs created by the proposed project (for every job created, the funding is $10,000). • Projects need to be completed within 5 years. *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
Water and Waste Disposal Guaranteed Loans and Grants (water & sewer)	USDA Rural Development	Low Interest Loan	Predevelopment Planning Grants • Grant assistance to low-income communities for initial planning efforts. • Maximum grant amount of $30,000 or 75% of the predevelopment planning costs. • Requires a 25% cost share from applicant or third-party sources. Water and Waste Disposal Loan and Grant Program – • Direct loan/grant and loan guarantees for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and stormwater drainage. • Eligible applicants: state/government entities, private non-profits and federally recognized tribes. • Populations of 10,000 or less. • 40-year loan term (maximum useful life of the facilities). • The interest rate is based on the need for the project and the median household income of the area to be served. *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
Rural Housing Service Program	USDA Rural Development	Low Interest Loan	Provides assistance through home repair loans and grants to remove health and safety hazards or make a home accessible for household members. • Funds can be used to repair or replace septic systems and other health and safety hazards. • Loans are available up to $20,000 at a one percent fixed interest rate • Loan term is 20 years. • Seniors age 62 and older may be eligible for a loan and grant combination to make needed repairs and improvements. • The maximum lifetime grant amount is $7,500. • Must be located in a rural community and income <50% of median income. *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
Rural Economic Development Loan and Grant Program	USDA Rural Development	Low Interest Loan and Grant	Provides zero-interest loans to local utilities to pass to local businesses for projects that will create and retain employment in rural areas. Grants of up to $300,000 are provided to the local utility which establishes a Revolving Loan Fund (RLF) from which loans are provided to local sponsors. • Funding for up to 80% of project costs. • Eligibility is based on household income < 50% of the area median income and located in a rural community. *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
Rural Water Loan Fund (RWLF)	National Rural Water Assoc.	Loan *Provides reimbursement for incurred cost*	RWLF is a funding program specifically designed to meet the unique needs of small water and wastewater utilities. The RWLF was established through a grant from the USDA/RUS, and repaid funds used to replenish the fund and make new loans. • Provides low-cost loans for short-term repair costs, small capital projects, or pre-development costs associated with larger projects. • Loan amounts may not exceed $100,000 or 75% of total project cost, whichever is less. • Loan offers below market interest rate. • Maximum repayment period of 10 years. *Program provides a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*

Program	Agency	Type	Description
CDBG Program	US Department of Housing and Urban Development	Grant	Entitlement and Non-Entitlement Grants: Program offers both entitlement and non-entitlement grants to low to moderate income communities to meet housing and community development needs including public facilities. Eligible activities include construction of public facilities and improvements, such as water and sewer facilities, and streets, public services, activities related to energy conservation and renewable resources, etc. Honolulu Field Office directly administers the CDBG Program for non-entitlement counties in the State of Hawai'i including Hawai'i, Kaua'i and Maui. Section 108 Loan Guarantee Program - Provides CDBG https://www.hudexchange.info/programs/cdbg/recipients the ability to leverage their annual grant allocation to access low-cost, flexible financing for economic development, housing, public facility, and infrastructure projects. Communities can use Section 108 guaranteed loans to either finance specific projects or to launch loan funds to finance multiple projects over several years. The loan term is 20 years. *Programs provide a reimbursement for costs incurred. Requires applicant to provide initial outlay of cash for project.*
State Funding Programs			
State Income Tax Credit	State of Hawai'i Department of Health	Credit	A State income tax credit is available for upgrading to a septic system or aerobic treatment unit, or connecting to a sewer, • Qualified cesspools depending on their location. Qualified cesspools are cesspools that are: located within 200 feet of a shoreline, perennial stream or wetland, or within a source water assessment program area. • A taxpayer may apply for a tax credit up to $10,000 for the documented expenses of upgrading each qualified cesspool. • Tax credits are available for five years, starting in tax year 2016, January 1, 2016, and ends in tax year 2020, December 31, 2020. • $5,000,000 total cap on the credits available for each tax year. Legislation to extend the tax credit did not pass in 2020.
CWSRF	State Department of Health	Loan	Financing for the construction of water pollution control projects necessary to prevent contamination of groundwater and coastal water resources and to protect and promote the health, safety and welfare of the citizens of the State. Provides low interest loans to county and state agencies to construct point source and nonpoint source water pollution control projects. • Covers planning, design and construction activities. • Loan proceeds fund up to 80 percent of project costs and require a 20 percent non-federal match. • Loan term of 30 years. • Annual interest rate of 0.25 percent and semi-annual loan fee of 0.5%. • Green Project Reserve of 10 percent which is reserved to fund green infrastructure. FY 2019 set aside was approx. $1.23 million.
Hawai'i Cesspool Remediation and Conversion Loan Program *(proposed)*	State SB 221	Loan	Enacted in July 2019, this bill authorizes the wastewater departments of all counties to offer low-interest loans for the upgrade or conversion of cesspools in each county to aerobic treatment unit systems. The loan program shall include an on-bill financing option supported by funding from the water pollution control revolving fund.
Environmental Infrastructure Loan Program	Rural Community Assistance Corporation (RCAC)	Loan	• Eligible projects include water, wastewater, solid waste and storm water facilities that primarily serve lower-income rural communities. • Public agencies, tribal governments, and nonprofits in rural populations of 50,000 or less in Hawai'i are eligible to apply. • Feasibility, pre-development, and construction phases are eligible. • Max for construction funding is $3M. • 20 years repayment. • 5% interest for first 10 years.
Fresh Water Initiative	Hawai'i Community Foundation (HCF)	Grant	The Initiative is supported by a funding partnership of 10 funders and is designed to proactively address and resolve water supply issues. HCF is specifically interested in organizations proposing to build or expand their own capacity to: 1) Lead a network of water entities; 2) Lead implementation around water conservation; 3) Lead implementation around water recharge; and/or 4) Lead implementation around water reuse in the Hawaiian Islands.
Fresh Water Initiative	Ulupono Initiative (Ulupono)	Grant/Other	Ulupono typically focuses on several investments of $1 million to $3 million in key mission projects: food, energy and waste in Hawai'i. UI identifies key partners, leverage points and linkages to determine where the most impact can occur. The initiatives goal is to infuse investment capital, or grants, along with collaboration and guidance to help our partner organizations find success in achieving impact.

Program	Agency	Type	Description
Green Energy Money $aver (GEM$) On-Bill Program	State of Hawai'i Department of Business, Economic Development & Tourism (DBEDT) Hawai'i Green Infrastructure Authority	On-Bill Financing Program	The Hawai'i Green Infrastructure Authority (HGIA) was created by the Legislature to make renewable energy investments accessible and affordable to Hawai'i's consumers. HGIA was capitalized through the issuance of a Green Energy Market Securitization (GEMS) bond, an innovative municipal bond financed mechanism allowing the advance of the State's goal of achieving 100% renewable portfolio standard in the electric sector by 2045. Some of the programmatic areas of the HGIA program, especially related to the GEM$ program can be used should cesspool remediation financing move towards a similar billing program.
Property Assessed Clean Energy (PACE)	State/ County/ Local	Financing Assessment	PACE programs are used by local governments to allow property owners to finance energy efficiency and renewable energy improvements (such as solar) to pay for the up-front cost of energy or other eligible improvements on a property and then pay the costs back over time through a voluntary assessment. By enabling a PACE program, local governments can greatly facilitate a commercial or residential property owner's ability to bundle energy efficiency and renewable energy investments to make comprehensive upgrades to their properties. A PACE program could be modified as a viable financing option for consideration to allow a property owner to pay back the costs of their cesspool remediation over time at an agreed upon interest rate and length of loan terms. Funding would occur through private lenders such as private banks or the issuance of municipal bonds.
Community Facilities District (CFD) Special Improvement District (SID)	State/ County/ Local	Financing Assessment on property	CFDs or SIDs, are independent, local special-purpose financing districts that levy taxes and assessments and issue bonds to provide infrastructure to communities.
HB 2151, HD 1 Relating to Cesspool Conversion	Department of Health	Grant	*This proposal is current moving through the State legislature.* Establishes a cesspool compliance pilot grant project to assist low- and moderate-income property owners with the costs of upgrading or converting a cesspool. Applies to cesspools identified as failing by the Department of Health.
Water Quality Program	The Hanalei Initiative	Community Group	The Hanalei Initiative, a collective group of citizens working for the betterment of Hanalei and the North Shore. Water quality is one of the main focus areas: Through potential DOH grant funding and private capital, the Hanalei Initiative is exploring financing options for converting cesspools to aerobic system conversions that actually treat water on site.
Hanalei Cesspool Conversion	Hanalei Watershed Hui	Community Group	Program provides funding to help pay for the replacement of cesspools, with a nonpolluting Advanced Treatment Unit, for residents living between Waioli and Hanalei Rivers and have a cesspool.

1.5.2 Federal Funding

The following is a summary of federal grant and low interest loan programs that may be viable financing opportunities for the cesspool conversions.

1.5.2.1 Environmental Protection Agency

The following sections summarize the applicable funding mechanisms supported by the EPA.

Clean Water State Revolving Fund Programs

The CWSRF program, a federal-state partnership, provides communities with a source of low-cost financing for a wide range of water quality infrastructure projects. One of the CWSRF program eligibilities includes the ability to provide financial assistance for the construction, repair and rehabilitation or replacement of decentralized wastewater treatment systems. CWSRF funding can be provided to public entities, such as municipalities, county governments, and state agencies, private, and non-profit organizations.

Applicability/Considerations for Cesspool Conversions:

- *See discussion under section 1.5.3.*

Water Infrastructure Finance and Innovation Act

The WIFIA program accelerates investment in water and wastewater infrastructure by providing low interest financing for planning/design and construction of large dollar value projects. WIFIA works separately from, but in coordination with, the CWSRF programs in each state.

Applicability/Considerations for Cesspool Conversions:

- *The program is a viable funding mechanism for cesspool conversions.*
- *Applicant will need to be either the CWSRF program, a public entity, approved non-profit or a conduit agency to apply and disburse funds to individual homeowners.*
- *Program provides low-interest loans which will require repayment.*
- *Minimum project cost is $20 million for large communities or $5 million for small communities (population<25,000). This will require packing of cesspool conversion projects or may be more appropriate for financing decentralized systems.*
- *Funding program provides loans for up to 49 percent of projects costs, requiring the applicant to provide the match financing of 51 percent.*
- *Loan is issued as a disbursement for costs incurred, so will require homeowner to initially pay for the conversion.*
- *Requires compliance with federal and state requirements.*

Non-Point Source Section 319 Grants

Under section 319 of the Clean Water Act, EPA provides grants to states to control nonpoint sources (NPS) of pollution from a variety of sources such as agricultural runoff, mining activities, and malfunctioning onsite septic systems. In Hawaiʻi, NPS grants are administered through Hawaiʻi's Clean Water Branch Polluted Runoff Control Program (PRC), which is under DOH. In the *2015-2020 Hawaiʻi Nonpoint Source Management Plan*, cesspool wastewater was identified as a source of non-point source runoff impacting the state's resources and therefore may be eligible for NPS Grant funding.

Applicability/Considerations for Cesspool Conversions:

- *May be a viable funding mechanism for near-term cesspool conversions.*
- *Applicant would need to be either a public entity, approved non-profit or watershed group.*

- *Grant is issued as a disbursement for costs incurred, so will require homeowner to initially pay for the conversion.*

1.5.2.2 United States Department of Interior, Bureau of Reclamation

The USBR WaterSMART program provides cost shared financial assistance to states, tribes and local governments to help them plan and implement projects to increase water supply through investments to modernize existing infrastructure. WaterSMART funding opportunities include: Title XVI/Water Infrastructure Improvements for the Nation (WIIN) grants, Water and Energy Efficiency Grants, Drought Program, Basin Study, Desalination, and Cooperative Watershed Management Programs (CWMP). These programs were evaluated for applicability for the cesspool conversion project and do not appear to be feasible at this time as viable funding options, except for the CWMP.

United States Department of Interior, Bureau of Reclamation – Cooperative Watershed Management Program

Through the CWMP, Reclamation provides funding to watershed groups to encourage stakeholders to form local solutions to address water management needs. Funding is provided for the development of watershed groups, watershed restoration planning, and watershed management project design (Phase I). A second program, Implementation of Watershed Management Projects, provides funds to established watershed groups to implement watershed management projects that address critical water supply needs and water quality concerns. As part of Phase I activities, applicants may use funding to develop bylaws, a mission statement, complete stakeholder outreach, develop a watershed restoration plan, and watershed management project design.

Applicability/Considerations for Cesspool Conversions:

- *May be a viable program for the organization of watershed groups and the development of watershed management plans.*
- *Eligible applicants include states, Indians, tribes, local and special districts, local government agencies, and non-profit organizations.*
- *Grant is issued as a disbursement for costs incurred, so the watershed group will have to cover the expenditures and then be reimbursed.*

1.5.2.3 United States Department of Commerce – Economic Development Administration

Public Works and Economic Adjustment Assistance Programs

The EDA provides grants for public works projects provide grant funding for public works projects, including wastewater and stormwater projects that promote economic development, through its Public Works and Economic Adjustment Assistance Program. Financial support is provided for up to 50 percent in matching funds (up to $3 million) based on the number of permanent jobs created by the implementation of the proposed project.

Applicability/Considerations for Cesspool Conversions:

- *May be a viable program for the cesspool conversions if it can be demonstrated that the project will result in permanent job generations.*

1.5.2.4 United States Department of Agriculture

Water and Waste Disposal Loan and Grant Program

The USDA provides funding directed at low-income and or small water/wastewater utilities. USDA provides Predevelopment Planning Grants which assist low-income communities with the initial planning and development of applications required for USDA Development program. The Water and Waste Disposal Loan

and Grant Program provides direct loan/grant and loan guarantees for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and stormwater drainage.

Applicability/Considerations for Cesspool Conversions:

- *May be a viable funding mechanism for cesspool conversions in rural communities or towns (population of less than 10,000 people).*
  - *Applicants include most state and government entities, private non-profits, and federally recognized tribes.*
  - *Grant is a disbursement for costs incurred, so it will require homeowner to initially pay for the conversion.*

1.5.2.5 Rural Housing Services Program

The Rural Housing Service Program provides assistance through home repair loans and grants to remove health and safety hazards or make a home accessible for household members.

Applicability/Considerations for Cesspool Conversions:

- *Source may be a viable funding mechanism for rural areas to help cover planning costs associated with the cesspool conversions.*
  - *Eligibility requirement includes rural and towns with populations of 10,000 or less.*
  - *Program eligibility is based on household income that cannot exceed 50 percent of the area median income and the property must be located in a rural community.*
  - *Funds can cover all upfront and construction costs, including septic system designs, permits and installations.*
  - *Funding is a disbursement for costs incurred, so will require homeowner to initially pay for the conversion.*

1.5.2.6 Rural Economic Development Loan and Grant Program

The Rural Economic Development Loan and Grant program provides funding for rural projects through local utility organizations that support economic development. USDA provides zero-interest loans to local utilities which they, in turn, pass through to local businesses (ultimate recipients) for projects that will create and retain employment in rural areas.

Applicability/Considerations for Cesspool Conversions:

- *Program may be a viable funding mechanism for cesspool conversions in rural areas.*
  - *Program eligibility is based on household income that cannot exceed 50 percent of the area median income and the property must be located in a rural community.*
  - *Loan or grant is a disbursement for costs incurred, so will require homeowner to initially pay for the conversion.*

1.5.2.7 United States Department of Housing and Urban Development – Community Development Block Grants (CDBG)

The HUD awards discretionary funding through various programs including the CDBG program.

CDBG Non-Entitled Counties in Hawai'i Program

HUD administers the Non-Entitled CDBG Program in Hawai'i and allocates funds on a formula basis using population, poverty and housing overcrowding as a basis for allocating funds. The Non-Entitled CDBG Grants in Hawai'i offer a source of funding to benefit community needs in but not limited to economic development, housing rehabilitation, public facilities, and construction or installation for the benefit of low-

to moderate-income persons. In Hawaiʻi, three counties qualify for this program - Hawaiʻi, Kauaʻi and Maui. Many of the programs are similar to that of the entitlement program with grants for community development activities directed at neighborhood revitalization, infrastructure, economic development and improved community facilities and services.

Applicability/Considerations for Cesspool Conversions:

- *Source maybe a viable funding mechanism for the conversion of cesspools if the three eligible counties agree to utilize all or a portion of their CDBG funds for this purpose.*
  - *Non-entitled communities are defined as cities with a population of less than 50,000 and counties with populations less than 200,000.*
  - *Requires a Consolidation Plan to the Honolulu office to be considered eligible.*
  - *Funding is a disbursement for costs incurred, so will require homeowner to initially pay for the conversion.*

Section 108 Loan Guarantee Program

Section 108 Loan Guarantee Program[4] provides CDBG recipients the ability to leverage their annual grant allocation to access low-cost, flexible financing for economic development, housing, public facility, and infrastructure projects. Communities can use Section 108 guaranteed loans to either finance specific projects or to launch loan funds to finance multiple projects including economic development, housing, public facilities, infrastructure, and other physical development projects, including improvements to increase resilience against natural disasters.

Applicability/Considerations for Cesspool Conversions:

- *Source may be a viable funding mechanism for the conversion of cesspools if the three eligible counties agree to utilize all or a portion of their CDBG funds for this purpose.*
- *Loan is a disbursement for costs incurred, so will require homeowner to initially pay for the conversion.*

1.5.3 State Funding Options

The following is a short discussion on several state grant and low interest loan programs that may be viable financing opportunities for the cesspool conversions. The focus of the funding options review was limited to those options available for individual homeowners or groups of homeowners to finance OSWT systems and typically consist of property assessments and low-interest loans and grants from various state and community-based agencies.

Hawaiʻi State Department of Health Clean Water State Revolving Fund Program

The CWSRF program is a federal-state partnership that provides communities with a source of low-cost financing for a wide range of water quality infrastructure projects. With the passage of the 2014 Water Resources Reform and Development Act (WRRDA) Amendments, the CWSRF program eligibilities were greatly expanded, including the ability of the program to provide assistance for the construction, and repair or replacement of decentralized wastewater treatment systems that treat municipal wastewater or domestic sewage. In addition, CWSRF funding can be provided to public entities, such as municipalities, county governments, and state agencies, and through various mechanisms funding can be provided to private and non-profit organizations.

[4] https://www.hudexchange.info/programs/cdbg/

The CWSRF loan assistance program has flexibility and can set the conditions for loan assistance, which can be exceptionally helpful in financing nontraditional eligibilities, such as cesspools, including:

- Loan maturities can range up to 30 years or useful life of the project.
- Repayment schedules can be structured to meet the needs of the borrower.
- Interest rates can vary from market rates to zero percent.
- Ability to provide lower interest rates to DACs.
- Repayment source does not have to be the project itself; any dedicated source of revenue can be used to repay a non-point source loan.

It is estimated that $5 million per year is the maximum financing that can currently be obtained through the CWSRF program for cesspool conversions. This level of funding represents less than 10 percent of the average annual cost of all cesspool conversions over the 30-year period. In addition, distribution of these funds to individual homeowners will place a significant burden on the DOH, which currently does not have the staff nor the administration capabilities to review and process individual applications, disperse the funds, and conduct follow-up payment collection. Additional support with funding and finance applications and management from counties, financial institutions, or non-profits may be required.

Applicability/Considerations for Cesspool Conversions:

- *The program is a viable funding mechanism for cesspool conversions; however, the administrative workload on CWSRF staff will need to be addressed.*
- *Applicant would need to be either a public entity, such as the counties, financial institution, approved non-profit, or other conduit agency to disburse funds to individual homeowners.*
- *Loan is issued as a disbursement for costs incurred, so will require homeowner to initially pay for the conversion.*
- *Requires compliance with federal and state requirements.*

Appendix D includes more information on potential CWSRF funding mechanisms for non-traditional projects.

Hawai'i Rural Community Assistance Corporation (RCAC)

RCAC provides low interest loan financing for feasibility, pre-development, and construction projects. Feasibility efforts are typically not more than $50,000 and a typical term is 1 year. Pre-development projects such as engineering, legal, and bond counsel efforts are typically not to exceed $350,000 and the term is 1 year. Maximum loans for construction funding are $3M. Loan terms are up to 20 years; 5 percent for the first 10 years and subject to change for longer term loans. Loan fees are 1 percent.

RCAC has funded water projects on Maui and O'ahu.

Applicability/Considerations for Cesspool Conversions:

- *This a viable funding program for cesspool conversions for low income rural communities.*
- *Applicant would need to be a public agency, tribal governments, or nonprofits in Hawai'i.*
- *Individual homeowners will likely need to create SIDs to apply for this source of funding.*
- *Loan is issued as a disbursement for costs incurred, so will require homeowner to initially pay for the conversion.*

Hawaiʻi Rural Water Association (Rural Water Loan Fund)

This state association is a chapter of the Rural Water Association and provides funding to infrastructure projects targeted at replacing equipment, providing system upgrades and completion of small projects including energy efficiency, sustainability and disaster recovery projects.

Applicability/Considerations for Cesspool Conversions:

- *This a viable funding program for rural communities. However, individual homeowners will likely need to create a SID to apply for this source of funding.*
- *Loan is issued as a disbursement for costs incurred, so will require homeowner to initially pay for the conversion.*

Proposed Hawaiʻi Cesspool Remediation and Conversion Loan Program

State SB 2850/HB2540 introduced legislation in 2018 that would create a specific program for cesspool remediation and conversions. This program is envisioned to provide low-interest loans to cesspool owners for the upgrade or conversion of cesspools to ATUs in each county. The loan program would include an on-bill financing option supported by funding from the water pollution control revolving fund. In 2019 SB 221 was passed to establish a similar loan program, effective July 2019. This program was to be implemented through the counties in coordination with DOH.

Applicability/Considerations for Cesspool Conversions: It is not clear whether this program has been implemented.

Office of Hawaiian Affairs Malama Loans

The mission of the Office of Hawaiian Affairs (OHA) is: "To enhance access for all persons of native Hawaiian ancestry to credit, capital and financial services and skills so as to create jobs, wealth, and economic and social well-being for all the people of Hawaiʻi." To support their mission, OHA provides loans and grants for native Hawaiian businesses and individuals.

The Malama Home Improvement Loan is available in amounts ranging from $2,500-$100,000. Loans over $20,000 must be secured by non-real estate assets. Current terms are 5-6 percent interest and up to a 7-year loan period. Loan applications must include: proof of Hawaiian ancestry and Hawaiʻi residency, contractor's estimate of the work, 2 years of federal tax returns and W-2s, and 1 month of current pay stubs.

While this program has limited eligibility, i.e. not all cesspool homeowners are native Hawaiian, it may be a financing option for those who do qualify. The state may consider evaluating funding options tied to native Hawaiian ancestry through organizations like Bishop Estate and the Department of Hawaiian Home Lands to assist the native Hawaiian community. This approach could already be available through federal programs such as HUD.

1.5.4 Hawaiʻi Cesspool Tax Credits, State Income Tax Credit (Act 120)

Hawaiʻi currently provides a state income tax credit for qualified cesspool owners upgrading to a septic system, ATU, or connecting to a sewer. Qualified cesspools are cesspools that are: located within 500 feet of a shoreline[5], perennial stream or wetland[6], or within a source water assessment program area[7]. A list of

[5] Hawaiʻi Administrative Rules §13-222-2
[6] Hawaiʻi Administrative Rules §11-54-1
[7] As determined by the Department of Health based on a two year time of travel from a cesspool to a public drinking water source

cesspools (identified by tax map key and county) that already meet the criteria of Act 120 is available on the DOH website[8].

A taxpayer may apply for a tax credit of up to $10,000 for documented expenses associated with upgrading each qualified cesspool. Under the current law, tax credits are available for five years (tax years 2016-2020), ending on, December 31, 2020. The state provided a maximum of $5,000,000 of credits that are available for each tax year. Any taxpayer who has upgraded a qualified cesspool but is not eligible to claim the credit in a taxable year because the cap has been reached shall be eligible to claim the credit in the subsequent years. Legislation to extend the tax credit did not pass in 2020.

While this program has several financial advantages for those homeowners who file state income taxes, there are likely many homeowners who are below the threshold for filing state income taxes and therefore are not able to take advantage of this option. Given that only 47 applications have been filed for this credit[9], this incentive may have limited application to current cesspool owners.

While the tax credits help to offset some construction costs associated with the conversion, it does not provide:

- Relief for the on-going maintenance and management of the new OSWT option.
- Relief to low-income customers who do not earn enough to qualify for this credit.
- Relief in upfront costs to retain assistance from a licensed civil engineer.

In addition, depending on the selected OSWT, the credit may only cover a fraction of the cost borne by the homeowner. Pending legislation may extend the term of this program, however an assessment of the accessibility by all homeowners to this incentive should be considered and other mechanisms identified.

1.6 Other Funding Models and Partnerships

This section summarizes less traditional funding models, including models used by other infrastructure systems in Hawai'i, e.g. energy, and specific, community-based funding models. Other non-traditional funding models include point of sale conversion requirements that would mandate the conversion of cesspools prior to sale of a house was initially considered in 2018 (SB 2567). However, at the time, it was not deemed feasible due to resistance from the real estate community and homeowners and was tabled for future discussion in 2020. This was prior to the COVID-19 impacts; consideration of mandated cesspool conversions prior to property sales may be postponed in light of larger economic issues in the State.

1.6.1 On-Bill Financing Program – Example: Hawai'i Green Infrastructure Authority

On-bill financing and repayment programs have been providing options for property owners for many years to pay for investments in clean energy upgrades through their utility. On-bill financing allows the electric utility to incur the cost of the clean energy upgrade, which is then repaid by the homeowner on the utility bill[10]. The upfront capital is provided by a third party, not the electric utility. In some on-bill repayment programs, the loan is transferable to the next owner of the home, building, or property. The idea of an on-bill financing program could be adapted towards the financing cesspool conversions with the assistance of other agencies that could assist in the billing administration function similar to electric utilities.

[8] https://health.hawaii.gov/wastewater/home/taxcredit/
[9] Number of filings from 2015-2017.
[10] Example utilities include Hawaiian Electric Company, Maui Electric Company, or Hawaiian Electric Light.

An on-bill financing model currently exists in the State. Act 211 authorized the establishment of the green infrastructure program, known as GEM$ to deploy clean infrastructure[11]. The legislation, among other key objectives, enabled ratepayers to finance clean energy improvements through an on-bill financing model that allows ratepayers to spread the initial capital costs of installing green infrastructure of up to 20 years, thus providing an affordable way to invest in green infrastructure that will reduce monthly energy costs.

The GEM$ program is operated under the Hawai'i Green Infrastructure Authority (HGIA) and has many of the similar on-bill functions a cesspool conversion program would require for implementation. For example, certain program functions of the GEM$ program, such as program marketing, construction contractor outreach, education and training, and loan functions[12] may be applied towards a cesspool conversion financing program. As of November 2017, $77.8 million in GEM$ funds have been committed to residential and commercial energy projects in the State. Following is a summary of key features of the GEM$ program:

- ***Possible Eligible Applicants.*** The GEM$ program serves low and moderate-income, single-family residential homeowners and renters, small businesses as defined by the U.S. Small Business Administration, multi-family rental projects, and non-profits. Financing for the GEM$ program was recently expanded so that participant eligibility under the program is not based on the creditworthiness of the applicant, and the on-bill repayments obligation is transferable to the next owner or tenant. In other words, the obligation for repayment is tied to the utility meter, not the individual homeowner. Approval does not require a credit check or income verification. HGIA bases approval on a good utility bill payment history – no disconnection notices in the previous 12 months – and an estimate that the project will deliver a minimum of 10 percent utility bill savings, including the repayment charge, after installation of the retrofit.
- ***Types of Projects.*** The HGIA has financed projects under its GEM$ program such as solar photovoltaic systems, energy storage, lighting upgrades, heating, ventilation, and air conditioning systems (HVAC) upgrades, mechanical upgrades, controls and monitoring devices and energy/water nexus systems.
- ***Pros and Cons***
  - *Pros:* The HGIA GEM$ program is an established on-bill loan program for private energy efficiency solar projects. Several elements of this program, including administration of funding, loan repayment and coordination with an entity for billing, may be applicable for the financing of residential cesspool conversion projects. GEM$ offers financing rates of approximately 5.5 percent over a 20-year loan term.
  - *Cons:* Unlike in the energy model, incentives associated with a cesspool conversion are hard to define for a water/wastewater utility companies to support any proposed bill financing. In addition, there is a question as to the implementation of on-bill financing in rural areas with low income applicants.

1.6.2 Property Assessments – Example: Property Assessed Clean Energy Program

PACE programs are used by local governments to allow property owners to finance energy efficiency and renewable energy improvements (such as solar) to pay for the up-front cost of energy or other eligible improvements on a property and then pay the costs back over time through a voluntary assessment.

A PACE program could be modified as a viable financing option for cesspool conversion to allow a property owner to pay back the costs of their cesspool remediation over time at an agreed upon interest rate and length of loan terms. Funding would occur through private lenders such as private banks or the issuance of municipal bonds.

[11] Sessions Laws of Hawai'i, 2013

[12] Loan functions include origination, underwriting, funding, and servicing.

- ***How PACE could be applied towards Cesspool Conversions.*** While Section 196 of the Hawaiʻi Revised Statutes (HRS) discusses Hawaiʻi's policies, goals, and objectives with respect to energy resource planning, there is no enabling legislation to establish a PACE program. However, HB 1669 was introduced in the 2020 legislative session and assigns the Hawaiʻi State Energy Office to work with the counties to establish a program. The program would allow a property owner to obtain a private loan for a renewable energy system on the property and pay back the loan through an addition to the owner's property tax bill. This PACE program concept, if approved by the legislature and signed by the Governor, could be modified to include cesspool conversions.
- ***Eligible Applicants.*** The PACE financing mechanism has been used in several states where legislation exists to finance improvements on private property such as:
  - Commercial properties (commonly referred to as Commercial PACE or C-PACE)
  - Residential properties (commonly referred to as Residential PACE or R-PACE).

  The unique characteristic of PACE assessments is that the assessment is attached to the property rather than to the individual. A PACE program can be modified to finance cesspool improvements through an assessment on the private property.
- ***Types of Projects.*** PACE programs are used to provide funds for a variety of types of needs, such as energy efficiency upgrades, disaster resilience improvements, water conservation measures, or renewable energy installations of residential, commercial, or industrial property owners. The PACE program could be expanded to include cesspool conversions.
- ***Funding of Projects.*** Historically, this funding has been applied to installation of roof top solar panels for residential homes with typical loans repaid over 5 to 25 years. If applied to cesspool conversion, the PACE financing model allows a property owner to pay back the conversion costs over time at an agreed upon interest rate and loan term. Funding would occur through private lenders or the issuance of municipal bonds depending on enabling state legislation.
- ***Program Requirements.*** In other states, the PACE financing model allows property owners to implement improvements and finance energy efficiency and renewable energy improvements without large up-front cash payments. Property owners that voluntarily participate in a PACE program repay their improvement costs over a set time period (typically 10 to 20 years) through property assessments. Property assessments are secured by the property itself and paid as an addition to the owners' property tax bills. Nonpayment generally results in the same set of repercussions as the failure to pay any other portion of a property tax bill. A PACE assessment is a debt of property, meaning the debt is tied to the property as opposed to the property owner. In turn, the repayment obligation may transfer with property ownership if the buyer agrees to assume the PACE obligation and the new first mortgage holder allows the PACE obligation to remain on the property. This can address a key disincentive to investing in energy improvements because many property owners are hesitant to make property improvements if the resulting savings are not sufficient to cover the upfront costs.
- ***Pros and Cons***
  - *Pros:* A PACE-type model would allow an individual property owner to secure private financing for a comprehensive list of projects, including cesspool conversion. The financing options may include spreading payments over a longer period of time, with the possibility of deducting payments from homeowner's income tax liability.
  - *Cons:* There are no active PACE programs in Hawaiʻi and implementation will require authorizing legislation. There may be resistance by lenders/mortgage-holders whose claims to the property may be subordinated to the unpaid assessment amount should the property go into foreclosure. The ability to provide discounts or accommodations to low income households

may not be feasible. In addition, the program is only applicable to primary property owners, thereby potentially disallowing renters to apply.

1.6.3 Property Assessments – Example: Community Facilities District and Special Improvement Districts

CFDs or SIDs, are independent, local special-purpose financing districts that levy taxes and assessments and issue bonds to provide infrastructure to develop communities of all types.

- ***How CFDs and SIDs Could be Used.*** Existing state legislation allows counties to create CFDs to finance special improvements[13]. Furthermore, the county has power to levy and assess a special tax on property located in the CFD or SID and issue bonds secured by the special taxes to provide funds for special improvements. Related to CFDs, Section 46-80.5 allows for the creation of a SID for the purpose of providing and financing supplemental maintenance and other improvements or services as the council of the county determines.
  An example of an improvement district specifically created to address the EPA's requirement to close large-capacity cesspools is the ID in North Kona in the County of Hawai'i. This ID funds the connection of 110 parcels to the county wastewater system. This funding mechanism could be applied to the funding construction and maintenance of OSWT systems for a subdivision of current cesspool owners.
- **Eligible Applicants.** The County must have a charter and adopt an ordinance to establish a district, "relating to special improvement financing by community facilities districts." The ordinance establishes procedures for the formation of CFDs. It is common for the ordinance to allow for written protest against creation of the CFD. If owners of more than 55 percent of the land proposed or more than 55 percent of owners protest against the proposed CFD, the creation of the district must cease. In the absence of protests as described, a county council may approve an ordinance forming a CFD and levy a special tax on properties with the district.
- **Types of Projects.** The ordinance passed by the county typically describes the types of special improvements that may be undertaken and financed through the formation of the CFD and secured by the special taxes that are imposed. Public improvements and services may be funded with proceeds of municipal bonds secured by the special taxes. SB3057 was passed during the 2018 legislation session to expand the authority of counties to use land-based financing to support operating costs for certain county services provided within SID and CFD.
- **Offer Low Interest Financing to Property Owners Requiring Cesspool Conversions.** CFDs and SIDs offer low interest tax-exempt financing of up to 30-year term (including 5 year principal deferment) to finance public improvements and services such as cesspool conversions. However, to date, this financing vehicle has been rarely used in the State to develop public improvements related to development of certain areas. To finance individual cesspool conversions, a county would have to pass an ordinance to form a CFD or SID and subsequently levy a special tax within the SID to fund the improvements. The use of CFDs and SIDs may only work in a county that has a concentrated area of cesspools requiring conversion.
- **Pros and Cons**
  - Pros: CFDs and SIDs offer low interest tax-exempt financing of up to 30 year term (including 5 year principal deferment) to finance public improvements and services such as cesspool conversions.

[13] See Section 12 of Article VII of the State Constitution and HRS Section 46-80.1.

- Cons: To finance individual cesspool conversions, a county would have to pass an ordinance to form a CFD or SID and levy a special tax to fund the improvements and receive the required fifty-five percent approval from the property owners to form the CFD or SIDs. Moreover, such a financing strategy could only be implemented where dense or concentrated areas of cesspool remediation are needed.

1.6.4 Public-Private Partnerships

Another potential funding mechanism is the development of P3s that encourage private investment in public infrastructure projects. P3s are contractual arrangements in which governments or public entities form partnerships with the private sector to design, finance, build, and operate and/or maintain infrastructure such as toll roads, water supply facilities, and wastewater treatment plants. Many different types of P3s exist because each of the five elements of development can be combined (design, finance, build, operate, and maintain). For instance, in the Design-build-operate-maintain (DBOM) arrangement, contracted private entities are responsible for project design and construction, and also take the responsibility of the operation and maintenance of the project. Public agencies are in charge of financing and theoretically pass all the risks related to operating costs and project revenues to the private partner. A P3 arrangement may shift project financing risks and long-term operations and maintenance responsibilities to the private sector; allowing agencies to leverage private capital and tap private sector expertise; which helps agencies avoid more debt issuance and preserve bond capacity. However, P3s also have some negatives including local opposition; the loss of public control and flexibility; may require a high degree of expertise in-house or having to hire consultants; may require complicated contracts and complex negotiations; and demand huge efforts of enforcement and monitoring contracts.

1.6.5 Hawaiʻi Non-Profit Partnerships

The following sections describe ways that Hawaiʻi's active and robust non-profit community could support cesspool conversions.

Fresh Water Initiative (Ulupono and Hawaiʻi Community Foundation)

The Fresh Water Initiative (Initiative) is an effort sponsored by the Hawaiʻi Community Foundation (HCF), a non-profit organization dedicated to advancing and supporting networks of social change. The goal of the Initiative is to bring together diverse partners to address the complexities of water security against the background of climate change. A key partner in the Initiative is the Ulupono Initiative (Ulupono). Ulupono is a social investment firm dedicated to improving the quality of life in Hawaiʻi through investment in sustainable projects.

The model used in the Initiative for collaboration and partnership should be considered as a model for the cesspool conversion plan since this is a highly complex community problem where multiple voices, many of whom need advocacy, need to come together for a successful solution.

Ulupono and HCF have come together around a common goal of water security and sustainability. Depending upon the technical strategies for the cesspool conversions, there are opportunities for cesspool conversions to improve Hawaiʻi's water security and sustainability. Both organizations may be able to help identify funding options that could achieve the multiple benefits of supporting their goals of not only water security but also acting as agents of community change and empowering communities to build sustainable solutions.

This is not a funding option in the traditional sense; it is more a model of collaboration and coalition-building around an issue aligned with cesspool conversions. It may be worth considering how these partners could assist in the cesspool conversion effort.

Hanalei Initiative and Hanalei Watershed Hui

The Hanalei Initiative is a collective group of caring citizens working for the betterment of Hanalei and the North Shore (of Kaua'i). Water quality is one of the focus areas. Through potential DOH grant funding and private capital, the Hanalei Initiative is exploring financing options for cesspool conversions.

Hanalei Watershed Hui (Hui) was established in 2000 as a non-profit to implement the Hanalei American Heritage River Program and Hanalei Watershed Action Plan. The Hui was working with the DOH in 2017 to help residents apply for $500,000 in grants that would help finance 75 cesspool conversions. Due to lack of interest from residents, the grant was cancelled.

While not a direct funding option, this is another example of community models that could be established throughout the State to educate homeowners around the options for cesspool conversion and its funding.

1.7 Potential Revenue Sources

Traditional centralized municipal water and wastewater conveyance and treatment plant infrastructure projects generally have a stable revenue source in the form of user fees or general taxing authority that is used to fund system capital and on-going O&M costs. However, many nontraditional projects (such as the cesspool conversion program) lack a stable revenue stream to fund project implementation, special financial assistance programs, and/or on-going permitting, monitoring, and administration. Consideration should be given to leveraging potentially available revenue sources to assist with financing the conversion program. Use of these revenue sources may require legislative action and/or voter approval and may include the following:

- Developer fees.
- Nutrient impact fees.
- Permit fees.
- Property taxes.
- Recreational or license fees.
- Resort taxes/fees.
- General excise tax.
- Special assessments.
- User fees.

1.8 Potential Future Federal Legislation and COVID 19 Stimulus Bills to Track

The Senate Committee on Environment and Public Works approved two partisan bills - America's Water Infrastructure Act (AWIA) of 2020, a broad water infrastructure and water resources bill, as well as the Americas Drinking Water Infrastructure Act of 2020, which together invest nearly $20 billion in wastewater infrastructure projects and community drinking water improvements. AWIA 2020 is anticipated to provide $17 billion in funding for water infrastructure projects, with $2.5 billion in funding for the Drinking Water Infrastructure Act. AWIA reauthorizes the CWSRF fund with increased program funding for the first time in 30 years and increases assistance to struggling communities. In addition, AWIA reauthorizes the WIFIA program through 2024 and the Sewer Overflow and Stormwater Reuse Municipal Grants program and creates the Clean Water Infrastructure Resiliency and Sustainability Program. The bills are currently pending full senate and presidential approval. As appropriations are provided for various provisions, there may be some potential funding opportunities for the cesspool project.

In addition, Congress is discussing a potential COVID-19 Stimulus Package Phase 4 for release in late July/August 2020. While there is some uncertainty on the exact programs to be funded, it is anticipated that a future bill will include funding for public infrastructure projects with a focus on projects that help to kick start the economy, modernize infrastructure, and help build resilience to future crises. It is anticipated that

funding provided through a potential stimulus bill will focus on shovel ready projects, be provided on a first come first serve basis, and are projects that help to kick-start a state's or the nation's economy. The Council of Infrastructure Financing Authorities has proposed the 2020 Save, Accelerate, Fill and Expedite (S.A.F.E.) Water Infrastructure Action Plan which proposes recommendations for the potential COVID-19 Stimulus Bill #4 including an allocation for Hawai'i's S.A.F.E. SRF Project Pipeline for Drinking Water projects at $32 million and Clean Water projects at $85.6 million and provides for program allowances including that the Clean Water and Drinking Water SRF programs be provided increased flexibility to achieving goals of the bill by waving requirements for state match for any stimulus funding and the 2020 capitalization grant to allow federal funding to flow immediately. However, the mechanism for disbursement of potential stimulus funding is yet to be determined.

While future legislations both target wastewater infrastructure funding, there is some uncertainty in the ultimate bill and appropriations and neither legislative can be relied upon as a mechanism to fund the entire cesspool conversion program but should be considered as one potential source of funding for the project.

1.9 Summary and Next Steps

The following section provides an overall summary, recommendations, and next steps.

1.9.1 Summary

In light of the lack of dedicated funding mechanism for the conversion of individual cesspool systems, a suite of financing sources has often been utilized in other states. These sourced have included self-financing (either from savings or bank loans), state incentives, and federal/state and local grant/low-interest loan funding. Some states have developed creative approaches for funneling federal and state low-interest loan and grant monies to individual homeowners. State tax credit or potential rebate programs may also provide another financing option for near-term cesspool conversion projects. In addition, some states have established a state-wide, fiscally sustainable funding mechanism for the financing of cesspool conversions.

While the costs of previous efforts to convert LCCs in the state were primarily borne by businesses, the current focus is on the replacement of individual homeowner cesspools which will require financing options that are available to private individuals and can be balanced with household affordability concerns. This TM focuses on potential funding mechanism and models for this purpose.

Financing options for the conversion of cesspools to approved OSWT systems will likely be comprised of a hybrid of financing options depending on several factors including, cost of selected OSWT system, priority of cesspool conversion, stakeholder feedback, and other factors that still need to be identified and assessed. The ideal cesspool conversion financing program would be one that will:

1. **Consider equitability and affordability issues.** Given the high cost of living in Hawai'i, the cesspool conversion finance program needs to account for affordability challenges and overall fairness within the community.
2. **Incentivize individual homeowners to convert existing cesspools.** The overall program will be more successful if cesspool owners have an incentive to convert. This process should be coordinated with the public outreach work task.
3. **Provide funding support for upfront cesspool conversion costs.** Homeowners may need funding support to even begin the cesspool conversion process. Consider funding mechanisms that mitigate a homeowner's need to pay all costs upfront.
4. **Consider the funding recipient.** Consider resources that can be paid directly to a homeowner vs. those that must be provided to a public agency, nonprofit, or financial institution and then provided to the homeowner. Financing options which are paid directly to the individual homeowner include

state incentives such as tax credits or rebates, grants from state/federal programs and non-profits and potential new programs modeled after current green energy infrastructure funding models. Financing options where resources must be directed to a public agency, non-profit, or financial institution, include grants and low interest loans from various state/federal programs to be administered by public agencies or non-profits, as well as property-based options including CFDs and SIDs.

5. **Balance the need for immediate, near-, and long-term expenditures.** The time horizon for implementation will also impact the available funding options. In the near-term, pursuit of available federal, state, and local funding sources, e.g. grants and loans, is likely more viable while the reliance on state, county, EPA, or CWSRF funded financing program is recommended for the long-term.
6. **Potentially fund a variety of OSWT options.** In coordination with the cesspool conversion technologies work, the funding may need to support a range of technical, site-specific solutions and a significant range of costs.
7. **Minimize the administrative burden on DOH while providing support to existing or new local agencies.** The funding program will need to account for the additional technical and financial service support to homeowners for cesspool conversions. Consider additional funding for state and local government to administer the program.

Identification of stable revenue sources will be helpful to fund the cesspool conversion program. Potential revenue sources to may include (where applicable):

- Developer fees
- Nutrient impact fees
- Permit fees
- Property taxes
- Recreational or license fees
- Resort taxes/fees
- General excise tax
- Special assessments
- Traditional municipal repayment sources (including user fees and tax/utility revenues)

In Hawaiʻi, adoption of legislation to provide funding, governance, authority, and institutional direction to fund cesspool conversion options has been numerous. However, there is a need to coordinate these legislative initiatives around administration and enforcement policies. Other states, in addition to addressing cesspool funding options, have been successful at passing legislation mandating cesspool conversions under various conditions including in real estate transactions and due to existing cesspool failures.

Based on a review of financing mechanisms utilized by ten other states to incentivize its individual homeowners to convert failing septic or cesspool systems, the key takeaways are as follows:

- The conversion process is a long-term effort that is slow moving and requires the establishment of a comprehensive and extensive public outreach effort.
- The long timeline for implementation also required that states established a sustainable financing mechanism including sources and revenue streams to cover program administration and other costs.
- The most common upgrade and conversion mechanisms instituted by states was the upgrade of the cesspool at the time of a property sale, or if a system failed during inspections or through a blanket phase-out program (as is being implemented in Hawaiʻi).

- Those states with the highest success had implemented extensive outreach programs that educated individual residents on the public health and water quality benefits of converting and provided information on incentives and state programs to help pay for these conversions.
- While each state varied in its program, most provided low interest loans to individual homeowners utilizing CWSRF or other state funds through a conduit/pass through mechanism. Utilizing this approach, the CWSRF programs were able to funnel funding to individual homeowners through a "conduit" or intermediate agency which assumed the loan as well as conducted all required program administrative activities – thereby reducing demands on the state's CWSRF program. Conduit agencies included other state programs, financial institutions or non-profit organizations.

Several financing models implemented in other states may prove to be a good fit in Hawaiʻi, including:

1. Financing program in which DOH CWSRF program partners with another State agency and shares program responsibility.
2. Financing program in which DOH creates a Conduit Lending/Pass Through Program with a public entity (such as the county or an eligible non-profit) in which DOH CWSRF staff are still involved with the disbursements. However, the pass-through entity is responsible for all program administrative activities (loan application, loan processing, project selection, repayments, loan close out etc.).
3. Financing program in which a new financing agency is established to handle the financing (and perhaps other aspects) of the cesspool upgrades and conversion.

In addition, several less traditional funding models have been used in Hawaiʻi by other infrastructure systems (e.g. energy) that may be applicable for cesspool conversions including: on-bill financing (used by HGIA); and Development of CFDs or SIDs which can levy taxes and assessments and issue bonds to provide infrastructure in communities.

Federal and state funding options for cesspool conversions for individual homeowners to finance OSWT systems are limited due to program priorities, and the requirement that the recipient of funding be a public entity or a qualified non-profit. Current funding options for individual homeowners include: Hawaiʻi Cesspool Tax Credits; Office of Hawaiian Affairs Malama Loans; Hawaiʻi Cesspool Remediation and Conversion Program (pending); Hawaiʻi Rural Water Association; and the Hawaiʻi Rural Community Assistance Corporation. In addition, EPA's WIFIA program and Hawaiʻi DOH CWSRF and NPS programs, may be potential funding sources, if a public entity were to be the loan recipient and then funnel loan monies to individual homeowners. Federal programs including USDA's Water and Waste Disposal Loan and Grant and Rural Housing Services Programs, as well as the HUD Non-Entitled Counties in Hawaiʻi Community Block Grants and Economic Development Administration should be further evaluated as potential funding programs as well. These later programs are targeted at rural or low-income communities.

1.9.2 Next Steps

The selected funding mechanism for the cesspool conversions will depend on the overall cesspool conversion program and strategy (e.g. prioritized areas, schedule of conversions, cost of technology to be used), who the funding recipient will be (individual vs a subdivision vs homeowners' association), DOH financial and staffing resources, and other factors. The prioritized list will provide an indication of the schedule of conversions and when dollars will be needed. Ultimately, any funding option will also need to include consideration of affordability since many of the cesspools are in areas of limited income.

The next steps in the initial evaluation of potential funding mechanisms that Carollo is scoped to complete includes:

1. Evaluate affordability issues as well as the equitable distribution of funds (TM02).

2. Present funding options to the DOH to solicit input, identify preliminary list of preferred financing mechanism, and identify considerations/concerns.

Recommendations and potential next steps to support cesspool conversions include:

1. Coordination of legislative efforts, such as:
   a. Extension of Act 120 tax credits beyond 2020 or creation of a rebate program.
   b. Creation of legislation to require that cesspools are disclosed as part of real estate property inspections/transactions.
   c. Evaluation of legislation for establishment and funding of a long-term cesspool conversion financing program.
   d. Evaluation of potential federal legislative actions.
2. Work towards the identification of potential viable financial mechanism through the following actions:
   a. Conduct additional research into preferred options identified by the CCWG.
   b. Outreach to federal/state funding programs to confirm applicability and program requirements, timing, etc.
   c. Follow-up with financing programs to discuss program details to understand the "nuts and bolts" of the programs. As well as identify lessons learned, successes and failures, and what program elements could work in Hawaiʻi.
3. Identify and contact potential agencies, non-profits and financial institutions within the state to determine technical expertise, ability and willingness to conduct administrative activities, what financial mechanisms they could help implement, and other functions they can perform.
4. Conduct discussions with DOH, CWSRF, counties, HUD, USDA, and other identified agencies/non-profits to assess and understand available resources (staff/financial), technical expertise, level of engagement/responsibility desired, and resource requirements.
5. Link preferred funding options to affordability and equitability distribution considerations to provide a complete picture of options and affordability mitigation measures.
6. Work with public outreach subgroup to develop strategies for presenting technology and financing options to groups of affected cesspool owners to solicit input.

1.10 References

Babcock, R W Jr, M D Barnes, A. Fung, W. Goodell, and K. Oleson. 2019. *Investigation of Cesspool Upgrade Option in Upcountry Maui*. Hawaiʻi Department of Health, Safe Drinking Water Branch.

Pollack, Barry. Rural Community Assistance Corporation (RCAC). Hawaiʻi, Environmental Infrastructure Loan Program. https://www.rcac.org/lending/environmental-loans/.

Brian T. Hirai, Esq., unpublished data. McCorriston Miller Mukai MacKinnon LLP (CFDs in Hawaiʻi). Of Counsel. McCorriston Miller Mukai MacKinnon LLP, PO Box 2800, Honolulu Hi 96803-2800. https://www.m4law.com/professionals/brian-t-hirai/. Phone 808-529-7404. Mobile: 808-271-5371. Email: hirai@m4law.com. Personal communication February 24, 2020.

Commonwealth of Massachusetts. 2019. The Community Septic Management Program. Retrieved from https://www.mass.gov/guides/the-community-septic-management-program See also: https://www.mass.gov/guides/buying-or-selling-property-with-a-septic-system. https://www.barnstablecountyhealth.org/programs-and-services/community-septic-management-loan-program.

Community Facilities Districts. *What is a Community Facilities District?* Community Facilities Districts County of Maui. http://mauicounty.us/cfd/.

County of Hawaiʻi. Department of Environmental Management Director's Report. 2013. Lono Kona Sewer Improvement District, North Kona, December 11, 2013.

Craft 3. 2018. Clean Water Loans. https://www.craft3.org/Borrow/clean-water-loans.

CWSRF Intended Use Plan State Fiscal Year 2020 and Federal Fiscal Year 2019 Appropriation. https://health.hawaii.gov/wastewater/files/2019/07/IUP_SFY_2020.pdf.

Delaware Department of Natural Resources and Environmental Control. 2018. Septic Rehabilitation Loan Program. https://dnrec.alpha.delaware.gov/environmental-finance/septic-rehabilitation/.

Delaware Department of Natural Resources and Environmental Control. 2018. Septic Rehabilitation Loan Program. https://dnrec.alpha.delaware.gov/environmental-finance/septic-rehabilitation/.

Dible, Max. 2018. "Logistics of Cesspool Conversion Bring Financial Burden". *West Hawaiʻi Today*, April 20, 2018. https://www.westhawaiitoday.com/2018/04/20/hawaii-news/logistics-of-cesspool-conversion-bring-financial-burden/.

Eagle, Nathan. 2017. "From Bad to Worse: Hawaiʻi's $1.75 Billion Cesspool Problem". *Civil Beat*, December 27, 2017. https://www.civilbeat.org/2017/12/from-bad-to-worse-hawaiis-1-75-billion-cesspool-problem/.

Enabling Legislation Related to Clean Energy On-Bill Financing. https://www.capitol.hawaii.gov/session2020/bills/HB2298_.pdf.

Hanalei Watershed Hui. http://www.hanaleiwatershedhui.org/news/2017hanalei-cesspool-replacement-project.

Hawaiʻi Clean Water State Revolving Fund (CWSRF) Program. https://health.hawaii.gov/wastewater/home/cwsrf/.

Hawaiʻi Cesspool Remediation and Conversion Loan Program (SB 2850/HB 2540 Proposed in 2018, SB 221 Proposed in 2019)
https://www.capitol.hawaii.gov/Archives/measure_indiv_Archives.aspx?billtype=SB&billnumber=2850&year=2018.
https://www.capitol.hawaii.gov/Archives/measure_indiv_Archives.aspx?billtype=HB&billnumber=2540&year=2018.
https://www.capitol.hawaii.gov/session2020/bills/SB221_.PDF.

Hawaiʻi Community Foundation Fresh Water Initiative.
https://www.hawaiicommunityfoundation.org/grants/fresh-water.

Hawaiʻi Department of Health, County of Hawaiʻi Cesspool Conversion presentation, April 23, 2018

Hawaiʻi Rural Water Association (Rural Water Loan Fund https://nrwa.org/initiatives/revolving-loan-fund/
https://www.capitol.hawaii.gov/session2020/bills/HB2298_.pdf.
https://www.capitol.hawaii.gov/Session2020/Testimony/HB1669_TESTIMONY_EEP_01-28-20_.PDFProgram C.

Hawaiʻi Statutes. Legislation related to CFDs and Special Improvement Districts.
https://law.justia.com/codes/hawaii/2011/division1/title6/chapter46/46-80-5/.
https://law.justia.com/codes/hawaii/2013/title-6/chapter-46/section-46-80.1.

Innovative Septic Improvement Program in Suffolk County, New York. 2018. Presentation retrieved from https://www.epa.gov/septic/webcasts-about-onsite-wastewater-treatment#suffolk.

Massachusetts Department of Environmental Protection. Community Septic Management Program. July 2005. https://www.mass.gov/files/documents/2016/08/sc/proman.pdf.

Massachusetts Department of Environmental Protection. Financing and Grants to Aid with Septic Repairs and Upgrades Fact Sheet. https://02038.com/wp-content/uploads/2011/12/Title-5-septic-MA-financing-grants-repairs-MA.pdf.

Maui Tax Credit Extension for Cesspools (HB 1767)
https://www.capitol.hawaii.gov/session2020/bills/HB1767_.pdf.

Merissa Sakuda, Unpublished data. Administrative Services Coordinator, Hawaiʻi Green Infrastructure Authority (HGIA). 250 S. Hotel St., #501, Honolulu HI 96813, PO Box 2359, Honolulu, HI 96804. Personal communication February 12, 2020. www.gems.hawaii.gov. Phone 808-587-3821.

Mezzacapo, Michael. 2019. *A Multi-Stage Regulation and Policy Survey of Onsite Wastewater Treatment System Upgrade Programs*. Special Report SR 2020-02, September 2019. University of Hawaiʻi.

Mezzacapo, Michael. Financing Cesspool Conversion in Hawaiʻi. University of Hawaiʻi.
https://health.hawaii.gov/wastewater/files/2019/10/FinancingConversions.pdf.

Minnesota Public Utilities Authority. 2019. Small Community Wastewater Treatment Program.
https://mn.gov/deed/pfa/funds-programs/smallcommunitywastewatertreatmentprogram.jsp.

New York Septic System Replacement Program. https://www.efc.ny.gov/SepticReplacement
https://www.governor.ny.gov/news/governor-cuomo-announces-75-million-replace-septic-systems-statewide.

Office of Hawaiian Affairs, Malama Home Improvement Loans https://loans.oha.org/personal/malama-home-improvement-loan/.

References for Land Secured Options – PACE Enabling Legislation Related to Clean Energy On-Bill Financing, https://www.capitol.hawaii.gov/session2020/bills/HB2298_.pdf.

Rhode Island Housing. 2019. Septic System and Sewer Tie-in Loan Program. https://loans.rihousing.com/SepticSewer/.

Rhode Island Housing. 2019. Septic System and Sewer Tie-in Loan Program. https://loans.rihousing.com/SepticSewer/.

Rhode Island Infrastructure Bank, Community Septic System Loan Program. https://www.riib.org/csslp.

Star Advertiser. 2018. "EPA actions close 10 large cesspools in Hawaiʻi". *Star Advertiser*. November 8, 2018. https://www.staradvertiser.com/2018/11/08/breaking-news/epa-actions-close-10-large-cesspools-in-hawaii/.

State of Hawaiʻi Department of Health Wastewater Branch. 2019. Tax Credit Program and Qualifying Cesspools. Retrieved March 14, 2019 from http://health.hawaii.gov/wastewater/home/taxcredit/.

State of Massachusetts. The Community Septic Management Program. https://www.mass.gov/guides/the-community-septic-management-program.

State of Ohio Environmental Protection Agency, Ohio Water Pollution Control Loan Fund Fact sheet. https://epa.ohio.gov/Portals/29/documents/WPCLF.pdf.

State of Ohio Environmental Protection Agency.Home Sewage Treatment System, Division of Environmental and Financial Assistance. https://epa.ohio.gov/defa/hsts.

State of Ohio, Department of Health Financial Resources. https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/sewage-treatment-systems/information-for-homeowners/financial-resources-for-the-repair-and-replacement-of-household-sewage-treatment-systems.

State of Ohio, Un-Sewered Area Assistance Program. October 2016. https://www.owda.org/docs/document_selector/upload/Un-Sewered%20Area%20Assistance%20Program.pdf.

State of Washington, Department of Ecology On-site Sewage System Projects Website. https://ecology.wa.gov/About-us/How-we-operate/Grants-loans/Find-a-grant-or-loan/Water-Quality-grants-and-loans/On-site-sewage-projects.

The Hanalei Initiative. https://www.hanaleiinitiative.org/projects-1

U.S. Department of Agriculture, Rural Development websites links: https://www.rd.usda.gov/programs-services/water-waste-disposal-loan-grant-program. https://www.rd.usda.gov/programs-services/emergency-community-water-assistance-grants. https://www.rd.usda.gov/programs-services/individual-water-wastewater-grants.

U.S. Department of Housing and Urban Development. (2018). Community Development Block Grant Program. https://www.hud.gov/program_offices/comm_planning/cdbg_programs_covid-19.

U.S. Environmental Protection Agency. 2017. Financing Options for Nontraditional Eligibilities in the Clean Water State Revolving Fund Programs. https://www.epa.gov/sites/production/files/2017-05/documents/financing_options_for_nontraditional_eligibilities_final.pdf.

U.S. Environmental Protection Agency. 201). Cesspool information. https://www.epa.gov/uic/large-capacity-cesspools.

U.S. Environmental Protection Agency. 2016. Overview of Clean Water State Revolving Fund Eligibilities. https://www.epa.gov/sites/production/files/2016-07/documents/overview_of_cwsrf_eligibilities_may_2016.pdf.

U.S. Environmental Protection Agency. 2017. Financing Options for Nontraditional Eligibilities in the Clean Water State Revolving Fund Programs. EPA publication 830B17003 https://www.epa.gov/sites/production/files/2017-05/documents/financing_options_for_nontraditional_eligibilities_final.pdf.

U.S. Environmental Protection Agency. 2019. Clean Water State Revolving Fund (CWSRF) program information. https://www.epa.gov/cwsrf.

U.S. Environmental Protection Agency. 2019. Water Finance Clearinghouse. https://ofmpub.epa.gov/apex/wfc/f?p=165:1.

U.S. Environmental Protection Agency. 2019. Water Finance Learning Modules. https://ofmpub.epa.gov/apex/wfc/f?p=165:9:1644653503907::NO:9.

U.S. Environmental Protection Agency. *EPA Hawaii Cesspools Success Stories*. https://archive.epa.gov/region9/water/archive/web/html/hicesspools-success.html#yamamura.

U.S. Environmental Protection Agency. January 2008. Clean Watersheds Needs Survey 2004, Report to Congress. https://www.epa.gov/sites/production/files/2015-06/documents/2008_01_09_2004rtc_cwns2004rtc.pdf.

Ulupono Initiative. http://ulupono.com/portfolios/fresh-water-initiative.

Washington State Department of Health, Division of Environmental Health, Office of Drinking Water, Presentation on Washington State CWSRF and 319 Programs. http://www.gwpc.org/sites/default/files/files/State%20of%20Washington%20-%20K%20Weisman(1).pdf.

Washington's Regional Onsite Sewage System Loan Program. 2017. https://www.infrafunding.wa.gov/downloads/2017_Conference_Presentations/S24.pdf.:

Webcasts about Onsite Wastewater Treatment. https://www.epa.gov/septic/webcasts-about-onsite-wastewater-treatment.

Appendix A

MECHANISMS TO FUND CESSPOOL CONVERSIONS TO CENTRALIZED AND DECENTRALIZED SYSTEM

Pay-As-You-Go-Funding

PAYGO financing involves collection of payments from customers within the utility's jurisdiction through user charges, capital charges, and other sources, for funding future capital improvements. All or a portion of these revenues are accumulated in a capital reserve fund and are used for capital projects in future years. PAYGO financing could be used to finance 100 percent or only a portion of a given project, depending on several factors.

Overall, total costs are substantially lower when employing a PAYGO financing approach due to the avoidance of interest payments incurred from bond funding, along with the associated transaction costs (e.g., legal fees, underwriters' discounts, etc.). However, it is often challenging to employ this funding approach for large new or replacement projects, due to the high amount of capital that is needed on-hand in reserves, or from rate-based cash flow. If the program is reserve funded, the agency must already have sufficient cash-on-hand designated for such a project. If the program is rate funded, it could significantly increase the agency's rates and fees if the program represents a sizeable increase in capital needs. This funding approach also doesn't recognize the inter-generational nature of water and wastewater utility assets which typically provide long-term benefits to multiple generations of ratepayers.

The PAYGO financing mechanism is not a viable mechanism by which to fund the cesspool conversions, as OSWTs will not fall under the jurisdiction of a utility. However, if a cesspool property were to be connected to an existing sewer system for centralized treatment, this may be an option to further explore.

Debt Financing

There are several options for debt financing of wastewater projects, ranging from the issuance of short- or long-term bonds.

Revenue Bonds

Revenue bonds are historically the principal method of incurring long-term debt. This method of debt obligation requires specific non-tax revenues such as user charges, facility income, and other funds, to be pledged to guarantee repayment of bonds. There is often no legal limitation on the amount of authorized revenue bonds that may be issued, but from a practical standpoint, the size of the issue must be limited to an amount where the net revenues available for annual debt service (interest and principal payments) are sufficient to meet bond covenant requirements. Revenue bond covenants generally include coverage provisions, which require that revenue from user fees minus operating expenses be greater than debt service costs by factors typically ranging from 10 to 25 percent, i.e. debt service coverage per the bond covenant is expected to range from 1.10 to 1.25 times.

General Obligation Bonds

General obligation (GO) bonds are municipal securities secured by the issuer's pledge of its full faith, credit, and taxing power. GO bonds are backed by the general taxing authority of local governments and are often repaid using utility revenues when issued in support of a sewer or water enterprise fund. In the event that GO bonds are issued for the cesspool project, the agency must have the necessary taxing capacity to issue the bonds.

Certificates of Participation

Certificates of participation provide financing through a lease agreement that does not require voter approval. The legislative body of the issuing agency is required to approve the lease arrangement by a resolution. The lessee (the public entity) would be required to make payments typically from revenues derived from the operation of the facilities. The amount financed may include reserves and capitalized interest for the period that facilities will be under construction.

Assessment District Bonds

Financing by this method involves initiating assessment proceedings. Assessment proceedings are documents in "Assessment Acts" and "Bond Acts." An assessment act specifies a procedure for the formation of a district (boundaries), the ordering, and making of an acquisition or improvement, and the levy and confirmation of an assessment secured by liens on land. A bond act provides the procedure for issuance of bonds to represent liens resulting from proceedings taken under an assessment act. Procedural acts include the Municipal Improvements Acts of 1911 and 1913. The commonly used bond acts are the 1911 Act and the Improvement Bond Act of 1915. The most prevalent procedure is a combination of the 1913 Improvement Act with the 1915 Bond Act. Charges for debt service can be included as a special assessment on the annual property tax bill. The procedure necessary to establish an assessment district may vary depending on the acts under which it is established and the district size.

The debt financing mechanism for the replacement of cesspools with OSWT is not a viable mechanism as most debt financing options require a public entity as the issuer and the issued must have a mechanism for repayment (e.g. annual property tax bills, utility revenues, etc.).

Grants and Loans

Federal, state and local grant and loan funding sources are available for the planning, design and construction of water, wastewater, and infrastructure projects. Grants and low interest loan funding programs, which are highly competitive, typically target specific types of project and/or have specific objectives that a project must achieve and often require projects to meet as many objectives as possible, including:

- Builds Regional partnerships.
- Incorporates integrated project benefits.
- Water conservation or efficiency.
- Protects groundwater resources.
- Renewable energy improvements or energy efficiency.
- Addresses risk and resiliency.
- Demonstrates consistency with the State and Regional policies and objectives.
- Demonstrates regional cooperation and partnerships with partners and stakeholders.
- Serves a DAC or severely DAC.
- Helps create both construction and post-construction related employment.

Federal and State low interest loans and grant programs have become more competitive due to an overall increased interest in alternate funding programs and federal and state budget constraints. Most programs require a public entity or agency be the applicant or serve as a conduit for funding to private entities. More

so, as funds are limited and highly competitive; the programs require a challenging qualification process; may expire after a specified time; and are not typically a long-term funding solution.

Federal and State low interest loans and grants maybe a viable mechanism for the funding of some cesspool conversions, especially for those in the near-term if they fit a specific programs priority. However, in the longer term, these existing programs do not provide for a reliable steady source of funding of the cesspool conversions due to the competitiveness of the programs, the uncertainty in yearly appropriations and other factors.

Appendix B

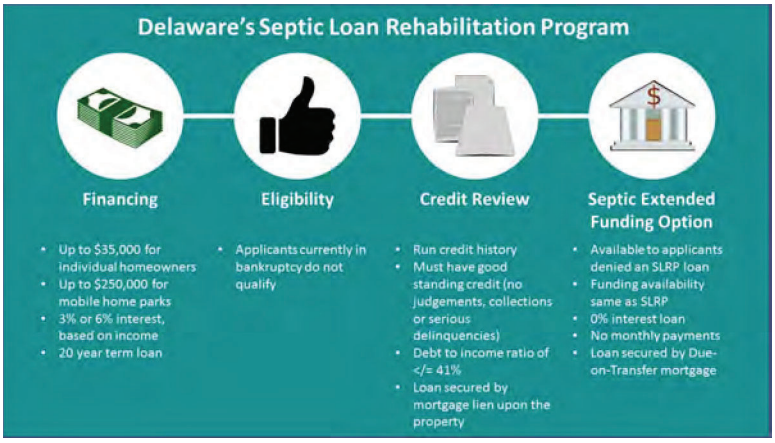
CESSPOOL FUNDING MECHANISMS IN OTHER STATES

Delaware (Program Type: Direct Lending)

Delaware is a coastal state with an estimated 70,000 onsite systems, 18 percent of which are estimated to be failing. Beginning in 2015, cesspools were banned and required to be replaced within one year of identification. The state has a goal to replace 6,074 septic and leach field systems by 2025. The Delaware CWSRF program, through the Delaware Department of Natural Resources and Environmental Control (DNREC), provides direct loans for the repair and replacement of privately owned decentralized wastewater treatment systems, to moderate to low income homeowners, under two programs: Septic Rehabilitation Loan Program (SRLP) and the Septic Extended Funding Option (SEFO).

Septic Rehabilitation Loan Program: The SRLP program provides low interest loans ranging from a minimum of $1,000 up to $35,000 to individual homeowners and $250,000 for mobile home parks. Individual loans have averaged $15,000. Eligible costs include site evaluation, OSWT system design, permits, construction costs and closing/recording costs. Eligible costs for central sewer projects include impact fees, connection fees, permit costs, electrical and abandonment of septic systems. Eligibility requirements include good standing credit (e.g. no judgements, collections or serious delinquencies), the applicant debt: income ratio is greater than or equal to 41 percent; and the loan must be secured by a mortgage lien upon the property. Applicants currently in bankruptcy do not qualify. Under the SRLP program, the loan term is 20 years and the interest rate is based on the applicant's income (ranges from 3-6 percent). There is no pre-payment penalty. Under the SRLP Extended Funding Option, the loan term is 20 years with a 0% interest rate and no monthly payments.

The DNREC established a partnership with the First State Community Action Agency (FSCAA) to assist with the SRLP. The FSCAA manages much of the administrative work associated with providing financial assistance directly to individual borrowers to reduce the burden on CWSRF staff resources, which has been a critical element to the SRLP attaining their goal of replacing 100 failing septic systems each year.



Septic Extended Funding Option – SEFO loans are offered to applicants that are denied an SRLP loan- typically due to poor credit or high debt to income ratio. The SEFO, is funded by an annual CWSRF allocation of $500,000 that comes from a 1 percent fee charged on CWSRF municipal wastewater loans. As with the SRLP program, applicants currently in bankruptcy do not qualify. This program provides the same funding and similar loan terms as the SRLP, however the interest rate is 0 percent and there are no monthly payments. Eligible costs

include site evaluation, design, permits, construction costs and closing/recording costs. The eligibility requirements are similar except the loan is secured by Due-on-Transfer mortgage. While the loans are forgiven after 20 years; if the property is sold or the mortgage refinanced, the principal must be re-paid immediately.

Community Septic System Outreach Program: This program was developed as a partnership between the Community Action Agency and the Delaware Environmental Finance Office to identify low and moderate income homeowners that may need financial assistance to replaced failed and/or failing OSWT systems.

Washington (Program Type: Pass Through/Conduit Lending)

The State of Washington's, Department of Ecology provides funding to local governments to set up low-interest loan programs to repair or replace failing onsite sewage systems through two programs: the RLP), as well as the LLP. Funding for these programs is provided by two sources: Washington's CWSRF and the Centennial Clean Water Fund. SRF funding is used as the primary source of loan financing, while the Centennial Clean Water Fund is used to cover administrative costs, loan losses and grants/subsidies to low-income individuals.

Local Loan Program: The CWSRF program, utilizing a pass-through program mechanism, provides funding to 15 counties or local health departments in the Puget Sound and Marine counties, as well as the Spokane Conservation District through the Local Loan Program. Currently, two counties/ conservations districts act as "pass-through entities" providing sub-loans to individual homeowners for the repair and replacement of septic systems. The county or its health department is responsible for local loan servicing, collecting payments, and payment tracking (but may contract these services to a lending institution). The pass-through entity (county or conservation district) also approves or denies loan requests and establishes the terms of the sub-loans to residents. The pass-through entity is responsible for submitting quarterly progress reports to the CWSRF program providing schedules for project completion, loan marketing activities, data on loan applications and closures, and a final list of local loans provided to homeowners and small commercial enterprises.

Regional On-site Sewage System Loan Program: The RLP, launched in 2016, is a partnership between the Department of Ecology, the Department of Health, local counties and health departments, and Craft3 (a non-profit third-party lender). The RLP program is managed by Craft3, a non-profit financial institution, who was contracted by the Department of Ecology to manage the lending activities on behalf of local governments. Craft3 works with the local authorities to ensure that the proposed repair or replacement is approved, and is responsible for the approval or denial of loan requests, establishing loan terms, the loan servicing, collection of payments, payment tracking, submittal of quarterly reports, loan marketing activities, providing data on loan applications and closures, etc. Ultimately, Craft3 assumes the financial risk associated with lending, and is obligated to repay the CWSRF funds.

Through this program, Craft3 provides Clean Water Loans to both residential and commercial owners to repair or replace failing onsite sewage systems or to abandon systems and connect to the sewer. To be eligible for a loan the septic system must be failing, and funding cannot be used for new developments. The 15-year loan can cover the full cost of designing, permitting, installing and maintaining a septic system and includes a reserve for ongoing inspections and repairs. The loan rates (1.99-4.99 percent) and terms (no monthly payment, monthly interest only or monthly principal plus interest) vary based on the annual household income and occupancy. There are no

income restrictions on eligibility, however more favorable rates/terms are provided for lower incomes. There is an option to extend the loan upon the loan maturing. If a property is sold or transferred, the loan balance if due on sale or maybe transferred to the new owner upon approval. Since the program inception in 1990, $15 million in CWSRF has been provided to the program.



Rhode Island (Program Type: Sub-State Revolving Fund)

Rhode Island is a coastal state and had an estimated 25,000 cesspools (2007) when the state passed a cesspool act to replace the 1,400 highest priority cesspools. It is unclear how many cesspools remain in Rhode Island, however as of 2015, almost 21,000 AIE technologies had been installed (many in new homes). Rhode Island passed the Rhode Island Cesspool Act of 2007 to better protect coastal water quality, groundwater and improve upon wastewater disposal methods. The act required that the state replace cesspools within 200 feet zones near tidal water, drinking water reservoirs and wells. However, the efforts to replace the cesspools was very slow. Ultimately, in 2016, the state passed a cesspool phase out program requiring for the replacement of cesspools on all properties subject to sale or transfer.

To facilitate the identification of priority conversion areas, the EPA awarded the state a $3 million State and Tribal Assistance Grant to create a cesspool conversion strategy/plan or comprehensive wastewater management plan. The state provides town with funds (State Bond funds, federal non-point source fund grants or EPA grants) to develop Onsite Wastewater Management Plans. Upon development of the plan, the town is eligible to apply for the Community Septic System Loan Program.

Community Septic System Loan Program

The State of Rhode Island's CSSLP, launched in 1999, provides low-cost financing to residential property owners for the repair or replacement of substandard or failing septic systems or to replace cesspools when the homeowner wishes to upgrade to a septic system. The program is funded via the Rhode Island Infrastructure Bank (RI I-Bank) which utilizes federal dollars recycled from previous CWSRF loans to provide the source of funds for the CSSLP. Municipalities apply to the Rhode Island I-Bank for a "lending facility", the proceeds of which can be utilized to make direct loans to homeowners. Residents of participating communities can then access the funding through their municipality via RI Housing. When a community has depleted its funding, the community re-applies to the Rhode Island I-bank for additional funds.

Rhode Island Housing serves as the loan servicer the homeowner loans and is responsible for the required administrative activities including: accepting and reviewing home homeowner applications from eligible communities; coordinating payments to septic system installers/homeowners;

collecting loan repayments from homeowners; crediting the homeowner repayments to the principal payment responsibility of the local governmental unit; and providing monthly reports to both the CWSRF program and the local governmental unit.

Under the CSSLP program, both residents and non-owner occupants may borrow up to $25,000 in interest free financing to pay for engineering and system replacement costs for failing septic systems. The CSSLP loan term is for up to ten years. There are no income limits for program participants, however applicants are required to have a debt to income ratio of no more than 45%. The homeowner is responsible for a $300 loan origination fee and a 1 percent annual servicing fee on the outstanding loan balance which is split between RI Housing and Rhode Island I-bank to cover costs associated with servicing the loan. For a homeowner to be eligible for CSSLP funding, a prerequisite is that the community within which the homeowner resides must have an On-Site Wastewater Management Plan which is approved by the Rhode Island Department of Environmental Management (DEM). In addition, the municipality must be on DEM's Project Priority List and be issued a Certificate of Approval. *To date the CSSLP program has provided $12.4 million in loans from since 1999. The program has issued 783 loans with an average loan amount of $15,435.*

Sewer Tie-in Loan Fund Program (STILF)

The Sewer Tie-in Loan Fund program provides homeowners in participating communities a low-cost loan to connect to the local sewer system and abandon their individual septic system or cesspool. Under the STILF program, the Rhode Island I-Bank provides interest free loans of up to $150,000 to sewer system owners. The sewer system owner then directs STILF funds to individual homeowners through RI Housing. The maximum loan for an individual property owner is $10,000, with a term of up to 5 years. Funds cannot be used to connect newly connected homes to sewers or to repair/replace or upgrade existing sewer connections. Upon notification by the sewer system owner that an individual property owner qualifies for the program, RI Housing will process the loan application, cut vendor checks, and process the loan repayments. *To date the STILF program has closed 49 loans for a total of $197,782. The average loan amount was $3,552.*

New York (Program Type: Septic System Replacement Fund)

New York passed the State's Clean Water Infrastructure Act in 2017 which provided $2.5 billion in funding for aging infrastructure and included $75 million to be provided over five years for the State's Septic System Replacement Fund.

Septic System Replacement Fund:

The Septic System Replacement Fund, administered by the EFC, provides funding to participating counties with an annual allocation of funds to replace cesspools and septic systems in New York State. Participating County Health Departments are responsible for the overall administer of the program and work directly with individual residential owners on the application process and grant awards. Counties may provide grants for projects that replace a cesspool with a septic system; installation/ replacement or upgrade of a septic system; or installation of enhanced treatment technologies. Individual property owners are reimbursed for up to 50 percent of eligible project costs (up to a maximum of $10,000) which include design, installation and system costs. Eligibility requirements include: a septic system project must be in a participating county and within a priority geographic area; Single family, two family and small businesses with an existing design sewage flow not exceeding 1,000 gallons per day (gpd); and seasonal or secondary homes may be eligible. New construction on vacant lots are not eligible and the property cannot have any outstanding or open

real property tax liens. The property must be a valid certificate of occupancy or equivalent. Grants are provided on a reimbursement basis, therefore property owners are initially responsible for the total cost of their septic system project.

Each county's Health Departments are responsible for reviewing and evaluating the individual homeowner applications and determining financial assistance awards based on the program criteria. Considerations include: property's location in relation to a water body, impacts to groundwater used as drinking water, and the condition of the property owner's current septic system. Upon notification of grant eligibility, property owners work with the County to submit the application, secure design approval and on contractor selection. Upon completion of construction activities, the Health Department is responsible for verifying the project and authorizing payment.

In addition to the State's Septic System Replacement Fund, individual counties have developed county level funding programs to further entire individual residential owners to transition to the use of new technologies/OSWT systems. Suffolk County, located along the coast, has an estimated 252,000 cesspools and 108,000 other onsite disposal systems. The county identified the need to convert/replace almost 2,600 onsite systems per year based on home sale and developed the Septic Improvement Program to support this effort.

Septic Improvement Grant and Loan Program.

Under the Reclaim Our Water Septic Improvement Program, homeowners who decide to replace their cesspool or septic system with new technologies will be eligible for a grant of up to $30,000 from Suffolk County and New York State to offset the cost of one of the new systems. In addition to the grant, homeowners can qualify to finance the remaining cost of the systems over 15 years at a low 3 percent fixed interest rate. The loan program is administered by Community Development Corporation of Long Island Funding Corp, with financial support from Bridgehampton National Bank, in the amount $1 million and financial commitments from several philanthropic foundations. Eligibility criteria include: residence must be served by an existing OSWT system or cesspool; not be located within a proposed sewer district; not be new construction; have a valid certificate of occupancy and the applicants income should be verified. Suffolk County has approved approximately 550 AIE systems. Currently, the County can award up to 200 grants per year but plans to increase to 1,000 per year.

Maryland (Program Type: Credits and Linked Deposit)

Maryland is a coastal state with an estimated 420,000 septic systems (2009), with 52,000 of these systems being located within critical land areas. With nitrogen being the most serious pollutant in the Chesapeake Bay and Maryland waterways, Senate Bill 320 was passed to upgrade onsite septic systems to remove nitrogen. The emphasis is on the replacement of cesspools and septic systems with AIE technologies that remove nitrogen. Maryland has multiple funding programs for cesspool conversions including the BRF, the Water Quality Trading Program (WQT), and the Linked Deposit Program.

Bay Restoration Fund:

The BRF, created with the passage of Senate Bill 320 in 2004, creates a dedicated fund to finance the improvement of nitrogen, phosphorus, ad nutrient levels. Maryland utilizes two mechanism to fund the program. All municipal sewer customers are charged a fee of either $2.50 or $5 per month (depending on location) which is deposited into an interest earning fund. In addition, for each user served by an OSWT system they are charged a $60 annual fee. The income of the ODSDF is

$27 million per year and 60 percent of the funds o to septic system upgrades and the remaining funds are used for cover crops. BRF funds can be used to finance wastewater treatment plants upgrades to the best available technology for nitrogen removal or to connect existing dwellings to sewer, where public sewer is available. The grants are limited to $20,000 per household and the property owner is responsible for any additional costs over the grant amount. Grants can be applied toward capital facility, user connection, and master plumbing charges. The Clean Water Commerce Act (CWCA) passed in 2017 and expanded the use of BRF to include the costs related to the purchase of cost effective nitrogen, phosphorus, or sediment loading reductions. The amount used for funding is not to exceed $10 million per year in the fiscal year (FY) 2020 and 2021.

Water Quality Trading Program:

The Water Quality Trading Program creates a public market for nitrogen, phosphorus, and sediment requirements. It is a voluntary program that's a collaborative effort between the MDE and the Maryland Department of Agriculture (MDA). The purpose is to accelerate the restoration and protection of the Chesapeake Bay and local waters by promoting upgrades of OSWT systems to generate credits and meet National Pollutant Discharge Elimination System (NPDES) permit requirements. Each county has a specific total maximum daily load goal and can reach these goals by upgrading OSWT systems.

Linked Deposit Program:

The Linked Deposit Program, funded by the Maryland Department of Environment, provides a source of low interest financing for private landowners and water system owners to implement capital improvements to reduce nutrient delivery to the Chesapeake Bay. "Linked" refers to the relationship between below-market rate of interest agreement provided to a participating lender by MDE's WQFA. The below-market rate of interest loan is passed on to the borrower to fund water quality and drinking water capital projects. Participating lenders are accountable for processing, underwriting, and servicing the loan. The bank will evaluate the credit worthiness of an applicant according to the lenders underwriting criteria. The bank assumes all risk of default and the State and MDE are not liable to reimburse a participating bank for any loses or expenses associated with loans from this program. The loan agreement is also between the lender and the applicant, not the State or MDE.

MDE's septic upgrade program annually receives an estimated $8 million in funding, enough to cover about 600-700 septic upgrades per year. An average septic system upgrade, plus five years of maintenance, costs approximately $10,000-$13,000. Since 2006, the State has awarded approximately $19 million to homeowners and counties for upgrading septic systems.

Massachusetts (Program Type: Pass through Lending, Direct Loans, and Tax Credits)

Massachusetts is a coastal state. The number of OSWT systems in Massachusetts is not readily available. In 1996, the Massachusetts Department of Environmental Protection (DEP) recognized failing cesspools and septic systems as a leading cause of water pollution and drinking water contamination.

Community Septic Management Program

Massachusetts established the Community Septic Management Program, in 1996, to provide low cost loans to communities to devise local inspection and septic management plans. The Community Septic Management Program provides communities with low interest loans of up to $200,000 to devise a Community Inspection Plan or a Septic Management Plan. The Local Inspection Plans are

intended to protect environmentally sensitive areas from contamination; while Septic Management Plans identify areas that need monitoring and maintenance. Both plans must include a provision of financial assistance to homeowners through betterment agreements.

Communities, through the local Board of Health, may then provide financial assistance to eligible homeowners for the repair, replacement, or upgrade of failed septic systems or the connection to an existing sewer through a Betterment Agreement. A Betterment Agreement channels loans from the CWSRF program through a municipality to individual property owners for the repair or replacement of septic systems. The interest rate ranges between 3-5 percent based on affordability. Funds may be used to cover all costs necessary to repair or replace a failed septic system, hook up to existing sewer system, or to replace traditional septic systems with alternative systems. To be eligible for funding, a project must be placed on a community's priority list and screened based on environmental/public health impacts, income and funding needs. In general, betterment loans, together with accrued interest, are repaid through the Community's tax collection – as a line item in the property tax bill. If the property is sold, the payments is assumable by the buyer of a property. The municipality can place a municipal lien on property if the homeowner defaults on the loan.

The Community Septic Management Program was funded through a loan from the State Revolving Fund which was offered at 0 percent interest rate to communities via the Massachusetts Water Pollution Abatement Trust. The Massachusetts Clean Water Trust provides up to $5 million a year from the CWSRF program assets to fund municipalities' needs. There is also a $20,000 grant available for first-time communities entering the Program to provide additional funds to assist with administrative costs. The community also has an option to set aside up to 2.5 percent of the loan funds to obtain consulting services to administer the Program. Each community executes an agreement with the Trust describing the terms and conditions of the SRF Loan. The community subsequently re-loans these funds to homeowners. The interest charged on the betterment loans to homeowners provides positive cash flow and additional security for the community. Each community assumes full responsibility for repaying monies borrowed from the Trust. However, the repayment obligation is secured with the betterment agreements made with homeowners.

Homeowner Septic Loan Program

The program is a bank loan program providing low interest loans to eligible homeowners through the Massachusetts Housing Program. The Massachusetts DEP allocated $14 million for financing home septic repairs. The program provides funding to owners with up to 4 family homes in the amount of $1,000 to $25,000 for a loan term of 3-20 years. Interest rates range from between 3-5 percent based on family size, income and market area. The minimum monthly payment is $27. The loans are backed by mortgage security. All loans are due in full upon sale, transfer or refinancing of the first mortgage.

Tax Credit:

The Commonwealth also provides a tax credit of up to $6,000 over 4 years to defray the cost of septic repairs to a primary residence. The tax credit is available for all septic systems and cesspool upgrades and repairs that occurred after January 1, 1997. Forms are provided through the Department of Revenue for homeowners to claim the tax credit.

Since the implementation of the Community Septic Management Program, more than 4,000 systems have been replaced, repaired, or upgraded. Over $22 million in low interest loans have been approved by the Massachusetts Clean Water Trust and the Massachusetts CWSRF program to communities. In addition, repayment through the property tax assessments is a creative revenue source for funding a nontraditional

project. The overall effectiveness of the Community Septic Management Program's implementation depends largely on the initiative of local officials.

New Jersey (Program Type: Direct Loan and Linked Deposit)

New Jersey Department of Environmental Protection's (NJDEP) Environment Infrastructure Financing Program is now known as the New Jersey Water Bank (NJWB). It is a partnership between the NJDEP and the New Jersey Environmental Infrastructure Trust (Trust). The purpose is to provide low cost financing for the design, construction, and implementation of projects that help protect and improve water quality. NJWB financing comes from the Trust and the NJDEP. The Trust issues revenue bonds that are used in combination with zero percent interest funds to provide very low interest loans for water infrastructure projects. The NJDEP uses a combination of federal State Revolving Fund (SRF) capitalization grants and State's matching funds, loan repayments, State appropriations, and interest earned on such funds. To receive funds through the NJWB, a public sponsor must develop a septic management district.

The New Jersey CWSRF Green Project Reserve program and the Municipal Grant Program (MGP) may also provide funding for septic systems. The CWSRF green project reserve is a federally funded program and both public and private owned projects are eligible for financial assistance. Eligible projects include decentralized wastewater treatment solutions including septic tanks. The MGP provides grants from the state to eliminate septic systems and finance new sewer connections. Assistance is available for up to $500 per property and can only be used to assist with the physical cost of connection to the system. New Jersey is in the process of developing a program to invest unexpended capital funds from its CWSRF and put the money to homeowners through a Link Deposit Program. This is similar to the program in Maryland in which the CWSRF program purchases a reduced rate certificate of deposit from a private institution, and the institution then loans out the deposited funds to individuals for smaller scale water quality projects.

Because cesspools must be upgraded during real estate transactions, there is an opportunity for funds to come through the Department of Community Affairs (DCA) community block grants or USDA rural development housing grants.

Ohio (Program Type: Direct Financing)

In 2013, the Ohio Department of Health estimated that 31 percent of septic systems were failing. There are several funding mechanisms available to help fund the conversion of the state's septic systems including: the Water Pollution Control Loan Fund (WPCLF), the Water Resource Restoration Sponsor Program (WRRSP), the State's CWSRF, and the Un-Sewered Area Assistance Program. The Ohio EPA offers three options for direct funding assistance which include: a linked deposit program, a local loan capitalization program, and the Principal Forgiveness loans to the Local Health Districts (LHDs).

Water Pollution Control Loan Fund:

This fund is offered by the Ohio EPA to assist low to moderate income households to repair and replace failing on site treatment systems. WPCLF provides below-market interest loans. Small borrowers are usually eligible for indirect loans through linked deposit programs, while public and large private borrowers are able to secure direct loans. Local government entities can create their own RLF or linked deposit program using a WPCLF loan. In 2019, $10.1 million was provided for the repair and replacement of failing septic systems.

Water Resource Restoration Sponsor Program (WRRSP):

Another program offered by the Ohio EPA, the WRRSP offers communities very low interest rate for wastewater treatment plant improvements as long as the community also sponsors projects to protect or restore water resources. The philosophy of the program is that wastewater treatment plans improvements and water resource restoration efforts are complementary efforts.

Ohio Clean Water State Revolving Fund (CWSRF):

The CWSRF program provides a linked deposit program for individual homeowners that need to upgrade or replace a decentralized system through low-interest loans. The state works with local banks to provide financial assistance at a reduced rate, and the borrower is able to secure a loan at under market rate.

Un-sewered Area Assistance Program:

The Ohio Water Development Authority developed this program to provide grants for the construction of a publicly owned sewer system for areas that are un-sewered and have failing on site treatment systems. This program is available to state and county and public agencies with the authority to manage wastewater or water management facilities in un-sewered areas.

Principal Forgiveness to LHD:

Principal Forgiveness loans are similar to grant funds and are the most popular amongst homeowners in the State. Since 2016, the Ohio EPA has awarded nearly $50 million to Ohio LHDs to be disbursed to eligible homeowners. Annual awards to Local Health Districts range from $150,000 to $300,000. LHDs are responsible for setting area priorities and determining eligibility of residents based on income and the failing on site treatment systems. Homeowners can qualify for 50 percent to 100 percent in principal forgiveness depending on income and status.

Florida (Program Type: Incentives)

Florida is a coastal state which has an estimated 2.6 million onsite septic systems in operation, serving as a means of wastewater disposal for 30 percent of Florida's population. Florida represents approximately 12 percent of the United States' septic systems. The state has shallow groundwater and has had significant water quality issues. In 2008, legislation was passed that mandated the development of a comprehensive nitrogen reduction strategy for on-site systems.

Septic Upgrade Incentive Program

In 2016, the Florida Department of Environmental Protection (DEP) was authorized to issue funds for its Septic Upgrade Incentive Program (Program) pursuant to the Florida Springs and Aquifer Protection Act and resulting Basin Management Action Plans (BMAPs) to develop an incentive program to encourage homeowners to voluntarily remediate existing conventional septic systems and cesspools to include nitrogen reducing enhancements. Eligible enhancements include retrofitting septic tanks with advanced pre-treatment, recirculating aerobic treatment units, or replacing traditional septic tanks with upgraded nutrient-reducing technology.The incentive program offers subsidies, only in designated priority focus areas within a county, in amounts up to $10,000 per system and are designed to offset homeowner costs. Funds are available on a first come first served basis, until funding is exhausted. The subsidies are available for payment directly to septic system installers and licensed plumbers retained by homeowners to update existing conventional systems with enhanced nitrogen reducing features and must be pre-approved by DEP prior to the commencement of work. The Program is contingent upon appropriation by the

Legislature and, if required, an authorized release of the funds by the Legislative Budget Commission. DEP anticipated that program funding would be exhausted by April 17, 2020, for the current FY. It is anticipated that new funding will be available at the start of the new FY beginning on July 1, 2020.

In addition, the Governor's budget includes an earmark for $7.6 million specifically for septic upgrades for homeowners in rural areas where sewer systems are not available.

Texas

Texas is a coastal state with 25-35% of its population served by OSWT systems and approximately 45,000 new onsite systems installed every year. The state has developed a rigorous approval process for propriety and non-standard onsite treatment systems. Most of the current grant programs in Texas do not provide assistance to individual homeowners, however some do fund local and regional projects that may include septic system assistance. Some programs include:

Texas On-Site Sewage Facility Grant Program (TOGP):

TOGP gives competitive grants to support applied research and projects for on-site wastewater treatment technology and systems. This grant is funded from a fee collected for each on-site sewage facility (OSSF) permit issued.

319 Nonpoint Source Program:

This program cleans and prevents pollution caused by runoff from urban and nonagricultural nonpoint sources. Nonprofit organizations and state agencies are eligible, but individuals may not apply for direct funding.

Supplemental Environmental Projects (SEPs):

The SEPs are from the Texas Commission on Environmental Quality that includes programs that help homeowners with septic systems among other environmental projects. Project types can either be a contribution where the respondent contributes to a pre-approved SEP performed by a third party, custom where the respondent performs the project using their resources, or compliance where an eligible local government may correct the violation alleged in the enforcement or remediate environmental harm.

Minnesota (Program Type: Conduit Lending)

Small Community Wastewater Treatment Program

The Minnesota Public Facilities Authority (PFA) administers the Small Community Wastewater Treatment Program to provide financing to replace non-complying septic systems and straight pipes with new individual or cluster subsurface sewage treatment systems that are publicly owned, operated and maintained. To be eligible for financing, applicants must be a city, county, township, sanitary district or other governmental subdivisions that has a project ranked on the Minnesota Pollution Control Agency's (PCA's) Project Priority List (PPL). Projects are funded in priority order, as established by the PCA. The entity receiving financing must own the subsurface sewage treatment systems (SSTS) systems built under the program. Each property owner seeking to participate in the program must provide a utility easement to the entity to allow access to the system for maintenance and repairs.

Program funding, appropriated from the State's Clean Water Fund, via the Clean Water, Land and Legacy Amendment, provides for:

1. Technical Assistance Grants - Technical assistance grants of up to $60,000 are available to communities to contract with licensed SSTS professionals, counties, the University of Minnesota on-site sewage treatment program, or qualified nonprofit organization to: conduct preliminary site evaluations and prepare feasibility reports, provide advice on possible SSTS alternatives, and help develop the technical, managerial, and financial capacity to build, operate, and maintain SSTS systems.
2. Construction Loans/Grants - Construction financing is available for costs (design, construction, land acquisition and related legal fees) associated with replacing a non-complying system with publicly owned subsurface sewage treatment system. PFA will provide construction financing of up to $2 million per year at a 1% interest rate and grants of up to 80 percent based on affordability criteria. Disadvantaged communities may also qualify for 50 percent principal forgiveness (grant). The construction loan term is for up to 20 years, but not to exceed the design life of the systems. Loan repayments must begin no later than two years after the loan is awarded.

All unsewered communities seeking CWSRF funding for decentralized systems are required to establish a user charge system to pay for operation and maintenance costs associated with the system including development of:

- Financing Plan that provides a dedicated source of revenue for debt service and operation and maintenance (typically special assessments or user charges).
- Management Plan including a schedule for inspections, pumping, repair and replacement activities.

Alternatives analysis using the Wastewater Treatment Hierarchy "Wastewater Hierarchy" where the focus is on small, acute problem areas before deferring to a larger infrastructure solution to correct environmental or public health issues.

Appendix C

POTENTIAL FEDERAL AND STATE FUNDING SOURCES FOR HAWAIʻI

Current funding options for cesspool conversions for individual homeowners or groups of homeowners to finance OSWT systems are limited and typically consist of property assessments, tax credits and low-interest loans and grants from various Federal, State and community-based agencies. The following is a summary of federal and state funding options that can be used to fund cesspool conversion projects, but many require a public entity be the primary applicant.

Federal Funding

There are several highly competitive federal grant and low loan programs that provide financial resources that may be viable opportunities.

Environmental Protection Agency

Clean Water State Revolving Fund Programs

The CWSRF program is a federal-state partnership that provides communities with a source of low-cost financing for a wide range of water quality infrastructure projects. With the passage of the WRRDA Amendments, the CWSRF program eligibilities were greatly expanded, including the ability of the CWSRF program to provide financial assistance for the construction, repair and rehabilitation or replacement of decentralized wastewater treatment systems, as well as the ability for the program to provide financial assistance to any qualified non-profit entity, as defined by the administrator, to provide assistance to owners and operators of small and medium publicly owned treatment works. In addition, CWSRF programs may now provide assistance for the construction, repair or replacement of decentralized wastewater treatment systems that treat municipal wastewater or domestic sewage. CWSRF funding can be provided to public entities, such as municipalities, county governments, and state agencies, private and non-profit organizations.

CWSRF Loan Assistance Programs have considerable flexibility in their funding mechanisms and can set the conditions for loan assistance, an authority that can be exceptionally helpful in financing nontraditional eligibilities, such as cesspools, including:

- Loan maturities can range up to 30 years or useful life of the project.
- Repayment schedules can be structured to meet the needs of the borrower.
- Interest rates can vary from market rates to zero percent.
- Ability to target lower interest rates to DACs to incentivize a variety of goals such as nonpoint source projects, green projects, and the use of innovative technologies.
- Source of repayment does not have to be the project itself, any dedicated source of revenue can be used to repay a NPS loan.

The CWSRF program can be used to finance a variety of projects through various funding mechanisms. Selection of the mechanisms is based on the type of project, repayment source and depends on decisions made by State programs. The federal EPA delegates the CWSRF program authority to each State.

Water Infrastructure Finance and Innovation Act

The EPA's WIFIA established in 2017 provides a new financing mechanism for water and wastewater infrastructure projects. WIFIA provides low interest rate financing for the planning/design and or construction of large dollar-value water and wastewater projects. Eligible projects include:

- CWSRF and Drinking Water SRF eligible projects.
- Projects for enhanced energy efficiency at drinking water, wastewater and recycled water facilities.

- Brackish or seawater desalination project, an aquifer recharge project, water recycling project.
- Acquisition of property if it is integral to the project or will mitigate the environmental impact of a project.
- Bundled SRF projects submitted under one application by an SRF program.
- A combination of projects secured by a common security pledge.

Projects must cost no less than $20 million (or $5 million for small community projects) or an entity may bundle a group of projects together totaling a minimum of $20 million. The program provides a maximum loan not exceeding 49 percent of the project costs. The interest rate is equal to the US Treasury rate of a similar maturity plus a point. The loan term is for 35 years, with the option to defer repayment by 5 years. Unlike the SRF program, the WIFIA program has an "application fee" which ranges on average from $300,000-$500,000, which reconciles the cost associated with processing the loan.

The WIFIA application process is a two-step process, agencies are asked to submit a Letter of Interest which is reviewed by the EPA and evaluated based on the program priorities and on a set of scoring criteria. The EPA will invite selected project applicants to submit a formal application package. It is with the formal application that the applicants are requested to provide an initial application fee of $100,000 and upon entering a financing agreement borrowers are asked to reimburse the EPA for processing costs.

Non-Point Source Section 319 Grants

Under section 319 of the Clean Water Act, EPA provides grants to states to control nonpoint sources of pollution from a variety of sources such as agricultural runoff, mining activities, and malfunctioning onsite septic systems. The EPA encourages each state to use the funds to restore and protection the priority water body types including surface and groundwater. While all Section 319(h) funding decisions are made by the states, projects must be identified in the state's non-point source management plan. States submit their proposed funding plans to EPA. Some, but not all, states use these grants to construct, upgrade, or repair onsite systems. Note that individual homeowners are not eligible to directly receive grant assistance through this program, as the grants are typically provided to watershed organizations that are actively implementing watershed-based plans to restore impaired waterbodies. The federal appropriations vary year to year. In FY 2019, the total appropriation for the program was $165.4 million was allocated for the program. States are required to use 50 percent of their allocation for watershed projects, and the remaining funds can be used for non-point source projects. Recipients of the grant are required to provide a 40 percent non-federal match and projects must be completed within 5 years of grant award.

In Hawaiʻi, non-point source grants are administered through Hawaiʻi's Clean Water Branch Polluted Runoff Control Program, which is under the Hawaiʻi State Department of Health. In the 2015-2020 Hawaiʻi Nonpoint Source Management Plan, cesspool wastewater was identified as a source of non-point source runoff impacting the state's resources and identified the need to develop statewide strategies that address water quality protection and runoff from cesspools, agriculture and urban areas. The PRC Program typically issues a Request for Proposal on an annual basis. Grant recipients are required to provide a 25 percent non-federal match. The State has recently invested in cesspool replacement projects in Kauaʻi (Hanalei Bay watershed) with Section 319 funding, and there are plans to invest in additional cesspool replacement projects in the following years.

United States Department of Interior, Bureau of Reclamation

The USBR WaterSMART program, Reclamation provides cost shared financial assistance to states, tribes and local governments to help them plan and implement projects to increase water supply through investments to modernize existing infrastructure. WaterSMART funding opportunities include: Title

XVI/WIIN grants, Water and Energy Efficiency Grants, Drought Program, Basin Study, Desalination, and CWMPs.

United States Department of Interior, Bureau of Reclamation – Title XVI Program (Title XVI Authorized and WIIN Authorized Projects)

Reclamation administers funds for recycled water feasibility, demonstration, and construction projects through the Water Reclamation and Reuse Program authorized by the Reclamation Wastewater and Groundwater Study and Facilities Act of 1992 (Title XVI) and its amendments. The program provides as much as 25 percent of construction costs with a maximum of $20 million. To meet eligibility requirements a project must have a feasibility study, comply with environmental regulations, and demonstrate the ability to pay the remainder of the construction costs. Projects are authorized by Congress and recommended in the President's annual budget request by the USBR. Congress then appropriates funds and the Bureau ranks and prioritizes projects and disburses the money on a competitive grant basis each year. Prioritized projects are those that postpone the development of new water supplies, reduce diversions from natural watercourses, and reduce demand on federal water supply facilities, or that have a regional or watershed perspective.

United States Bureau of Reclamation - Drought Resiliency Program

Reclamation administers two grant programs under the Drought Resiliency Program.

- **Drought Contingency Planning:** Provides grant funds for the development of Drought Management Plan or for an agency to update an existing drought plan with grant awards of up to $200,000.
- **Drought Resiliency Projects:** USBR provides funding for the implementation of projects that build long-term resiliency to drought and reduce the need for emergency response actions that are identified in a Drought Management Plan. Projects eligible for funding should address at least one the following: serve to increase the reliability of water supply; improve water management; implement systems to facilitate voluntary water sales, transfers, or exchanges; and provide benefits for the environment are eligible. Types of projects include moving pipelines, small recycling, storage reservoir construction, and projects that increase flexibility in drought. The Drought Resiliency Grants provide as much as 25 percent of construction costs with a maximum of $300,000 for projects completed in two (2) years and $750,000 for projects that are completed in three (3) years. $20 million. To meet eligibility requirements a project must have a drought management plan, comply with environmental regulations, and demonstrate the ability to pay the remainder of the construction costs.

United States Bureau of Reclamation WaterSMART Small-Scale Water Efficiency Projects

Under the WaterSMART grants program, Reclamation provides a dedicated source of funding to fund small on the ground implementation projects to support water planning. USBR anticipates making $2 million available in Federal funding available in 2019. The total project cost should be capped at $150,000 and grant funding will include a 50/50 cost share with the total Federal funding limit of $75,000. Projects need to be completed within 2 years of grant award.

United States Bureau of Reclamation - WaterSMART: Water and Energy Efficiency

Through the WaterSMART Water and Energy Efficiency Grants program, Reclamation provides a 50/50 cost share funding to irrigation and water districts, Tribes, States, and other entities with water or power delivery authority. Eligible projects include projects that result in quantifiable and sustained water savings, increase renewable energy use and improve energy savings, and support broader water quality sustainability benefits. Projects that benefit endangered and threatened species, support water sustainability benefits, or

implement activities to address climate related impacts on water may apply. Projects are selected through a competitive process and the focus is on projects that can be completed within 24 months that will help sustainable water supplies in the western United States. There are two funding limits for the program: $300,000 (typically for projects completed within a year; and up to $1,000,000 (for projects to be completed in 3 years). The total earmarked for this program in FY 2019 was $34 million.

United States Department of Interior, Bureau of Reclamation – Cooperative Watershed Management Program

Through the CWMP, Reclamation provides funding to watershed groups to encourage stakeholders to form local solutions to address water management needs. Funding is provided on a competitive basis for:

Watershed Group Development and Watershed Restoration Planning: This funding provides funding for the development of watershed groups, watershed restoration planning, and watershed management project design (Phase I). Eligible applicants include states, Indians, tribes, local and special districts, local government agencies and non-profit organizations. As part of Phase I activities, applicants may use funding to develop bylaws, a mission statement, complete stakeholder outreach, develop a watershed restoration plan, and watershed management project design. For this funding program, Reclamation will award up to $50,000 per year for a period of up to two years (total of $100,000) with no non-Federal cost-share required.

Implementation of Watershed Management Projects: Under this program, Reclamation provides cost-shared financial assistance to established watershed groups to implement watershed management projects. These on-the-ground projects, collaboratively developed by members of a watershed group, address critical water supply needs and water quality concerns, helping water users meet competing demands and avoid conflicts over water. Reclamation will award up to $300,000 per project. Applicants must contribute at least 50 percent of the total project costs.

United States Department of Commerce – Economic Development Administration

Public Works and Economic Adjustment Assistance Programs

The EDA provides grants for public works projects provide grant funding for public works projects, including wastewater and stormwater projects that promote economic development. The EDA through its Public Works and Economic Adjustment Assistance Program will provide support assistance with up to 50 percent in matching funds (up to $3 million) based on the number of permanent jobs created by the implementation of the proposed project. For every full-time job created, the EDA will provide $10,000 in EDA assistance. In order to apply a community, County or region must have a current Comprehensive Economic Development Strategies plan. The public entity would have to provide an economic impact statement demonstrating the anticipated growth associated with the project implementation as part of the application process. All construction projects are expected to be completed within 5 years from the date of award. Applications are accepted on a rolling basis. The EDA has published the FY 2020 Public Works and Economic Adjustment Assistance Programs Notice of Funding Availability and is soliciting applications in rural and urban areas. There are no submission deadlines and applications will be accepted until all funds have been expended.

United States Department of Agriculture

Water & Waste Disposal Loan and Grant Program

The USDA provides funding directed at low-income and or small water/wastewater utilities. USDA provides Predevelopment Planning Grants which assist low-income communities with the initial planning and development of applications required for USDA Development Program requirements include: 1) Population must be less than 10,000 people; and 2) Median household income below the poverty line or less than 80 percent of the statewide non-metropolitan median household income. Maximum grant amount of

$30,000 or 75 percent of the predevelopment planning costs. Twenty-five (25) percent cost share from applicant or third-party sources.

The Water and Waste Disposal Loan and Grant Program provides direct loan/grant and loan guarantees for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and stormwater drainage. Eligible applicants include most state and government entities, private non-profits and federally recognized tribes. Eligible areas include rural areas and town with populations of 10,000 or less. Funds may be used to finance the acquisition, construction or improvement of sewer collection, transmission, treatment and disposal systems. Loans have a 40-year payback period, based on the useful life of the facilities. The interest rate is based on the need for the project and the median household income of the area to be served.

Rural Housing Service

Under the Rural Housing Service Program, USDA offers a variety of programs to build or improve housing and essential community facilities in rural areas. To ensure decent, safe and affordable housing remains available, USDA Rural Development can provide assistance through home repair loans and grants to remove health and safety hazards or make a home accessible for household members. Funds can be used to repair or replace furnaces, appliances, electrical, foundations, siding, roofing windows, plumbing, wells, septic systems and other health and safety hazards. Loans are available up to $20,000 at a one percent fixed interest rate for up to 20 years. Seniors age 62 and older, who do not have repayment ability for a loan, may be eligible for a loan and grant combination to make needed repairs and improvements. The maximum lifetime grant amount is $7,500. Funds can cover all upfront and construction costs, including septic system designs, permits and installations. Program eligibility is based on household income that cannot exceed 50 percent of the area median income and the property must be located in a rural community.

Rural Economic Development Loan and Grant Program

The Rural Economic Development Loan and Grant program provides funding for rural projects through local utility organizations. USDA provides zero-interest loans to local utilities which they, in turn, pass through to local businesses (ultimate recipients) for projects that will create and retain employment in rural areas. The ultimate recipients repay the lending utility directly. The utility then is responsible for repayment to USDA. USDA provides grants of up to $300,000 to local utility organizations which use the funding to establish RLFs. Up to 10 percent of the grant funds may be applied toward operating expenses over the life of the RLF. Loans are then made from the RLFs to project sponsors (up to 80 percent of project costs). First time loans are provided at 0 percent interest, subsequent loans may incorporate interest rates or administrative loan fees. When the RLF is terminated, the grant is repaid to USDA. Program eligibility is based on household income that cannot exceed 50 percent of the area median income and the property must be located in a rural community.

United States Department of Housing and Urban Development – Community Development Block Grants (CDBG)

The HUD awards discretionary funding through various programs including the CDBG program. The CDBG program, authorized under Title 1 of the Housing and Community Development Act of 1974, provides grant funding to communities to develop viable urban communities by "providing housing and a suitable living environment, and by expanding economic opportunities". HUD provides annual funding to states, which then allocates money to local communities in the form of CDBGs.

CDBG Entitlement Program

The Entitlement Community CDBG Program provides federal funding to entitled cities and counties to carry out a wide range of community development activities directed at revitalizing neighborhoods, economic development, and providing improved community facilities and services. Entitled communities are defined as those cities with a population of greater than 50,000 and counties with populations of greater than 200,000. Funding is provided to entitled communities to meet housing and community development needs. Entitlement communities develop their own programs and funding priorities. However, maximum feasible priority must be provided to projects that benefit low- and moderate- income persons. In addition, funding maybe allocated for activities, if the grantee certifies that the activities meet other community development needs having a particular urgency because existing conditions pose a serious and immediate threat to the health or welfare of the community where other financial resources are not available to meet such needs.

CDBG Non-Entitled Counties in Hawaiʻi Program

HUD administers the Non-Entitled CDBG Program in for the state of Hawaiʻi and allocates funds on a formula basis using population, poverty and housing overcrowding as a basis for allocating funds. The FY 2004 Appropriations Act requires that HUD administer the program in Hawaiʻi in the same manner that it administers the CDBG Entitlement Grant Program. The Non-Entitled CDBG Grants in Hawaiʻi offer a source of funding to benefit community needs in but not limited to economic development, housing rehabilitation, public facilities, construction or installation for the benefit of low- to moderate-income persons. HUD's Honolulu Field Office directly administers the CDBG Program for non-entitlement counties in the State of Hawaiʻi.

In Hawaiʻi three counties qualify for this program - Hawaiʻi, Kauaʻi and Maui. Non-entitled communities are defined as cities with a population of less than 50,000 and counties with populations less than 200,000. Many of the programs are similar to that of the entitlement program with grants for community development activities directed at neighborhood revitalization, infrastructure, economic development and improved community facilities and services. Like the entitlement project, eligible activities include construction of public facilities and improvements, such as water and sewer facilities, and streets, public services, activities related to energy conservation and renewable resources, etc. No less than 70 percent of the funds must be used for activities that benefit low- and moderate-income persons over a period specified by the state, not to exceed 3 years. In order to receive CDBG funds, non-entitlement CDBG grantees must submit a Consolidation Plan (the jurisdictions comprehensive planning document) to the Honolulu field office. *To utilize this program, the County's would need to agree to use their CDBG funds towards this purpose.*

Section 108 Loan Guarantee Program

Section 108 Loan Guarantee Program (Section 108) provides CDBG recipients the ability to leverage their annual grant allocation to access low-cost, flexible financing for economic development, housing, public facility, and infrastructure projects. Communities can use Section 108 guaranteed loans to either finance specific projects or to launch loan funds to finance multiple projects over several years. Section 108 can fund economic development, housing, public facilities, infrastructure, and other physical development projects, including improvements to increase resiliency against natural disasters. Section 108 assistance can be deployed in two ways:

- Directly by the community or its governmental or non-profit partner to carry out an eligible project
- Indirectly with a community or its partner re-lending (or, in limited circumstances, granting) the funds to a developer or business to undertake an eligible project

The loan amounts are based on the entities latest CDBG amount received and capped at five times the amount minus any outstanding Section 108 commitments. The maximum loan repayment period is 20 years and the interest rate varies based on the treasury yield.

State Funding Options

The following is a summary of current and potential state funding options for cesspool conversions. The focus of the funding options review was limited to those options available for individual homeowners or groups of homeowners to finance OSWT systems and typically consist of property assessments and low-interest loans and grants from various State and community-based agencies. Funding options to connect to a county of private wastewater system are not included below.

Hawaiʻi State Department of Health Clean Water State Revolving Fund Program

The CWSRF Program has existed since 1988 when the State legislature passed Act 365 which was superseded by HRS Chapter 342-D Part V. This program provides financing for the construction of water pollution control projects necessary to prevent contamination of groundwater and coastal water resources and to protect and promote the health, safety and welfare of the citizens of the State of Hawaiʻi. It also provides low interest loans to county and State agencies to construct point source and nonpoint source water pollution control projects. Loan terms for this program include terms of no more than 30 years; annual interest rate of 0.25 percent and a semi-annual loan fee of 0.5 percent. Terms are fixed over the life of the loan and proceeds can be used for planning, design and construction activities. Loan proceeds fund up to 80 percent of project costs and require a 20 percent non-federal match.

Since the program was established in 1988, approximately $875.40 million in low interest loans have been provided to counties in the State to fund water quality improvements. In Federal Fiscal Year (FFY) 2019, the State was expected to receive $12.3 million for additional loans. The program includes a Green Project Reserve of 10 percent which is reserved to fund green infrastructure. For FY 2019, this set aside was approximately $1.23 million.

This fund has been used to support the closure of LCCs in the State and DACs are specifically targeted for this program. The requirements for the fund have been modified to address the needs of individual cesspool owners, homeowner associations and nonprofit organizations so that they have access to loans to fund new decentralized systems to replace cesspools.

Applicability for Cesspool Conversions: This a viable funding program for cesspool conversions, however the administrative workload on CWSRF staff will need to be addressed.

Hawaiʻi Rural Community Assistance Corporation (RCAC)

Public agencies, tribal governments, and nonprofits in the State are eligible to apply for this program which has been in existence for 35 years. Eligible projects include water, wastewater, solid waste and storm water facilities that primarily serve lower-income rural communities. Individual homeowners will likely need to create SIDs to apply for this source of funding. "Green lending" includes a prioritization component whereby applicants indicate water and energy savings giving them higher funding priority.

Feasibility, pre-development, and construction projects are eligible. Feasibility efforts are typically not more than $50,000 and a typical term is 1 year. Pre-development projects such as engineering, legal and bond counsel efforts are typically not to exceed $350,000 and the term is 1 year. Maximum loans for construction funding is $3M. Loan terms are up to 20 years; 5.0 percent for the first 10 years and subject to change for longer term loans. Loan fees are 1.0 percent.

RCAC has funded water projects on Maui and Oʻahu.

Applicability for Cesspool Conversions: This a viable funding program for cesspool conversions for lower income rural communities.

Hawaiʻi Rural Water Association (RWLF)

The State association is a chapter of the Rural Water Association and provides funding to infrastructure projects targeted at replacing equipment, providing system upgrades and completion of small projects including energy efficiency, sustainability and disaster recovery projects. Current loan terms include interest rates of 3.0 percent and a repayment periods of 10 years. Loan amounts are typically less than $100,000 or 75 percent of total project costs, whichever is less. There are no administrative fees. Eligible systems must be public entities (municipalities, counties, special purpose districts, Native American Tribes, non-profit corporations and cooperatives) serving up to 10,000 people.

Applicability for Cesspool Conversions: This a viable funding program for rural communities. However individual homeowners will likely need to create a SIDs to apply for this source of funding.

Proposed Hawaiʻi Cesspool Remediation and Conversion Loan Program

State SB 2850/HB2540/SB 221 introduced legislation in 2018 that would create a specific program for cesspool remediation and conversions. This program is envisioned to provide low-interest loans to cesspool owners for the upgrade or conversion of cesspools to aerobic treatment unit systems in each county. The loan program would include an on-bill financing option supported by funding from the water pollution control revolving fund. In 2019 SB 221 was passed to establish a similar loan program, effective July 2019. This program was to be implemented through the Counties in coordination with DOH.

Applicability for Cesspool Conversions: It is not clear whether this program has been implemented.

Office of Hawaiian Affairs Malama Loans

The mission of the Office of Hawaiian Affairs (OHA) is: "To enhance access for all persons of Native Hawaiian ancestry to credit, capital and financial services and skills so as to create jobs, wealth, and economic & social well-being for all the people of Hawaiʻi." To support their mission OHA provides loans and grants for Native Hawaiian businesses and individuals.

The Malama Home Improvement Loan is available in amounts ranging from $2,500-$100,000. Loans over $20,000 must be secured by non-real estate assets. Current terms are 5-6 percent interest and up to a 7-year loan period. Loan applications must include: Proof of Hawaiian ancestry and Hawaiʻi residency; Contractor's estimate of the work; 2 years federal tax returns and W-2s; and 1 month current pay stubs.

While this program has limited eligibility, i.e. not all cesspool homeowners are Native Hawaiian, it may be a financing option for those who do qualify. The state may consider evaluating funding options tied to Native Hawaiian ancestry through organizations like Bishop Estate and the Department of Hawaiian Home Lands to assist the native Hawaiian community. This approach could already be available through Federal programs such as HUD.

Hawaiʻi Cesspool Tax Credits, State Income Tax Credit (Act 120)

Hawaiʻi currently provides a state income tax credit for qualified cesspool owners upgrading to a septic system, aerobic treatment unit, or connecting to a sewer. Qualified cesspools are cesspools that are: located

within 500 feet of a shoreline[14], perennial stream or wetland[15], or within a source water assessment program area[16]. A list of cesspools (identified by tax map key and county) that already meet the criteria of Act 120 is available on the DOH website[17].

A taxpayer may apply for a tax credit of up to $10,000 for documented expenses associated with upgrading each qualified cesspool. Under the current law, tax credits are available for five years (tax years 2016-2020), ending on, December 31, 2020. The state provided a maximum of $5,000,000 of credits that are available for each tax year. Any taxpayer who has upgraded a qualified cesspool but is not eligible to claim the credit in a taxable year because the cap has been reached shall be eligible to claim the credit in the subsequent years. As of February 2020, House Bill 1723 which extends the tax credit from December 31, 2020 to December 31, 2025 was progressing through the legislature, passing the Second Reading and referred to committee for further deliberations.

While this program has several financial advantages for those homeowners who file state income taxes, there are likely many homeowners who are below the threshold for filing state income taxes and therefore are not able to take advantage of this option. Given that only 47 applications have been filed for this credit[18], this incentive may have limited appeal and application to current cesspool owners. This challenge will be addressed in the Affordability Analyses in a subsequent TM.

While the tax credits help to offset some construction costs associated with the conversion, it does not provide:

- Relief for the on-going maintenance and management of the new OSWT option.
- Relief to low-income customers who do not earn enough to qualify for this credit.
- Relief in upfront costs to retain assistance from a licensed civil engineer.

In addition, depending on the selected OSWT, the credit may only cover a fraction of the cost borne by the homeowner. Pending legislation may extend the term of this program, however an assessment of the accessibility by all homeowners to this incentive should be considered and other mechanisms identified.

[14] Hawai'i Administrative Rules §13-222-2
[15] Hawai'i Administrative Rules §11-54-1
[16] As determined by the Department of Health based on a two year time of travel from a cesspool to a public drinking water source
[17] https://health.hawaii.gov/wastewater/home/taxcredit/
[18] Number of filings from 2015-2017.

Appendix D

POTENTIAL CWSRF FUNDING MECHANISMS FOR NON-TRADITIONAL PROJECTS

The following is a summary of potential mechanisms by which the State CWSRF programs can provide financial assistance through the counties or other public entities to individual residential owners.

Direct Loans:

CWSRF programs are able to make direct loans to any municipality, inter-municipal, interstate, or state agency for construction of publicly owned treatment works. Additionally, in some cases, CWSRF programs can make direct loans to private borrowers under certain circumstances.

Co-Financing:

Local communities can use a variety of state and federal funding sources to help co-finance infrastructure improvements. Funding sources, such as the EPA, USDA, USBR, HUD, and other State funding programs, often offer opportunities to co-fund projects with the CWSRF program. Co-financing projects is useful for large projects that cannot be entirely funded by the State's CWSRF program, or if there are project costs that may not be eligible under CWSRF but are eligible under other programs.

CWSRF programs can also enter into a co-financing arrangement with other state agencies and programs, allowing the program to leverage existing relationships and mechanisms by which to award and disburse funding. Several states have used this approach to reach borrowers for NPS projects by partnering with state agricultural offices that already have an existing relationship with landowners.

Partnerships:

Many types of partnerships are possible in the CWSRF program, which can allow the program to extend the reach of the program to fund projects that might otherwise not be in a position to receive CWSRF assistance. The Delaware CWSRF has entered into master lease/purchase agreement with another state agency to fund necessary infrastructure improvements including a wetland remediation. The CWSRF is the lessor and the state agency is the lessee under a memorandum of understanding with the CWSRF loan provided in the form of a lease paying project and repayments are in the form of rental payments.

Conduit/Intermediary Lending

The following is a summary of two mechanisms for conduit/intermediary lending.

Pass through Lending

Pass-through lending distributes CWSRF funds through a conduit entity/agency to an end borrower. Conduit entities include state agencies, counties, conservation districts and local municipalities. The benefits of a pass-through lending approach includes:

- Conduit entity (e.g. county) is frequently able to bundle several sub-loans and complete the CWSRF application requirements for all of them, reducing the administrative burden on individual end borrowers as well as the CWSRF program.
- As the conduit organization is the loan guarantor, a pass-through arrangement provides a more secure financial capability assurance for the CWSRF program as opposed to making loans directly to the small, untested end borrowers.
- A pass-through structure makes it possible for CWSRF subsidies, such as principal forgiveness, to reach non-municipal, nontraditional projects via the eligible public pass-through partner, who can then channel the savings through to a private or nonprofit end-user.

Linked Deposit

Linked deposit financing takes advantage of a provision in the CWSRF authorizing statute allowing CWSRF funds to be used "to earn interest on fund accounts". In a linked deposit arrangement, a state CWSRF

program purchases a reduced-rate certificate of deposit from a private financial institution. The financial institution then loans out the deposited funds (at a slightly lower interest rate) to individuals for smaller-scale water quality projects. Other states have used linked deposits to successfully fund projects such as septic replacements, agricultural best management practices, or environmentally friendly forestry equipment. This mechanism allows the individual end borrowers to work directly with their own financial institutions instead of the CWSRF program. Financial institutions earn a fee that compensates them for administrative the loans. The financial institution is responsible for reviewing and approving applications from the end borrowers (as well as collecting payments), removing much of the administrative burden that would otherwise fall to the CWSRF program.

Sponsorship Lending

CWSRF programs can combine assistance to both traditional and nontraditional projects in the same loan agreement (e.g. traditional public treatment works project with a non-point source project). This allows user fees from the traditional portion of the project to serve as a repayment stream for the nontraditional project. Typically, a municipality receives a loan with a reduced interest rate as compensation for undertaking/ "sponsoring" a nontraditional project thus allowing municipalities to address pressing watershed restoration or water quality protection priorities without placing a repayment responsibility on NPS projects. For added incentive, a CWSRF could further reduce the interest rate so that the municipality would save money rather than break even.

Programmatic Financing

Programmatic financing shifts traditional project-specific lending strategy to one that is designed to fund the utility's entire capital improvement plan (CIP) (or any portion thereof) so long as the projects are eligible and in compliance with CWSRF program requirements. This can also encompass non-point source projects (stormwater, green infrastructure, and restoration projects) that are eligible and included as part of the CIP. The focus is on the schedule and pace of disbursements for a "package" of projects on an annual basis under a single loan agreement. With programmatic financing, if a project in the CIP is delayed or falls through, the funding can be directed towards other eligible project activities in the CIP. This approach has been used successfully in Minnesota and Rhode Island for a number of years, and is currently being implemented in Hawaiʻi.

Portfolio Lending

Portfolio Lending is a strategy to commit funding over time to one or several projects identified in a CIP or watershed management plan. Both options can easily accommodate nontraditional projects. Portfolio lending requires careful cash-flow management to ensure that program funds are not over-extended, but can provide a valuable level of certainty to a CWSRF program's project pipeline. While the borrower must still complete the CWSRF application process to receive a loan each year, they have the assurance that the state revolving fund (SRF) will have the financial capacity to fund the project.

Capital Improvement Plans

With CIP Portfolio Lending, the CWSRF program commits to fund a certain portion (or all) of a municipality or utility's CIP over time, assuming each project meets eligibility and priority criteria. This helps to develop borrowing relationships to ensure stable demand for CWSRF funds and contributes to the municipality's long-term planning efforts. If nontraditional projects are included in the CIP, they can be financed at the same time instead of trying to finance as standalone projects.

Watershed Management Plan

With a Watershed Management Plan approach, there is a higher priority placed on funding projects that address water quality on a watershed basis. The planning and implementation activities associated with watershed management projects lend themselves well to a portfolio funding approach that encompasses numerous projects in various stages through a multi-year lifespan.

Intermunicipal Lending

In Intermunicipal Lending, an intermunicipal agency is established by two or more municipalities, which is then eligible for CWSRF assistance. The agency can facilitate cross-jurisdictional coordination and funding support for regional solutions to water quality problems. The assistance recipient could be a single entity within the agency or the agency itself and would be ultimately responsible for the implementation of the portfolio of projects eligible for CWSRF assistance. It is also important to note that a CWSRF can provide authorized assistance to intermunicipal agencies, including loan guarantees for "sub-state revolving funds." However, the cooperation and coordination required in the development, funding and implementation of "joint' projects might be a challenge.

For example, the Missouri CWSRF provided a $1 million loan to the MACOG to capitalize the Missouri On-Site Wastewater Improvement Grant-Loan program. This pass-through arrangement provides financing for homeowners to repair or replace on-site wastewater treatment systems. The program provides a 50 percent/50 percent low-interest loan and grant for low-income homeowners or a 60 percent/10 percent/30 percent low-interest loan/grant/homeowner match for non-low-income homeowners. While MACOG coordinates the entire program and holds the loan agreement with the CWSRF program, the program is administered by the nineteen individual regional planning commissions and councils of government throughout Missouri for customers in their jurisdictions.

Planning and Design Lending

CWSRF programs can also provide planning and design low interest loans and grants. In some states, the planning and design loan becomes interest-free or is forgiven if the borrower pursues CWSRF construction financing. Loan forgiveness is particularly helpful to nonpoint source projects. For example, in the state of Arizona, the WIFA administers the CWSRF program and uses a portion of their fee revenue to fund a planning and design program aimed at providing much needed assistance to communities with limited resources who need help in completing this kind of work. This funding is capped at $35,000 per project with a 40 percent local match.

Purchasing Local Debt Obligations

Clean Water Act Title VI allows states the opportunity to provide assistance through the purchase or refinancing of local debt obligations. For example, States may purchase general obligation or revenue bonds issued by municipalities, inter-municipalities, and interstate agencies at or below market rates, so long as such debt obligations were incurred after March 7, 1985. In terms of financing nontraditional projects, the purchase of local debt presents a viable alternative for intermunicipal borrowers, interstate agencies, public private partnerships (P3), and nontraditional projects with longer useful life expectancies including, but not limited to, land purchases, conservation easements, and watershed restoration efforts.

Credit Enhancements

With a credit enhancement program, a highly-rated CWSRF program guarantees third-party debt (such as a bond issue) for a municipality or utility with a weaker credit rating. The guarantee agreement between the CWSRF and the assistance recipient results in more favorable borrowing terms for the recipient, allowing the entity to take advantage of interest rates similar to what it might receive on a traditional CWSRF loan. At the

same time, this arrangement allows the CWSRF program to stretch its assistance capabilities further since a guarantee does not require the same cash outlay as a traditional loan. This form of assistance has not been widely used among CWSRF programs.

CWSRF Bond Issuance

The following are two types of bonds that could be issued by the CWSRF program to help finance the cesspool conversions.

Traditional Bonds

The sale of bonds by or on the behalf of the CWSRF programs has produced a tremendous boost in the assistance provided by SRF programs. Since 1989, 29 CWSRF programs have leveraged their programs in this manner, issuing approximately $42 billion in bonds to finance eligible projects. CWSRF bonds can be sold to finance traditional projects, nontraditional projects, or both. There is not a lot of experience in the marketplace for the sale of bonds to finance only non-traditional projects. To issue bonds, the CWSRF program must have the capacity (e.g., free cash flows and debt service reserve if necessary) to enter into debt, secure it, and make debt service payments. Equally important is a sufficient pipeline of projects that are ready to proceed; therefore, the demand for nontraditional projects should be carefully assessed along with their readiness to proceed before bonds are issued.

Green Bonds

"Green Bonds" are municipal bonds issued with a commitment to direct proceeds exclusively toward environmentally beneficial purposes. Although the terminology is new (coined in 2008 by the World Bank), the concept is tried-and-true for CWSRF programs that have leveraged funds, since the proceeds from leveraged bonds have always been used for projects benefitting the environment. For the most part, Green Bonds are typically issued with the same pricing and terms as the issuer's standard bonds, but may be marketed to different investors

Appendix B

Technical Memorandum 2:
AFFORDABILITY EVALUATION FOR CESSPOOL CONVERSIONS
(November 2020)



Hawai`i State Department of Health
Cesspool Conversion Finance Research

Technical Memorandum 2
AFFORDABILITY EVALUATION FOR CESSPOOL CONVERSIONS

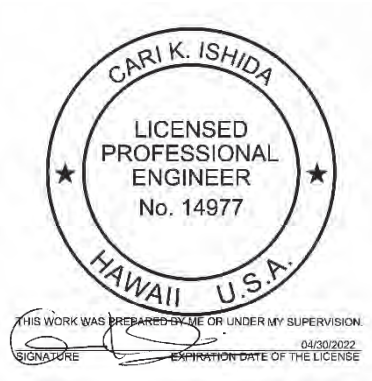
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Technical Memorandum 2
AFFORDABILITY EVALUATION FOR CESSPOOL CONVERSIONS

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Abbreviations

ACS	American Community Survey
ALICE	Asset Limited, Income Constrained, Employed
ATU	aerobic treatment unit
Carollo	Carollo Engineers, Inc.
CBG	census block group
CCWG	Cesspool Conversion Working Group
COVID-19	Coronavirus Disease 2019
DOH	Department of Health
FPL	Federal Poverty Level
GIS	Geographical Information Systems
HM	hours of minimum wage
Legislature	Hawai'i State Legislature
mgd	million gallons per day
MHI	median household income
O&M	operations and maintenance
OSWT	onsite wastewater treatment
TM	technical memorandum
USEPA	United States Environmental Protection Agency
UV	ultraviolet
WWTP	wastewater treatment plant

Technical Memorandum 2

EXECUTIVE SUMMARY

ES.1 Introduction

Throughout the State of Hawai'i, there are approximately 88,000 cesspools, releasing an estimated 53 million gallons per day (mgd) of wastewater to the environment. Most of the existing cesspools provide wastewater disposal for single family residences, as opposed to large-capacity systems serving multiple residences or commercial areas. Given that over 90 percent of the state's drinking water supplies are from groundwater sources, cesspools pose a potential environmental and public health risk.

In 2017, the Hawai'i State Legislature (Legislature) passed Act 125, which states that by January 1, 2050 all cesspools in the state, unless granted exemption, shall upgrade or convert to a septic or aerobic treatment unit (ATU), or connect to a sewer system (Act 125, 2017). The Legislature then passed Act 132 in 2018, which established a Cesspool Conversion Working Group (CCWG) to develop a long range, comprehensive plan and commission a statewide study of sewage contamination in nearshore marine areas (Act 132, 2018). The CCWG retained Carollo Engineers, Inc., (Carollo) to provide expertise on onsite wastewater treatment (OSWT) technologies as well as cesspool conversion funding, finance options, and affordability.

As a result of Act 125, cesspool owners will be required to upgrade their existing cesspools to an OSWT technology that complies with environmental and public health regulations. The cost associated with cesspool conversions will likely be a financial burden to many residential owners in a state where the cost of living is already high. The Legislature tasked the CCWG to develop a strategy to aid the funding and financing of the cesspool upgrades. The purpose of this technical memorandum (TM02) is to evaluate the affordability issues associated with the requirements of Act 125. A previous TM (TM01) summarized potential funding mechanisms that may be applicable to provide financial support to homeowners for their cesspool upgrades.

ES.2 Purpose and Limitations

The purpose of this TM is to evaluate the potential financial impacts on cesspool homeowners that must upgrade to an approved OSWT system. In addition, this TM provides an evaluation of the overall affordability of cesspool conversions based on industry standards and local financial measures.

It should be noted that this is a preliminary affordability evaluation, and that the CCWG is engaged through other focus areas, such as public outreach where valued feedback is considered. This evaluation was completed based on publicly available information and did not include public input. Future public outreach and education are planned as a part of the overall cesspool conversion strategy development under separate contracts.

Other considerations that may have impacts to the affordability evaluation include exemptions to cesspool conversion (at the discretion of the Department of Health [DOH] per Act 125), or changes to the priority areas and definitions. Ongoing efforts under separate contracts are underway to study available cesspool data validation and prioritization. If new information or guidance on cesspool priority areas is developed, the affordability evaluation should be revisited.

ES.3 Potential Financial Impact of Cesspool Conversions on Homeowners

This TM considers the potential monthly financial impacts of cesspool conversions on individual homeowners. Many homeowners will require some type of financial assistance to convert their cesspools to an approved OSWT technology. Depending on the financing option and OSWT technology selected, the cesspool conversion project could result in financial impacts to the residents ranging from approximately $94 to $339 per month as shown in Table ES.1. The table summarizes the potential costs to homeowners for a range of cesspool upgrade options. The "low" scenario represents the simplest and most straightforward cesspool upgrade to a septic tank system. The "average" and "high" scenarios represent typical and more complex cesspool upgrades, respectively for the purposes of this affordability analysis.

Table ES.1 Summary of Potential Monthly Financial Impacts to Cesspool Homeowners

Cost Description	Cesspool Conversion Cost Scenarios		
	Low	Average	High
Installation Cost(1)	$10,000	$23,000	$38,000
Monthly Installation Repayment Cost(2)	$61	$139	$230
Monthly O&M Cost(3)	$33	$71	$109
Estimated Total Monthly Cost	$94	$210	$339

Notes:
(1) Based on historical installation costs for septic tank and ATU treatment and disposal systems from DOH. The low costs represent the 10th percentile, and the high costs represent the 90th percentile. All conversion costs are site specific and these costs may not be representative for more complex sites/installations.
(2) Based on 20-year loan at 4.0 percent interest rate.
(3) Monthly operations and maintenance (O&M) costs are estimated with the low cost representing septic tank operations costs. The high cost represents a higher level of treatment with ATU + UV disinfection + seepage pit. The average operations cost is the average of the low- and high-end values.

The total low costs are comparable to the monthly sewer bill for a customer connected to a centralized public wastewater system in the state.[1] However, most homeowners will be required to pay more than the comparable monthly sewer bill to convert a cesspool to an alternative OSWT technology.

ES.4 Affordability Analysis

The affordability analysis compared the range of cesspool conversion costs to various measures of affordability, including federal poverty, and median household income (MHI) levels.

In addition, the analysis includes a scenario evaluating the potential impacts of a hypothetical $10,000 rebate program. This scenario was included to evaluate how some level of financial relief would improve the affordability of cesspool conversions. Certainly, there are many more scenarios of financial relief that can be evaluated in coordination with future policy decisions. This scenario was intended to be only one example.

The affordability analysis used total cesspool conversion costs, which include the cost to replace the cesspool with an approved OSWT technology and the cost to operate and maintain the new OSWT. The analysis does not net out any maintenance costs (e.g. routine pumping) that a homeowner currently incurs for an existing cesspool.

Although there are a number of methodologies that have been suggested as guidance for affordability of water and/or wastewater services (some of which are described herein), this analysis primarily relies on the

[1] The typical monthly sewer bill for an average household ranges from $40 to $111 depending on the location within the state.

traditional financial capability assessment guidelines established by the United States Environmental Protection Agency (USEPA). Under this guidance, a household is considered "cost burdened" when wastewater services exceed 2 percent of household income (USEPA, 1997). These households who will be required to convert to an alternate OSWT technology with income below the Federal Poverty Level (FPL) were also identified and considered.

Figure ES.1 illustrates the estimated number of residents financially burdened by the cesspool upgrade cost by county without and with a $10,000 rebate based on the USEPA 2 percent criteria. This analysis shows that 97 percent of residents with cesspools across the state would be financially burdened by the need to fund cesspool conversion and maintain the new OSWT. This decreases to 85 percent if each cesspool homeowner could receive a $10,000 rebate for conversion.

Hawai'i County has the greatest projected financial impact, with the costs of cesspool conversion without a rebate exceeding 2 percent of the MHI for all census block groups containing cesspools. Hawai'i County also has 48,303 cesspools, more than three times as many as any other county in the state.

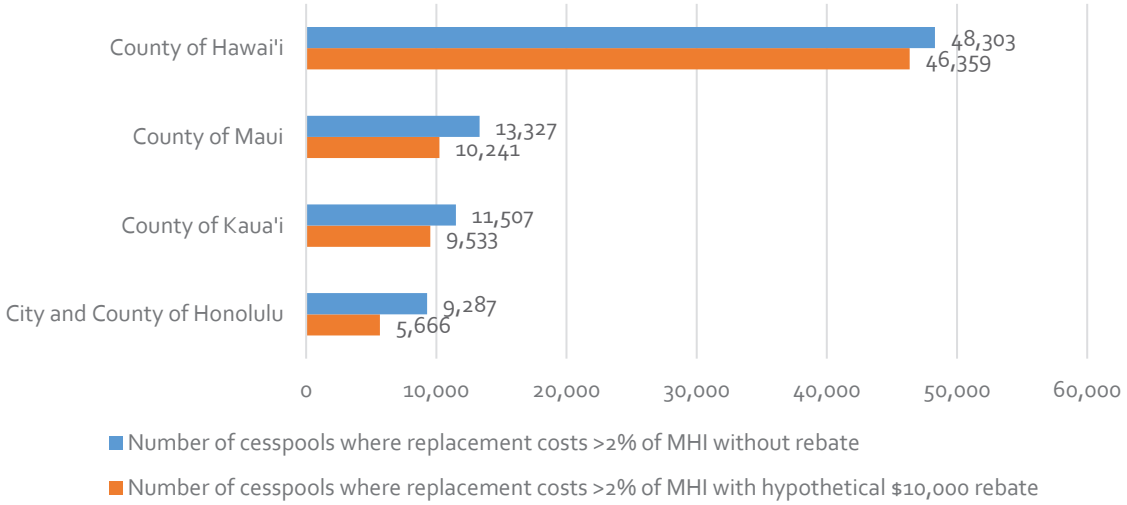


Figure ES.1 Number of Residents with Cesspools Projected to be Financially Impacted by Cesspool Conversion Costs with and without the Rebate[(1)(2)(3)]

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.
(2) Assumes all homeowners can obtain a hypothetical rebate of $10,000.
(3) MHI = median household income

Figure ES.2 shows the income distribution for residents with cesspool by county, based on the median household income for Census Block Group of the cesspool. The same affordability threshold amounts are shown as previously described along with the FPL. Looking at the county level, significant disparities appear in the income distribution. Hawai'i County, which has the largest share of cesspools, has 69 percent or 33,185 residents with cesspools with an income between $40,000 and $80,000 per year. By comparison, over 80 percent or 8,903 residents with cesspools in the City and County of Honolulu have an income above $80,000 per year. Residents with cesspools with incomes greater than $80,000 encompass 53 percent (6,444 residents with cesspools) for Maui County and 48 percent (6,479 residents with cesspools) for Kaua'i County.

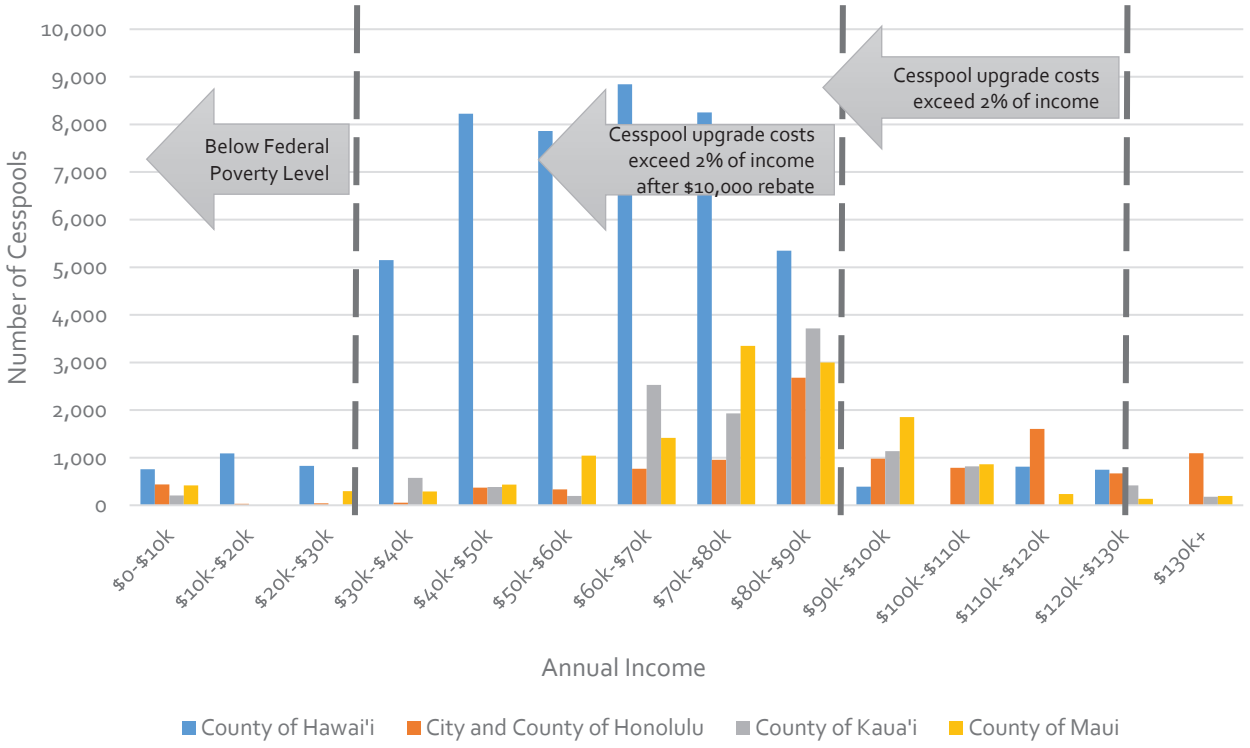


Figure ES.2 County Median Household Income Levels and Estimated Conversion Cost as Percent of Annual Income(1)

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.

ES.5 Summary and Conclusions

Many residents with a cesspool will struggle to afford the conversion and ongoing system O&M costs required by Act 125. These challenges appear to be most acutely felt in Hawai'i County, where income and poverty levels indicate the greatest number of households projected to need assistance. However, these challenges are also felt by a significant number of residents with cesspools across the state as well.

There are two basic ways to increase affordability: 1) either through reducing the monthly cost; or 2) providing direct funding support. The state could investigate both options as ways to increase the number of cesspools replaced as part of this program. To reduce monthly costs, low-interest loan programs can help households with a stable but insufficient income to afford cesspool upgrades. Households living below the FPL have the greatest need for direct funding support. The number of residents with cesspools in these categories are shown in Table ES.2 by county and statewide. Table ES.2 also shows the number of residents with cesspools that fall below the 2 percent MHI threshold with and without a hypothetical rebate. To address environmental and public health concerns, direct funding could also be prioritized for cesspools located in high priority, sensitive ecological, or drinking water source areas. This will enhance the effectiveness of the program and help reach established environmental goals.

Table ES.2 Summary of the Residents with Cesspools by County Based on Key Affordability Criteria[1]

Affordability Measure	County of Hawai'i	County of Kaua'i	County of Maui		City and County of Honolulu	Statewide
			Maui	Moloka'i		
Number of Households with Cesspools Below Federal Poverty Level[2]						
Below Federal Poverty Level	3,254	204	416	297	512	4,683
Number of Households with Cesspools Where Conversion Cost Exceeds 2 Percent Median Household Income[2]						
With $10,000 Rebate	46,359	9,533	9,000	1,241	5,666	71,799
Without $10,000 Rebate	48,303	11,507	11,888	1,439	9,287	82,424

Notes:
(1) Affordability analysis was for the average scenario with $23,000 cesspool upgrade costs, and monthly costs of $210 if the cesspool conversion is financed over 20 years at 4 percent interest.
(2) Federal poverty level is $30,718 annual income.
(3) The 2 percent of median household income threshold is $126,125 annual income based on the USEPA definition of "cost burdened".

To determine the amount of financial assistance that may be needed, it is also important to consider the portion of the cesspool conversions costs that *can* be afforded by homeowners. With the exception of those with estimated annual income below the FPL, it was assumed that homeowners could afford to privately finance an amount that results in a monthly payment less than or equal to 2 percent of their estimated monthly income less the average monthly maintenance cost for the selected replacement technology. If that amount is less than the average of conversion costs, it is assumed the difference would require financial aid. Table ES.3 summarizes the estimated amount of conversion costs that can be afforded or privately financed versus the amount of financial aid that may be required. It is anticipated that more than $900 million in financial aid is required to support cesspool conversions for homeowners who are financially burdened.

Table ES.3 Estimated Private Financing and Financial Aid Required for Cesspool Conversions[1]

Priority	Total Private Financing[2] ($ million)	Total Financial Aid Required[3] ($ million)
1	$89.8	$106.5
2	$94.2	$239.3
3	$164.7	$256.3
4	$557.6	$440.1
Totals	**$906.3**	**$1,042.2**

Notes:
(1) Based on average conversion cost of $23,000.
(2) Assumes residents can afford up to 2 percent of estimated household income for cesspool conversions, financed at 4 percent interest over 20 years.
(3) Assumes cesspool conversion costs in excess of 2 percent of estimated household income will require financial aid. Residents with income levels below the federal poverty limit are assumed to require financial support for all conversion costs.

Technical Memorandum 2

AFFORDABILITY EVALUATION FOR CESSPOOL CONVERSIONS

2.1 Introduction

Based on the 2004 *Clean Watersheds Needs Survey Report to Congress*, 62 percent of the residents in the state of Hawai'i are served by centralized wastewater treatment facilities, and the remaining 38 percent are served by decentralized or OSWT systems. There are approximately 110,000 OSWT systems, including 88,000 cesspools and over 21,000 septic systems in the state.

The USEPA defines a cesspool as an underground excavation that receives sanitary wastewater from bathrooms, kitchens, and washers. Figure 2.1 is a schematic diagram of a typical cesspool. Cesspools are designed to capture wastewater solids but are not designed to provide wastewater treatment or nutrient removal. The structure usually has an open bottom and perforated sides. Domestic wastewater flows into the structure and the solid waste collects at the bottom, while the liquid waste flows out to percolate into the subsurface that may be hydraulically connected to groundwater and surface water.

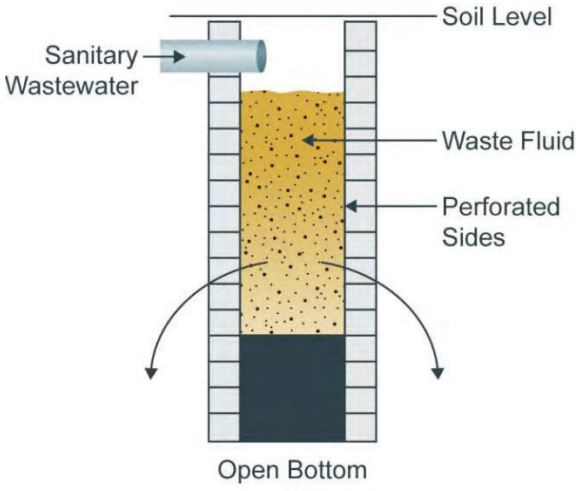


Figure 2.1 Cesspool Schematic

Most of the existing cesspools in Hawai'i serve single family residential units and are spread out through the state. Table 2.1 summarizes the estimated number of cesspools by county, as well as the estimated total wastewater discharged by cesspools. Of these, 43,000 cesspools have been identified as posing a risk to the state's water resources, with 31,000 of these located within the perennial watersheds on the counties of Hawai'i, Kaua'i, Maui, and Moloka'i (DOH, 2018).

Table 2.1 Estimate of Cesspools and Total Anticipated Discharge by Island[1]

Island	Estimated Housing Units	Estimated Number of Cesspools	Estimated Cesspool Effluent (mgd)
Hawai'i	82,000	49,300	27.3
Kaua'i	29,800	13,700	9.5
Maui[2]	65,200	12,200	7.9
Moloka'i[2]	3,700	1,400	0.8
O'ahu[3]	336,900	11,300	7.5
Total	**517,600**	**87,900**	**53.0**

Notes:
(1) Confirmation of the actual number of cesspools, locations, and priorities is being conducted under a separate task of the CCWG.
(2) Maui and Moloka'i are within Maui County.
(3) O'ahu includes all the City and County of Honolulu.

In total, these cesspools are estimated to discharge 53 mgd of untreated sewage to the groundwater system and coastal waters. Untreated wastewater from cesspools contain nutrients (nitrogen and phosphorous) and pathogens such as bacteria, protozoa, and viruses, which can have an impact on drinking water, water quality in streams, rivers, and other receiving water bodies, and the health of the state's reefs and the health of Hawai'i's residents and visitors.

In 2017, the Hawai'i State Legislature passed Act 125, which states that by January 1, 2050 all cesspools in the state of Hawai'i, unless granted exemption, shall upgrade or convert to a septic system or aerobic treatment unit (ATU), or connect to a sewer system (Act 125, 2017).

To incentivize "early adopter" cesspool conversion, the state of Hawai'i established a temporary tax credit program in 2016 under Act 120. Act 120 provided a $10,000 tax credit to homeowners for the upgrade of qualifying cesspools and is set to expire on December 31, 2020.

Act 132 was passed in 2018 to establish the CCWG to develop a long range, comprehensive plan and commission a statewide study of sewage contamination in nearshore marine areas (Act 132, 2018). Act 132 directed the DOH to evaluate residential cesspools in the state, develop a report to the legislature that includes a prioritization method for cesspool upgrades, and work with the Department of Taxation on possible funding mechanisms to reduce the financial burden on homeowners. The CCWG retained Carollo to provide expertise on cesspool conversion technologies and funding and finance options.

As a result of Act 125, homeowners will be required to upgrade their existing cesspools to approved technologies. The CCWG recognized that the cost associated with the conversion will be a significant financial burden to individual residential owners. One of the complex challenges tasked to the CCWG is to develop a strategy to aid the funding and financing of the cesspool conversions.

Figure 2.2 shows a stepwise approach to guiding cesspool homeowners through the conversion process. The CCWG and key advisors are developing the overall strategy to the cesspool conversion program, including public outreach, treatment technologies, data validation and prioritization, and finance research. The information on funding mechanisms provided in TM01 and the information on the affordability of cesspool conversions for homeowners provided in this TM02 is intended to support step #5 shown in Figure 2.2. However, there is a significant amount of strategy, planning, and coordination that will be completed by the CCWG and others over the next few years.

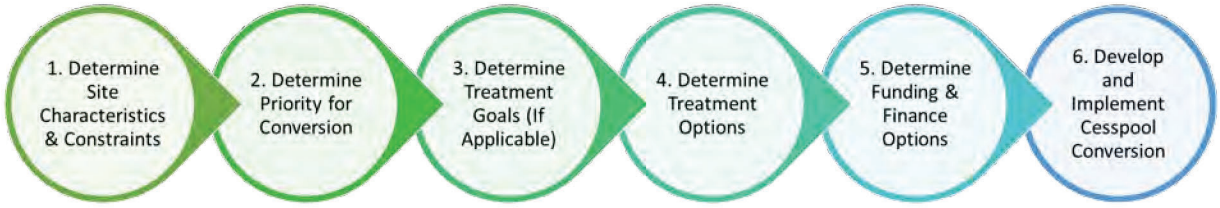


Figure 2.2 Stepwise Approach to Cesspool Conversions for Homeowners

Historical costs to upgrade a cesspool to an approved OSWT and disposal system (e.g. septic system or ATU followed by soil absorption system) range widely from approximately $9,000 to $60,000 or more depending on system capacity, technology, location or site constraints, and size of dwelling unit[2]. With 88,000 cesspools requiring upgrades, total upgrade costs could range between $880 million to more than $5.3 billion.

While there are low-interest loan and grant funding opportunities from federal, state, and local financing sources, these sources combined fall significantly short of what is required to fully fund all conversions. In addition, most of the financing programs are available only to government entities, such as state agencies or counties, and are not targeted and in most cases unavailable to private, residential property owners. This is further complicated by the fact that state agencies and the counties do not currently have the staff or the administrative capabilities to receive grant or loan funds; review and process individual homeowner applications; disperse the funds to the homeowners; and, in the case of loans, conduct follow-up payment collection.

Incentivizing residents to convert existing cesspools will be challenging. Despite the benefits of improving public health and the environment, there are currently no immediate state mandates[3] or regulatory drivers to incentivize conversions and there are few financial incentives for homeowners to convert or upgrade their systems. Cesspools are generally very low-cost and there are minimal maintenance requirements. Significant challenges to the successful conversion of the state's cesspools includes:

- Identification of individual residential incentives.
- Identification of sustainable funding mechanisms for the financing of capital expenditures, long-term costs associated with the maintenance and management of OSWT systems, and overall program administration.
- Identification of funding mechanisms that consider homeowner affordability as well as DOH and/or county administrative workload.

In addition to financial incentives, there is a need to identify and quantify the benefits (e.g., economic, environmental, water quality, etc.) to be gained from converting cesspools that can be communicated to individual homeowners to further incentivize the homeowners to convert.

[2] Based on cost data from DOH. See Appendix A.
[3] The cesspool conversion deadline in Act 125 is January 1, 2050.

2.1.1 Method of Cesspool Conversion

There are generally three options for cesspool conversions:

- **Connection to existing or new centralized sewer systems.** In the large municipal areas of Hawai'i, homes and businesses are connected to county or privately-owned sewer collection and treatment systems, where wastewater flows to a centralized facility for treatment and disposal. Centralized sewer collection and treatment systems are generally cost efficient because of economies of scale. These facilities treat the wastewater either for discharge or for water reuse applications. However, new connections typically must pay significant capital investment fees required by counties or private developers to connect to the centralized system, and connections to centralized systems may not be feasible for many cesspool conversions.
- **Connection to decentralized sewer systems.** Decentralized sewer systems (also "cluster" wastewater systems) are similar to centralized sewer systems, but typically have a smaller collection system service area and wastewater treatment facility. Decentralized treatment can range from passive treatment with soil dispersal to more sophisticated, mechanical treatment, such as membrane bioreactors.
- **Conversion of cesspools to approved OSWT and disposal systems.** Approximately 38 percent of the households in Hawai'i are served by decentralized or OSWT and disposal systems, including cesspools (USEPA, 2008). Since many of the cesspools are in rural areas without centralized or decentralized wastewater systems, conversion to approved OSWT and disposal systems may be the most cost-effective option for some homeowners compared to centralized and decentralized treatment options.

2.1.2 Purpose and Limitations

The purpose of this TM is to evaluate the potential financial impacts on cesspool homeowners that must upgrade to an approved OSWT system. In addition, this TM provides an evaluation of the overall affordability of cesspool conversions based on industry standards and local financial measures.

It should be noted that this is a preliminary affordability evaluation, and that the CCWG is engaged through other focus areas, such as public outreach where valued feedback is considered. This evaluation was completed based on publicly available information and did not include public input. Future public outreach and education are planned as a part of the overall cesspool conversion strategy development under separate contracts.

Other considerations that may have impacts to the affordability evaluation include exemptions to cesspool conversion (at the discretion of DOH per Act 125), or changes to the priority areas and definitions. Ongoing efforts under separate contracts are underway to study available cesspool data validation and prioritization. If new information or guidance on cesspool priority areas is developed, the affordability evaluation should be revisited.

The affordability analysis in this TM includes a scenario assuming all cesspool homeowners can utilize a hypothetical $10,000 rebate to reduce cesspool conversion costs. It is acknowledged that additional funding and alternatives scenarios can be evaluated to determine what policy decisions would assist homeowners with cesspool conversion affordability. To streamline this affordability evaluation, two approaches to defining cesspool conversion affordability were used. However, there are many ways to define affordability thresholds as it relates to wastewater services and cesspool upgrades. Other affordability definitions and thresholds can be considered in future evaluations.

2.2 Potential Financial Impacts of Cesspool Conversions on Homeowners

Traditional water and wastewater infrastructure projects generally involve significant expenditures which provide benefits to a community which share in those costs. Cesspool conversion is a significant expenditure with limited, immediate benefit to an individual homeowner. Nevertheless, families are likely to bear the cost of conversion and on-going maintenance without any way to help recover these costs. While addressing affordability of the cesspool conversions for homeowners it is important to clearly understand not only the cost of the conversion, but also the potential impacts of financing options. A previous TM (TM01) evaluated potential alternative financing mechanisms. The affordability analysis is based on a single financing approach.

The cost of cesspool conversion includes up-front construction/installation and ongoing O&M costs. Cesspool conversion costs to an approved OSWT system (e.g., septic tank system, ATU, or other approved technology) have ranged from $9,000 to $60,000 with an average of $23,000, based on historical installation costs provided by DOH (see Appendix A). These large cost ranges illustrate that there are many factors involved in the cost of a cesspool retrofit which can include type and size of the system, different site conditions (soil type, access, slope, etc.), different material costs, and different market conditions (e.g. number of available contractors). Such data show that it is challenging to come up with a "typical" cost, because there are so many variables – basically each project is different and generalizing costs is very difficult.

Depending on wastewater treatment and disposal options, the annual O&M cost can vary from $400 (septic tanks) to $1,300 (ATU, ultraviolet (UV) disinfection, and seepage pit). Annual O&M costs for septic tanks includes inspection and pumping of the septic tank approximately once per year. The upper range of annual O&M costs include power and maintenance costs for ATU + UV disinfection + seepage pit (Babcock et al, 2019).

Table 2.2 summarizes anticipated monthly homeowner financial impacts using the mid-range financing terms for a home equity loan. The ranges are based on the average cost of $23,000 for installation, with low and high cost scenarios of $10,000 and $38,000 based on the 10th and 90th percentile cost estimates, respectively (see Appendix A). O&M costs are based on a range from $400 to $1,300 per year, with an average of $850. There can be variations in the financing term and interest rates that are possible, however, the installation costs are assumed to be financed over 20 years at 4.0 percent, based on current market rates for home equity loans as of July 2020.

The costs shown in Table 2.2 are total cesspool conversion costs, which include the cost to replace the cesspool with an alternative OSWT technology and the cost to maintain the new OSWT. Any existing maintenance costs that a cesspool owner pays on the existing cesspool have not been considered.

Table 2.2 Summary of Potential Monthly Financial Impacts to Cesspool Homeowners

Cost Description	Cesspool Conversion Cost Scenarios		
	Low	Average	High
OSWT Installation Cost (total)(1)	$10,000	$23,000	$38,000
Interest rate (percent)(2)	4.0	4.0	4.0
Loan Term (years)(2)	20	20	20
OSWT Installation Cost (monthly)(2)	$61	$139	$230
Estimated O&M Cost (monthly) (3)	$33	$71	$109
Estimated Monthly Cost	**$94**	**$210**	**$339**

Notes:
(1) Based on historical installation costs for septic tank and ATU treatment and disposal systems from DOH. The low-end costs represent the 10th percentile, and the high-end costs represent the 90th percentile. All conversion costs are site specific and these installation costs may not be representative for more complex sites/installations.
(2) Installation costs are assumed to be financed over 20 years at 4 percent based on market rates for home equity loans as of July 2020.
(3) O&M costs are based on $400 (assuming a septic tank) to $1,300 per year (assuming ATU + UV disinfection + seepage pit), with an average cost of $850/year.

2.3 Affordability Analysis

An affordability analysis was performed for the cesspool conversion program. This analysis is intended to estimate the relative financial impact of cesspool upgrades on homeowners. Figure 2.3 is a schematic of the data sources, costs, and affordability measures that were used in the analysis. Each of these components are summarized in the following sections.

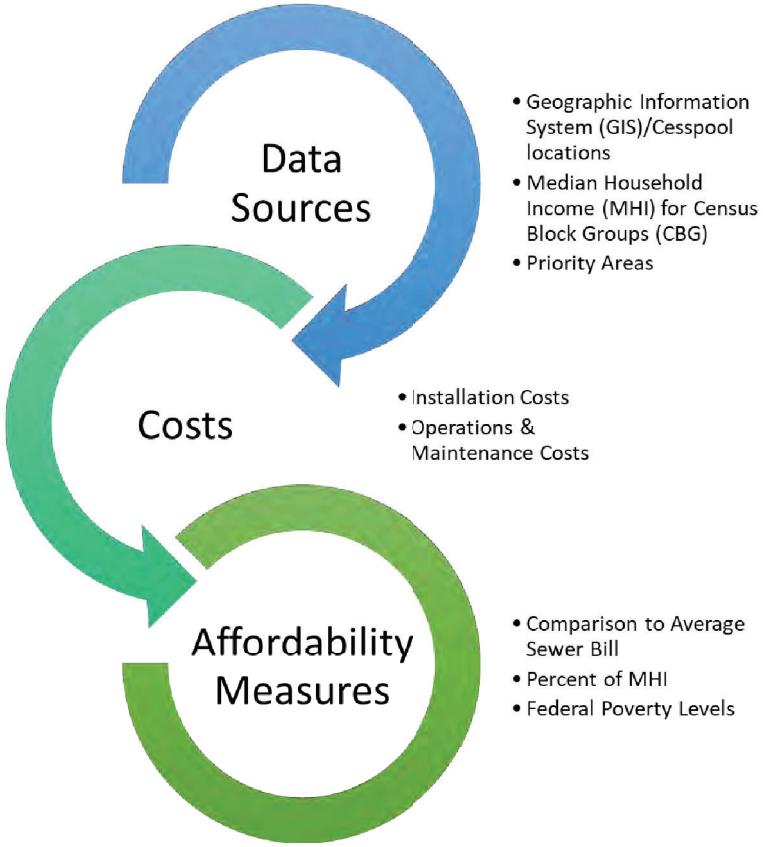


Figure 2.3 Data Sources, Costs, and Affordability Measures included in the Affordability Analysis

2.3.1 Data Sources and Collection

The primary data sources for the affordability analysis included:

- Geographic Information System (GIS) shapefiles for Hawai'i, Kaua'i, Maui, Moloka'i, and O'ahu showing individual cesspools, gathered from the Hawai'i Statewide GIS Program[4].
- GIS shapefiles for Cesspool Upgrade Priority Areas (DOH, 2018).
- MHI and number of households living in poverty for each census block group, collected from the American Community Survey (ACS) for 2018 from the U.S. Census Bureau (ACS, 2018). A census block group is the smallest geographical unit for which demographic data is available. Census block groups generally follow geographic and infrastructure boundaries such as rivers, railroads, and streets, and as a result tend to follow neighborhood boundaries. Census block groups typically cover an area with 600 to 3,000 people.[5]

2.3.2 Data Processing

The following sections describe the data processing for household demographics, and cesspool conversion prioritization and costs, monthly sewer bill comparisons, and affordability measures.

2.3.2.1 Household Demographic Data

A geospatial analysis of the Hawai'i cesspool locations was performed to assign economic and prioritization data to each cesspool site. For each household with a cesspool, a corresponding MHI and number of households living in poverty for the census block group from the ACS 2018 data was assigned. The ACS 2018 demographic data serves as a useful estimate for the income and poverty of each property owner with a cesspool in the data. Poverty data was gathered from the ACS 2018 data and assigned this to each cesspool based on its census block group.

2.3.2.2 Cesspool Conversion Prioritization

As identified in the 2018 Legislature Report, the cesspools were sorted by the priority upgrade areas. These priority upgrade areas were developed with the goal of funding a conversion program for low-income property owners. The priority upgrade categories are as follows (DOH, 2018):

- **Priority 1:** Significant risk of human health impacts, drinking water impacts, or draining to sensitive waters.
- **Priority 2:** Potential to Impact Drinking Water.
- **Priority 3:** Potential Impacts on Sensitive Waters.
- **Priority 4:** Impacts Not Identified.

If funding is limited, these priority areas represent a useful metric when allocating grants, loans, and other funding offsets to property owners. The CCWG is currently reviewing the priority areas and definitions as a part of the overall strategy development via the data validation and prioritization subgroup.

[4] http://geoportal.hawaii.gov/

[5] For more information regarding Census Block Groups, please refer to the US Census Bureau, please see https://www.census.gov/programs-surveys/geography/about/glossary.html#par_textimage_4

2.3.3 Terminology & Definitions

Throughout this TM, there are several financial terms and other definitions used to describe the analysis. Key terms and definitions are summarized as follows:

- **Affordability.** Throughout this TM, "affordability" refers to the ability for a household to pay for wastewater services without facing economic hardship. For cesspool conversion costs to be considered affordable, households would not need to consider forgoing medically necessary prescriptions or doctors' visits, sacrifice meals, face the inability to pay for childcare, energy bills, or rent/mortgage, for example (Raucher et al, 2019).
- **Financially burdened.** Those that are financially burdened would have to sacrifice essential expenses, such as those listed for affordability, to be able to pay for cesspool conversions.
- **Living wage.** A living wage is the amount of income that a household needs to pay for essential living expenses. The living wage developed by the Massachusetts Institute of Technology accounts for essential expenditures in several categories, including food, housing (including utility costs), transportation, medical care, childcare, and taxes[6].
- **Federal Poverty Level.** The FPL provides a benchmark for determining what households can be considered "impoverished" and thus qualify for assistance and support programs, but there is often a large segment of households that are above this threshold but struggle to make ends meet with their income[7].
- **Homeowner or cesspool owner.** Ultimately, it is the responsibility of the homeowner or the persons that own the property with the cesspool to meet the cesspool conversion requirements outlined in Act 125. However, some of the properties with cesspools may be rented to another resident.
- **Resident.** The resident lives at the property with the cesspool and the resident may or may not own the property. It is the resident's income level that is shown in the median household income dataset, which is a key assumption of the affordability analysis described herein. It is acknowledged that the cesspool conversion costs may or may not be passed from the homeowner to the resident (if rented).

2.3.4 Affordability Methodology

The affordability analysis included evaluation of various measures of affordability and financial impact for the cesspool conversion to answer the following questions:

- What percent of income should a typical household be expected to spend on cesspool conversion?
- How likely is it that a cesspool owner either lives below the poverty level or is significantly income-constrained?
- How does the conversion cost compare to a wastewater connection to a public system and monthly service cost for sewered areas?

Cost impacts to homeowners were previously described in Section 2.2. For installation costs, it was assumed that the conversion would be financed through a home equity loan over 20 years at 4.0 percent. There are several methodologies that have been suggested as guidance to define affordability for water and/or wastewater services. Those that have been considered herein include percent of median household income,

[6] https://livingwage.mit.edu/

[7] https://www.census.gov/topics/income-poverty/poverty.html

federal poverty and Asset Limited, Income Constrained, Employed (ALICE) levels, labor hours at minimum wage, and comparison to local sewer bills. Each is described in the following sections.

2.3.4.1 Percent of Median Household Income

Historically, affordability for water and wastewater service has been benchmarked as a percentage of MHI. The USEPA has advanced this metric in the past, stating that wastewater should be less than 2 percent of income to be considered "affordable" (USEPA, 1997). For most analysts, median household income for the municipality, zip code, or some other geographic boundary is readily available, and as a result, the percent of MHI approach has been broadly accepted as a crude measure of affordability for decades, with some going higher or lower than 2 percent. For instance, Fitch Ratings has published guidance that it generally views rates above 1 percent of MHI as "financially burdensome" for customers (Fitch Ratings, 2016).

Despite the broad use of this metric, the water and wastewater industry has sought alternatives over the last several years. Several authors have advanced new benchmarks to measure affordability in response. While percent of MHI is now a useful starting point, the same water and wastewater bill will have a much greater relative impact on a low-income household than a median income household. Affordability measures should therefore reflect this relative impact.

Much of MHI's shortcomings as an affordability measure stem from the fact that it is often used to cover too broad of a geographic area. The MHI for an entire state or even a county or zip code encompasses an extremely broad range of income levels and is likely to be representative of a relatively small subset of households.

In contrast, the MHI for a census block group is likely to more closely reflect the income levels of most residents because the block group tends to follow neighborhood boundaries and is likely to include less socioeconomic stratification. While the MHI for the entire state of Hawai'i represents the income distribution across approximately 1.4 million people, the MHI for a block group represents at most 6,000 people. Therefore, the percent of MHI for each block group was used for this analysis. It was assumed that the median household income for the block group is approximately representative of the individual cesspool owners.

There are still challenges and shortcomings to this approach. First, the census block group MHI does not differentiate between renters and homeowners, which may provide further levels of income stratification. Renters may report income that is then reflected in the census data but ultimately, they may not be directly paying for the cesspool conversion.

Second, even when using the median income of a small block group, there still may be substantial income stratification within the group. It is unlikely that this group will be perfectly homogeneous from a socioeconomic perspective. As a result, the MHI analysis focuses on a typical household, and does not reflect the lower end of the income distribution where affordability challenges are greatest.

The threshold where the average cesspool conversion and O&M costs are less than 2 percent of MHI is $126,125 per year for the average cost scenario ($210 per month).

2.3.4.2 Federal Poverty and ALICE Levels

Affordability challenges naturally begin at the lower end of the income distribution. Households with incomes below a "living wage" face the greatest difficulty paying for basic services like water and wastewater. A living wage is the amount of income that a household needs to pay for essential living expenses. The living wage developed by the Massachusetts Institute of Technology accounts for essential expenditures in several categories, including food, housing (including utility costs), transportation, medical

care, childcare, and taxes. Several different measures were reviewed in this analysis to observe the baseline level of poverty. While these measures do not measure the affordability of the cesspool conversion costs (they do provide a benchmark for affordability), they do highlight where income constrained census block groups overlap with cesspool locations.

The census block group data includes an estimate of the number of households living in poverty. For 2018, the U.S. Census Bureau defined poverty level as a family with an income of less than $30,718.[8] The FPL provides a benchmark for determining what households can be considered "impoverished" and thus qualify for assistance and support programs, but there is often a large segment of households that are above this threshold but struggle to make ends meet with their income. In fact, the FPL is so low for most states, that many references to the FPL are in terms of multiples of FPL, e.g. 200 percent of FPL or 400 percent of FLP. "The FPL, with its minimal and uniform national estimate of the cost of living, far underestimates the number of households that cannot afford to live and work in the modern economy." (ALICE Report, 2020)

ALICE is one measure used to define households who may not qualify for aid under FPL measures but still have significant challenges making ends meet. ALICE household budgets are intended to provide a more realistic estimate of how much income is necessary to both live and work in each geography. This economic indicator has been in existence for about a decade. The 2018 ALICE household survival budget for a family of four in Hawai'i is estimated at $90,828 per year (United for ALICE, 2020). This compares to the FPL for a family of four estimated at $28,870 in 2018. There have been 3 reports published based on 2016, 2017 and 2018 data. It typically takes about 2 years to analyze the data. Therefore, the current 2020 ALICE report is based on 2018 data.

While ALICE indicators are prepared for each state through census data, approximately 20 states[9] actively support additional economic research in their respective states to further understand the drivers of economic challenges in their communities. This research is led by a 27-person national advisory committee that represents the various states, including Hawai'i and is tasked with making sure that the data and research are applied independently and consistently towards the development of ALICE models and tools.

The ALICE budget is comprised of the following categories: housing, childcare, food, transportation, health care, technology, taxes, savings, and miscellaneous (10 percent of budget).

The main conclusions of the most recent ALICE report for Hawai'i indicate a troubling trend. Despite strong economic growth until Coronavirus Disease 2019 (COVID-19) impacts hit the state in March 2020, the number of ALICE households rose from 22 percent in 2007 to 33 percent in 2018. The total number of households in Hawaii is estimated at 455,100. This trend is exacerbated by the recent COVID-19 impacts with the ALICE report estimating that an additional 35,000 households would become ALICE households by the end of 2020.

2.3.4.3 Hours of Labor at Minimum Wage

Some water utility affordability scholars have argued in support of using hours of labor at minimum wage as a measure of affordability (Teodoro, 2018). This metric puts the water and sewer bill in terms of how many hours a person would have to work at the local minimum wage in order to pay for sewer service. The minimum wage across the state is $10.10 per hour[10].

[8] For more information regarding the U.S. Census Bureau's poverty measures, please see https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html
[9] AK, CT, FL, HI, ID, IL, IN, IO, LA, MA, MI, NJ, NY, OH, OR, PA, TN, TX, VA, WA and WI
[10] Effective January 1, 2018. See https://labor.hawaii.gov/wsd/minimum-wage/

2.3.4.4 Comparison to Centralized Wastewater Collection and Treatment

Many communities across the United States are served by centralized wastewater collection and treatment systems. While these are less prevalent in Hawai'i compared to other states, there are wastewater treatment plants (WWTP) across the state that can offer a comparative monthly cost for residential households. While comparing cesspool conversion costs with WWTP service charges does not measure affordability (as the monthly sewer bills may exceed 2 percent of income for some customers), it does provide a local benchmark for alternative cost.

Figure 2.4 shows typical average monthly sewer service charges for wastewater collection and treatment for the various counties compared to the monthly cost for cesspool conversion for the low, average, and high cost scenarios.

Hawai'i County has the lowest monthly wastewater bill at $40 per month on average, while City and County of Honolulu has the highest at $111 per month. As a percent of MHI for each county, the monthly wastewater bills range from 0.8 percent (Hawai'i County) to 1.6 percent (City and County of Honolulu).

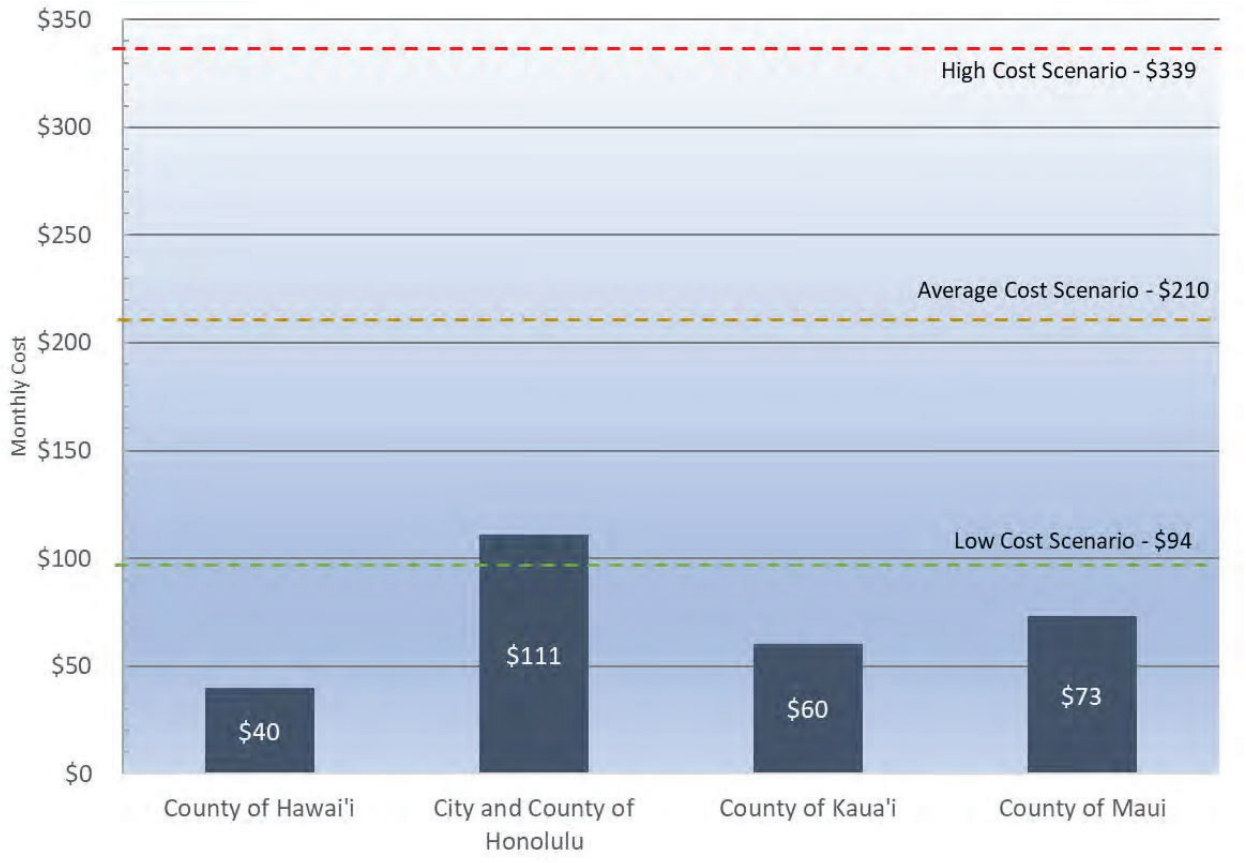


Figure 2.4 Typical Monthly Sewer Bill Compared to Monthly Cesspool Conversion Costs for Average Scenario[1-4]

Notes:
(1) County of Hawai'i – single family monthly flat rate of $40.00
(2) City and County of Honolulu – based on estimated single family water usage at 9,000 gals/month. Wastewater bill is 80 percent of water usage*$4.63/kgals + base fee of $77.55 = $110.89
(3) County of Kaua'i – single family monthly flat rate of $60.09
(4) County of Maui – based on estimated single family water usage at 9,000 gals/month. Wastewater bill is based on all water usage up to 9,000 gals at $4.50/kgals + base fee of $32.50 = $73.00

2.4 Affordability Analysis Results and Discussion

To streamline the affordability analysis, this effort focused on the cesspool conversion costs relative to the percent of median household income levels by census block groups and federal poverty levels statewide and for each of the counties individually. Because the minimum wage is uniform across the state, this measure was not included with the county-level results. Affordability analyses using the ALICE household budget level are included in Appendix B for reference. Appendix C summarizes the affordability analyses by county and legislative district.

2.4.1 Statewide

The following sections summarize the affordability analysis for the state of Hawai'i, considering the percent of census block group median household income and federal poverty levels.

2.4.1.1 Census Block Group Median Household Income

Figure 2.5 shows the number of cesspools statewide by census block group MHI. The dashed black lines indicate the affordability threshold previously defined as 2 percent of MHI ($126,125 per year for the average cost scenario or $210 per month and $89,766 per year for the adjusted average cost scenario [after rebate] or $150 per month for cesspool conversion costs). The number of cesspools and MHI levels to the left of the dashed line are projected to have affordability challenges with the cesspool upgrades. By this definition, approximately 82,424, or 97 percent of all cesspool owners in the state will be financially burdened by cesspool upgrade costs without financial assistance. The FPL is shown for reference.

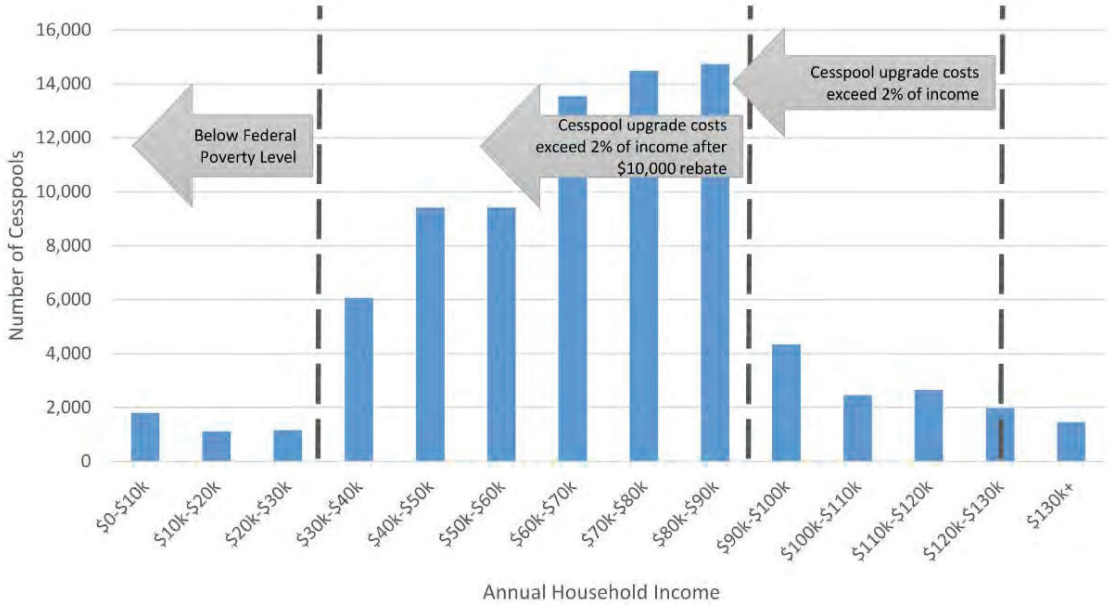


Figure 2.5 Statewide Number of Cesspool Homeowners Relative to Median Household Income Levels(1)

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.

Figure 2.6 shows the same information broken down by county relative to MHI levels and the affordability threshold. Assuming no financial assistance, an estimated 48,303 cesspools owners with affordability challenges are in Hawai'i County. The County of Maui has approximately 13,327 cesspool owners below the affordability threshold, followed by the County of Kaua'i with approximately 11,507 homeowners impacted. Lastly, the City and County of Honolulu has the least number of homeowners impacted with approximately 9,287.

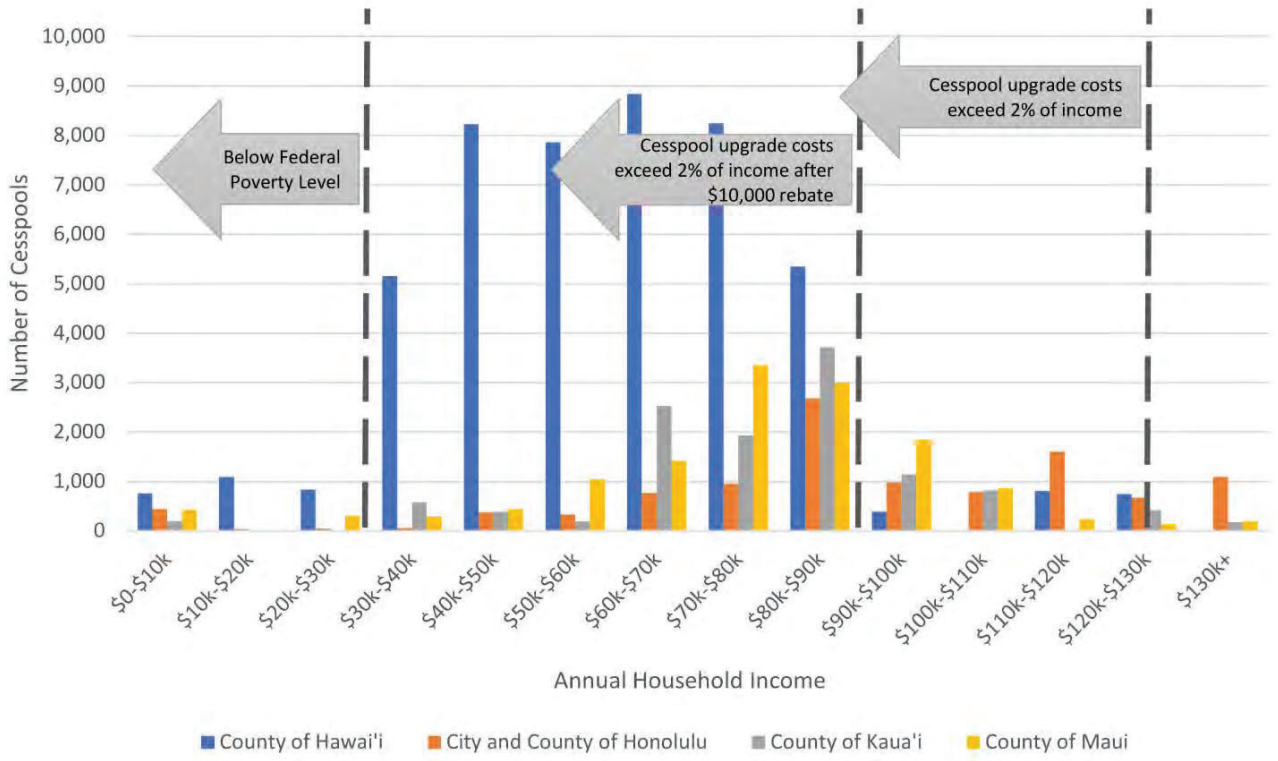


Figure 2.6 Number of Cesspool Homeowners Relative to Median Household Income Levels by County

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.

Table 2.3 shows the results of the affordability analysis considering census block group MHI by cesspool priority level. Assuming no financial assistance, the cost of cesspool conversions would exceed 2 percent of MHI for 97 percent of cesspool owners (all priority categories). It is estimated that 99 percent of the Priority 1 cesspool owners will have difficulty affording cesspool conversions. If the high cesspool conversion cost scenario is assumed (estimated cost of $339 per month), virtually all cesspool homeowners would be financially burdened by the conversion.

These results show that cesspool conversion costs would be a significant burden for most Hawai'i residents. Given that a vast majority of the cesspool homeowners are likely to find the conversion unaffordable even when costs are financed over 20 years, significant affordability challenges should be expected for the program, absent additional funding.

Table 2.3 Statewide – Number of Households Expected to Exceed 2 Percent of Income

Priority Categories	Number of Cesspools(1)	Number of Households Projected to Spend >2 percent of Income on Cesspool Conversion(2)		
		Low Cost	Average Cost	High Cost
1	8,532	341	8,434	8,532
2	14,500	5,048	14,321	14,500
3	18,306	3,121	17,717	18,306
4	43,379	16,759	41,952	43,358
Totals	**84,717**	**25,269**	**82,424**	**84,696**

Notes:
(1) Number of cesspools are based on GIS data and may not align exactly with the 2018 DOH report.
(2) Based on the median household income for the census block group where the cesspool site resides.

2.4.1.2 Poverty Levels

Across the state, it is estimated that 4.8 percent or 4,104 households with cesspools have incomes below the federal poverty level or $30,718.

Figure 2.7 shows the percent of cesspool homeowners by county and statewide that fall in various categories relative to the FPL ($30,718), including:

- Below FPL.
- Between 100-200 percent of FPL ($30,718-$61,436).
- Between 200-300 percent of FPL ($61,436-$92,154).
- Between 300-400 percent of FPL ($92,154-$122,872).
- Above 400 percent of FPL (>$122,872).

The County of Hawai'i has the most residents with cesspools located in block groups where the MHI is both below the FPL and between 100 and 200 percent of FPL, with 1,867 and 15,640 cesspools, respectively. The City and County of Honolulu, County of Maui, and County of Kaua'i follow, with 489, 460, and 204 cesspools located in block groups where the MHI is below the FPL, respectively.

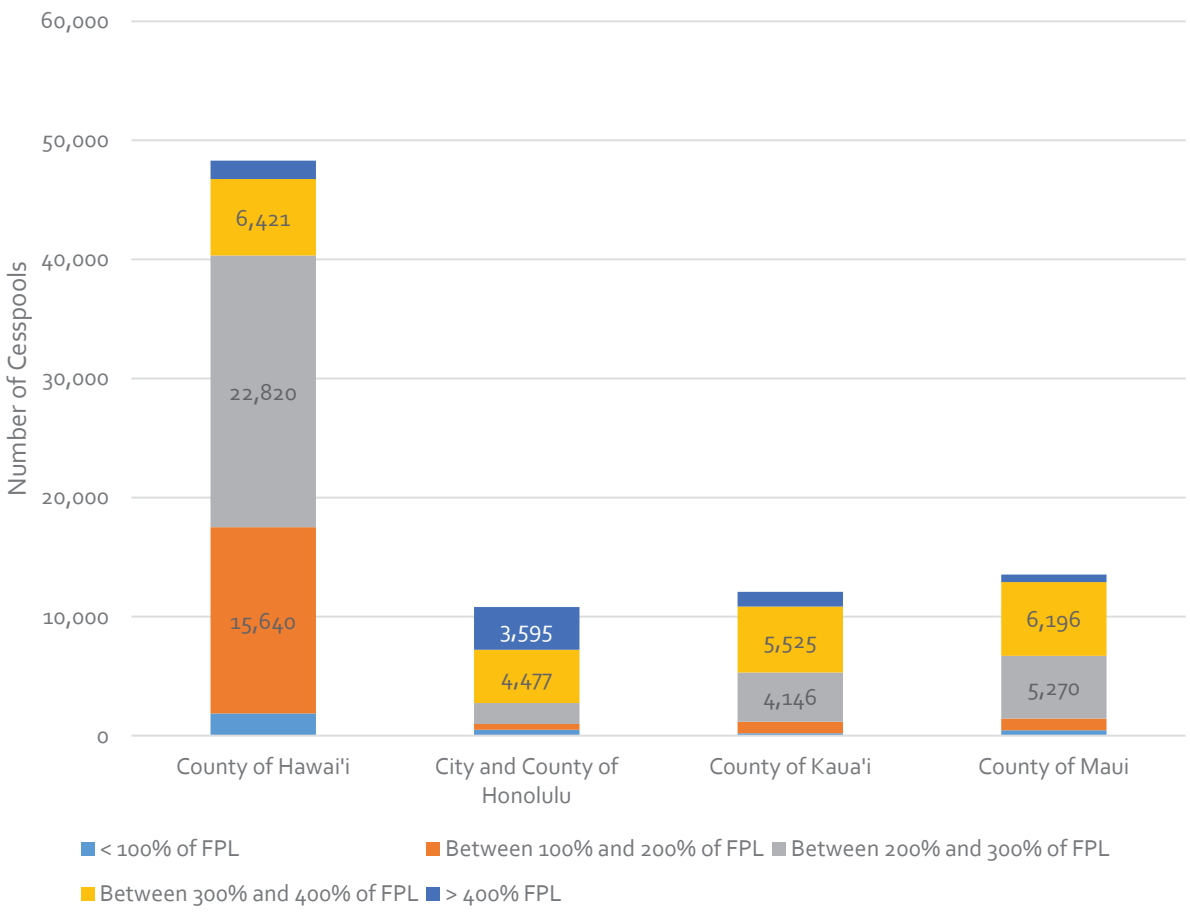


Figure 2.7 Number of Cesspool Homeowners by Federal Poverty Levels

2.4.2 County of Hawai'i

The following sections summarize the affordability analysis for the County of Hawai'i by percent of census block group MHI, and poverty levels. The County of Hawai'i has the largest number of cesspools (48,303), as well as the most residents facing affordability challenges. Hawai'i County also has the greatest proportion of households without centralized sewers than any other county (71 percent). This high percentage indicates that sewer mains are unlikely to be available for most properties. Without options to connect to existing centralized wastewater systems, the only option for many cesspool owners in Hawaii County is approved OSWT systems.

2.4.2.1 Census Block Group Median Household Income

Figure 2.8 shows the number of cesspools in the County of Hawai'i by census block group MHI. The dashed black lines indicate the affordability threshold previously defined as 2 percent of MHI (for full cost and adjusted cost after $10,000 rebate). As previously discussed, the County of Hawaii has the most significant cesspool conversion affordability challenges based on MHI data. Approximately 48,303 cesspools owners located in Hawai'i County (more than half of all cesspools in the state) are expected to face affordability challenges for conversions.

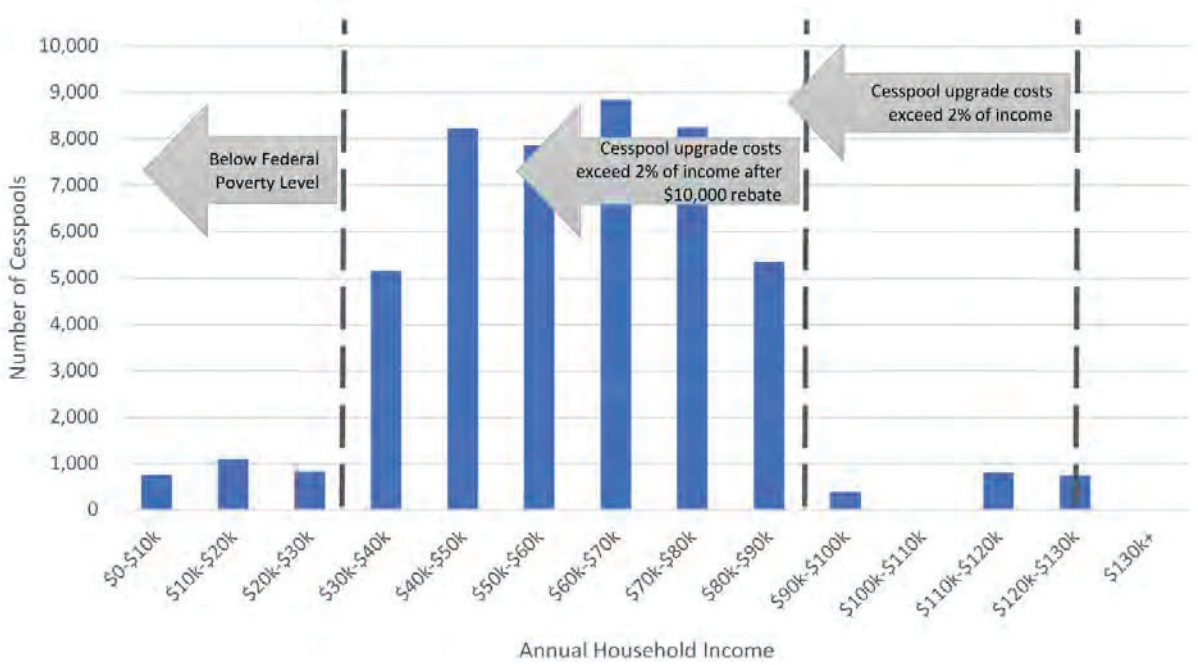


Figure 2.8 Hawai'i County – Number of Cesspools Relative to Median Household Income(1)

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.

Figure 2.9 shows the locations of the Hawai'i County's cesspools relative to median household incomes and priority upgrade areas. The Priority 2 area south of the Hilo Bay area shows that homeowners have MHI levels below the affordability threshold. Most homeowners in this area appear to have MHIs of less than $80,000 and MHI appears to decrease moving inland. The Priority 2 area near Hilo Bay shows a mixture of MHI with pockets of lower income levels ranging from $0 to $40,000. Other Priority 3 areas located on the Kona side and near Puako show MHIs ranging from $50,000 to $80,000, which is still below the affordability thresholds for cesspool conversions. MHI data for cesspools located outside of priority upgrade areas range widely. The highest MHIs are shown in the Waimea area. Lower MHI data are shown for more sparsely populated, coastal and inland areas.

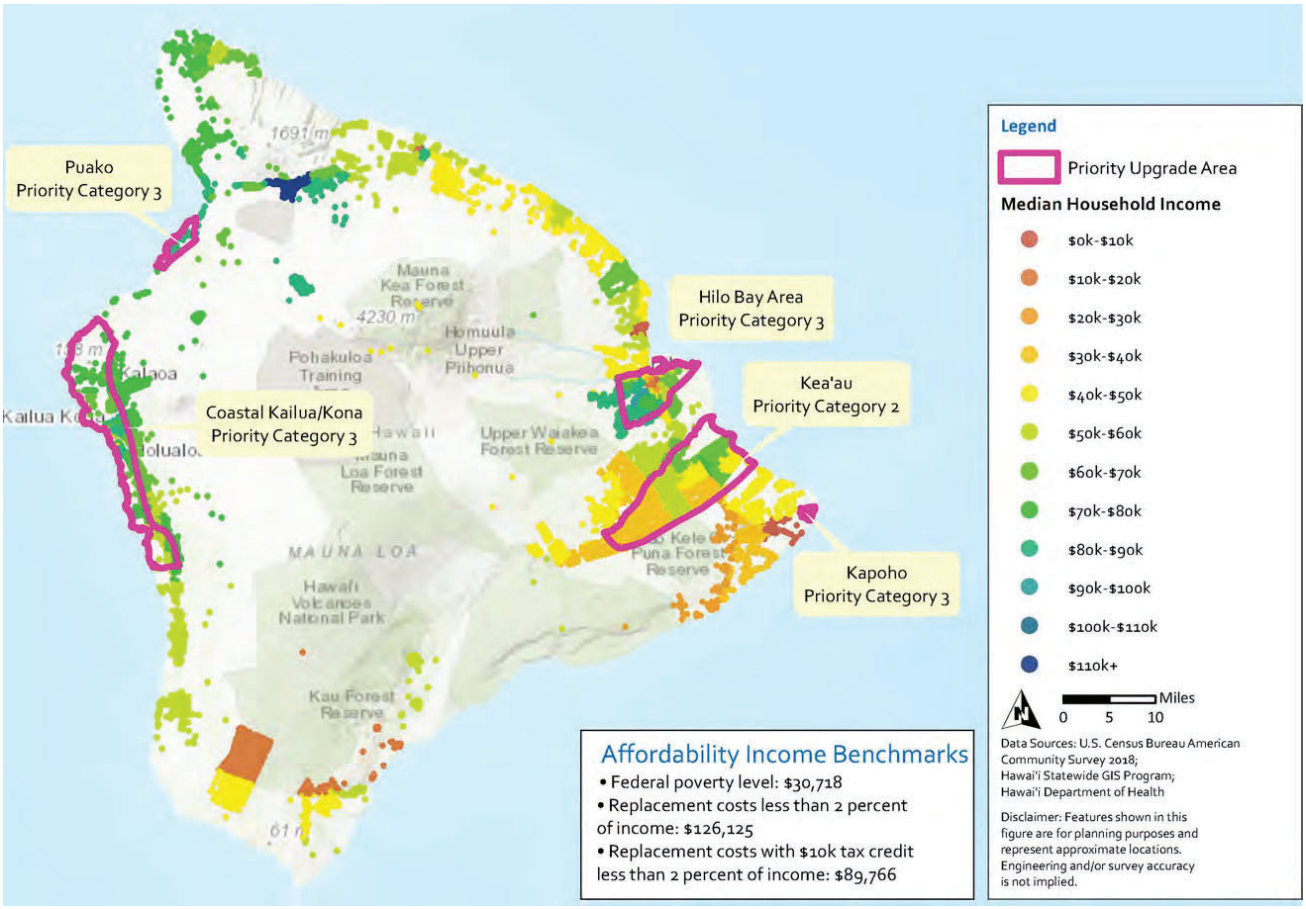


Figure 2.9 Hawai'i County Cesspools and Median Household Income Levels

Table 2.4 summarizes the number of cesspool owners expected to spend greater than 2 percent of their income on conversion broken down by low, average, and high conversion cost scenarios and by priority level. All County of Hawai'i cesspool homeowners fall below the affordability threshold for the average conversion cost scenario. Approximately 44 percent of cesspool homeowners would be unable to afford cesspool conversions under the low-cost scenario. A greater share of the County of Hawai'i's residents would face affordability issues for cesspool conversion compared with statewide metrics.

Table 2.4 Hawai'i County – Number of Households Projected to Exceed 2 Percent of Income

Priority Categories	Number of Cesspools	Number of Households Projected to Spend >2 percent of Income on Cesspool Conversion(1)		
		Low Cost	Average Cost	High Cost
1	0	NA	NA	NA
2	8,039	4,651	8,039	8,039
3	15,188	2,784	15,188	15,188
4	25,076	13,841	25,076	25,076
Totals	**48,303**	**21,376**	**48,303**	**48,303**

Notes:
(1) Based on the median household income for the census block group where the cesspool site resides. Assumes no financial assistance.
(2) NA = not applicable

2.4.2.2 Poverty

Like the state as a whole, the majority of the County of Hawai'i's cesspool homeowners have incomes above the FPL. Approximately 5.5 percent or 2,675 households with cesspools have incomes below the FPL.

2.4.3 City and County of Honolulu

The following sections summarize the affordability analysis for the City and County of Honolulu by percent of census block group MHI, and poverty levels. Most homeowners have sewer connections such that the City and County of Honolulu has the lowest percentage of households with a cesspool at 3 percent. There are an estimated 311,525 households and 10,805 cesspools in the City and County of Honolulu.

2.4.3.1 Census Block Group Median Household Income

Figure 2.10 shows the number of cesspools in the City and County of Honolulu by census block group MHI. The dashed black lines indicate the affordability threshold previously defined as 2 percent of MHI (for full cost and adjusted cost after rebate).

Honolulu's census block group MHI distribution is skewed more to the right than the other counties, but it also has a significant number of block groups at the far-left end of the distribution, with incomes below $10,000 per year. Therefore, while the county may not have the same broad affordability challenges that other counties will see, the households that will be unable to pay for conversion may be extremely challenged to do so.

Figure 2.11 shows the locations of the City and County of Honolulu's cesspools relative to median household incomes and priority upgrade areas. The Priority 1 area in Kahulu'u shows MHIs ranging from $90,000-$110,000+ (on the border and above the affordability threshold). The Priority 3 area on the Windward side of the island near Waimanalo shows most MHIs ranging from $50,000-$100,000. Some homeowners in this area will require financial assistance with cesspool upgrades. The Diamond Head area of O'ahu is a Priority 3 area with MHIs ranging widely from $0-$110,000+. Connection to the City and County of Honolulu's sewer

system may be an option for these homeowners; however, sewer construction in this area may be challenging. Without a sewer connection, some homeowners may require financial assistance for upgrades.

The Priority 3 area in Ewa Beach shows higher MHIs ranging from $90,000-$110,000+. Many of these homeowners may be able to afford cesspool conversions without significant financial assistance. However, homeowners in the Priority 3 area near Waialua have MHIs ranging from $40,000-$80,000 (less than the affordability threshold) and may require financial assistance. There are some pockets of MHIs showing as greater than $110,000 in this area where homeowners may be able to afford the cesspool upgrades.

Table 2.5 summarizes the number of cesspools projected to spend more than 2 percent of income on the cesspool conversion in the City and County of Honolulu for the low, average, and high cost scenarios and by priority level. It is estimated that approximately 86 percent of City and County of Honolulu cesspool homeowners (9,287) fall below the affordability threshold for the average conversion cost scenario.

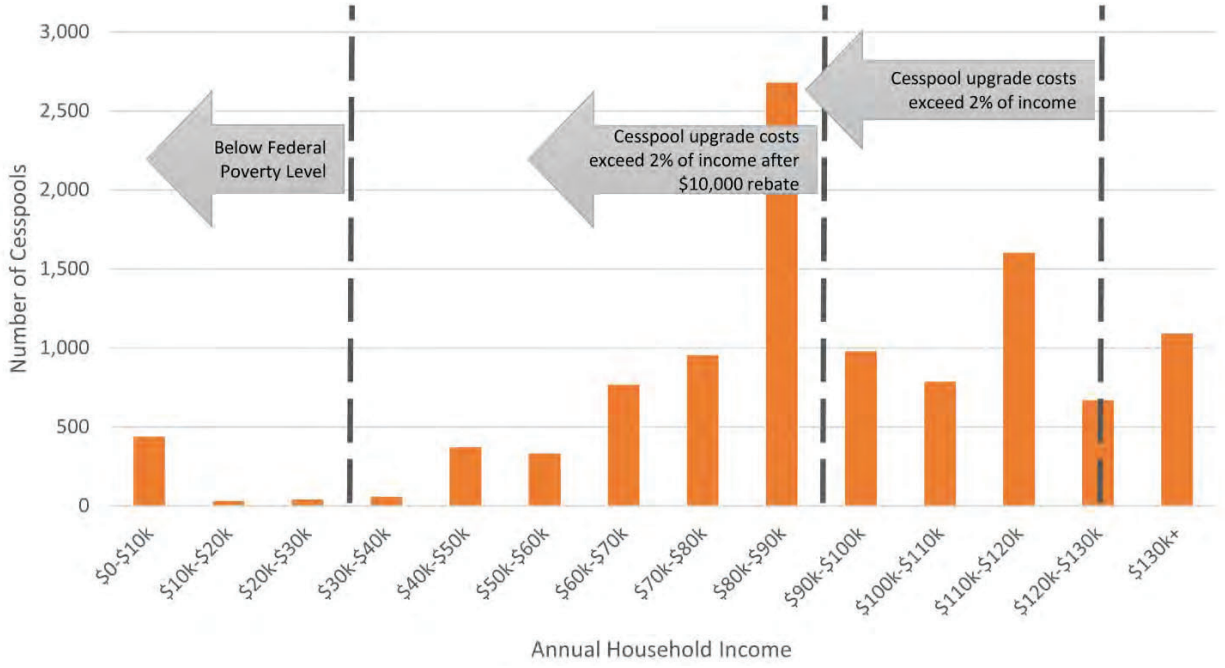


Figure 2.10 City and County of Honolulu – Number of Cesspools Relative to Median Household Income Levels[(1)]

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.

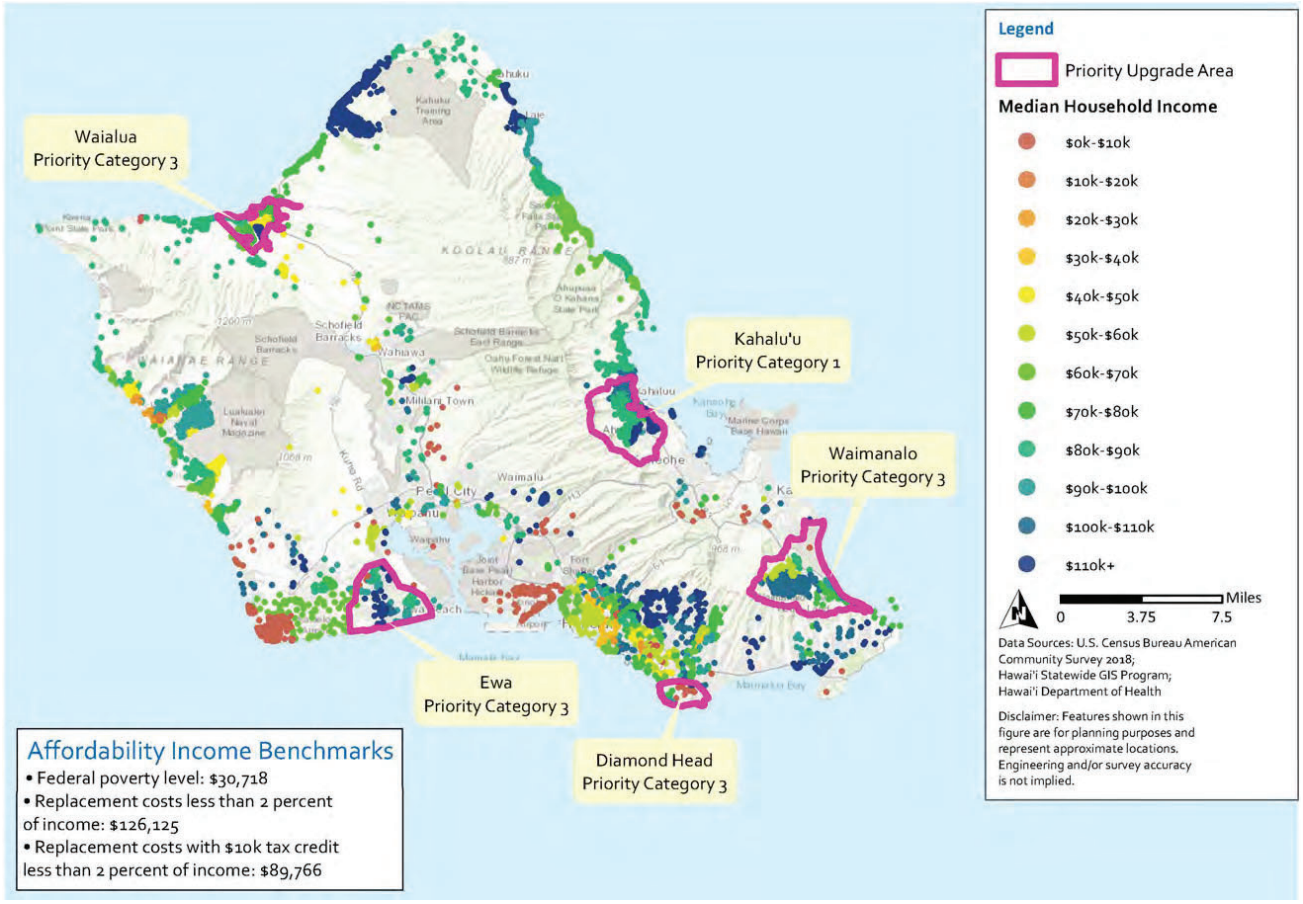


Figure 2.11 City and County of Honolulu Cesspools and Median Household Income

Table 2.5 City and County of Honolulu – Percent of Median Household Income by Priority Category

Priority Categories	Number of Cesspools	Number of Households Projected to Spend >2 percent of Income on Cesspool Conversion(1)		
		Low Cost	Average Cost	High Cost
1	656	NA	656	656
2	0	NA	NA	NA
3	2,924	147	2,335	2,924
4	7,225	1,027	6,296	7,204
Totals	**10,805**	**1,174**	**9,287**	**10,784**

Notes:
(1) Based on the median household income for the census block group where the cesspool site resides. Assumes no financial assistance.
(2) NA = not applicable

2.4.3.2 Poverty Levels

The City and County of Honolulu has approximately 4.7 percent or 512 households with cesspools that have incomes below the FPL.

2.4.4 County of Kauaʻi

The following sections summarize the affordability analysis for the County of Kauaʻi by percent of census block group MHI, and poverty levels. There are an estimated 12,085 cesspools and 22,524 households in Kauaʻi County, with approximately 54 percent of households having a cesspool.

2.4.4.1 Census Block Group Median Household Income

Figure 2.12 shows the number of cesspools in the County of Kauaʻi by census block group MHI. The dashed black lines indicate the affordability threshold previously defined as 2 percent of MHI (for full cost and adjusted cost after rebate). Approximately 11,507 cesspools owners located in Kauaʻi County, or 95 percent, are expected to face affordability challenges for cesspool conversions without financial assistance.

Figure 2.13 shows the locations of Kauaʻi County's cesspools relative to median household incomes and priority upgrade areas. The Priority 3 area near Hanalei Bay area shows that homeowners have MHI levels ranging from $20,000 to $70,000, which is below the affordability threshold. The Priority 2 level area near Kapaʻa/Wailua shows MHIs ranging from $40,000 to $100,000, just below the affordability threshold. Also, Priority 2 level area on the south side of Kauaʻi shows a range of $40,000 to more than $110,000 for MHIs.

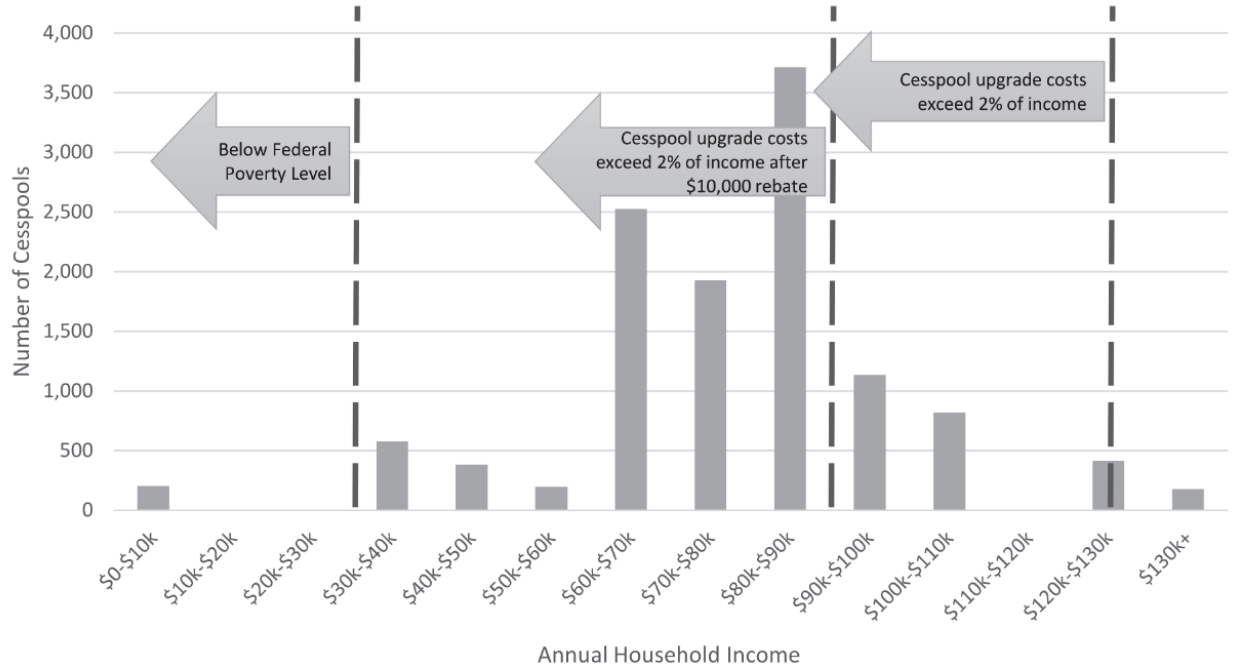


Figure 2.12 County of Kaua'i – Number of Cesspools Relative to Median Household Income Levels[(1)]

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.

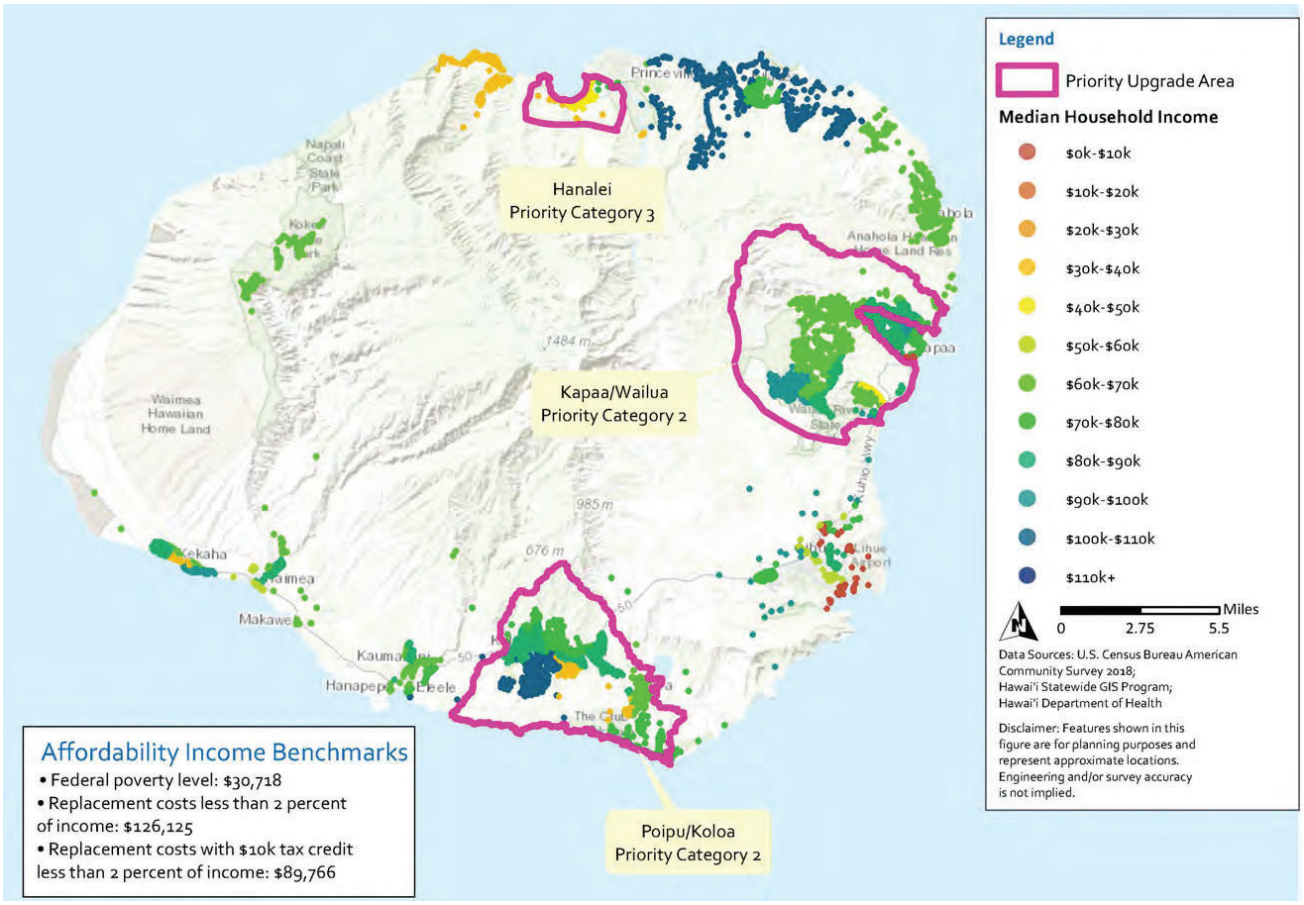


Figure 2.13 Kaua'i County Cesspools and Median Household Income

Table 2.6 summarizes the number of cesspools projected to spend more than 2 percent of income on the conversion in the County of Kauaʻi for the low, average, and high cost scenarios and by priority level. It is estimated that effectively 84 percent (11,507) of County of Kauaʻi cesspool homeowners fall below the affordability threshold for the average conversion cost scenario.

If the high cost scenario is assumed, all cesspool homeowners on Kauaʻi fall below the affordability threshold, while only 8 percent would fall under the same designation under the low-cost scenario. Compared with the statewide metrics, a slightly smaller share of Kauaʻi County cesspool homeowners is expected to face affordability issues for cesspool conversion.

Table 2.6 County of Kauaʻi – Number of Households Projected to Exceed 2 Percent of Income

Priority Categories	Number of Cesspools	Number of Households Projected to Spend >2 percent of Income on Cesspool Conversion(2)		
		Low Cost	Average Cost	High Cost
1	0	NA	NA	NA
2	6,461	397	6,282	6,461
3	194	190	194	194
4	5,430	605	5,031	5,430
Totals	**12,085**	**1,192**	**11,507**	**12,085**

Notes:
(1) Based on the median household income for the census block group where the cesspool site resides. Assumes no financial assistance.
(2) NA = not applicable

2.4.4.2 Poverty Levels

The County of Kauaʻi has the smallest share of households assumed to be living below the FPL across all counties in Hawaiʻi at 1.7 percent or 512 of residents with cesspools.

2.4.5 County of Maui

The County of Maui includes Maui, Molokaʻi, Lānaʻi, and Kahoʻolawe, of which Maui and Molokaʻi have cesspools included in this analysis. This section is divided between these two islands. There are an estimated 12,085 cesspools in Maui County, compared with 54,274 households. It is estimated that approximately 22 percent of households have a cesspool.

2.4.5.1 Maui

The following sections summarize the affordability analysis for Maui by percent of census block group MHI, and poverty levels.

Census Block Group Median Household Income

Figure 2.14 shows the number of cesspools in Maui by census block group MHI. The dashed black lines indicate the affordability threshold previously defined as 2 percent of MHI (for full cost and adjusted cost after $10,000 rebate).

Table 2.7 summarizes the number of cesspools projected to spend more than 2 percent of income on the cesspool conversions in Maui for the low, average, and high cost scenarios by priority level. It is estimated that approximately 98 percent of Maui cesspool homeowners (11,888) fall below the affordability threshold for the average conversion cost scenario without financial assistance.

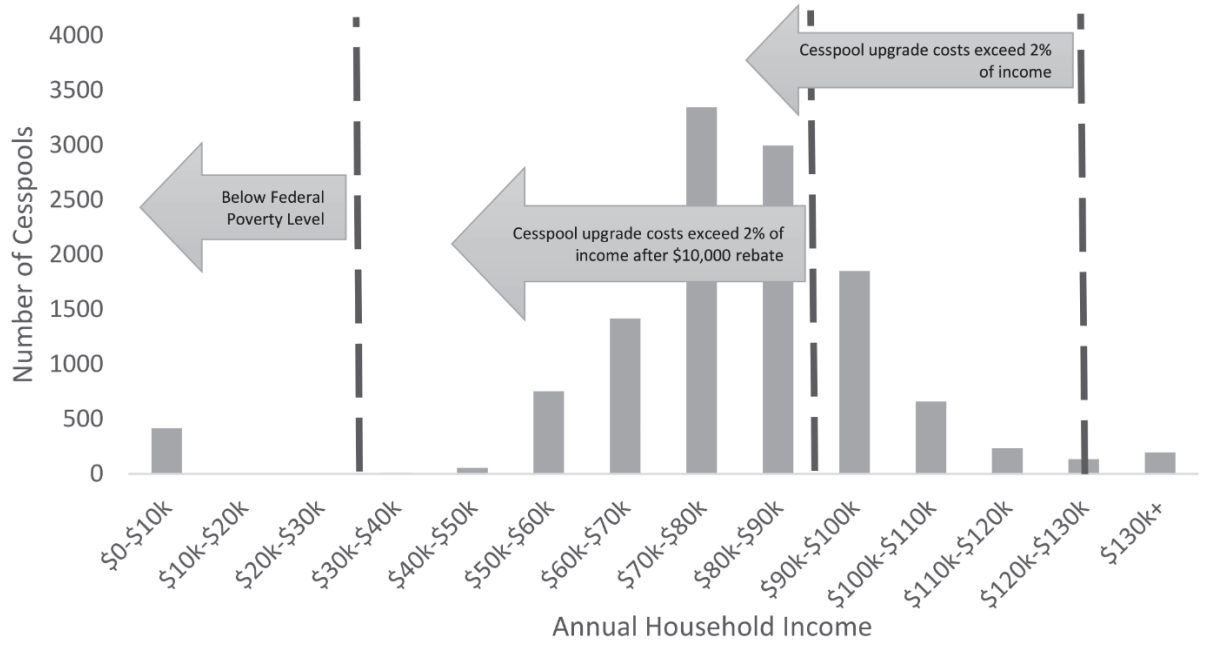


Figure 2.14 Maui – Number of Cesspools Relative to Median Household Income Levels(1)

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.

Table 2.7 Maui – Number of Households Projected to Exceed 2 Percent of Income

Priority Categories	Number of Cesspools	Number of Households Projected to Spend >2 percent of Income on Cesspool Conversion(1)		
		Low Cost	Average Cost	High Cost
1	7,876	341	7,778	7,876
2	0	NA	NA	NA
3	0	NA	NA	NA
4	4,209	231	4,110	4,209
Total	**12,085**	**572**	**11,888**	**12,085**

Notes:
(1) Based on the median household income for the census block group where the cesspool site resides. Assumes no financial assistance.
(2) NA = not applicable

Poverty Levels

It is estimated that 3.4 percent or 416 households with cesspools on Maui have incomes below the FPL.

2.4.5.2 Molokaʻi

The following sections summarize the affordability analysis for Molokaʻi by percent of census block group MHI, and poverty levels.

Census Block Group Median Household Income

Figure 2.15 shows the number of cesspools in Molokaʻi by census block group MHI. The dashed black lines indicate the affordability threshold previously defined as 2 percent of MHI (for full cost and adjusted cost after rebate).

Table 2.8 summarizes the number of cesspools projected to spend more than 2 percent of income on the cesspool conversions in Maui for the low, average, and high cost scenarios and by priority level. It is estimated that effectively all Molokaʻi cesspool homeowners (1,439) fall below the affordability threshold for the average conversion cost scenario.

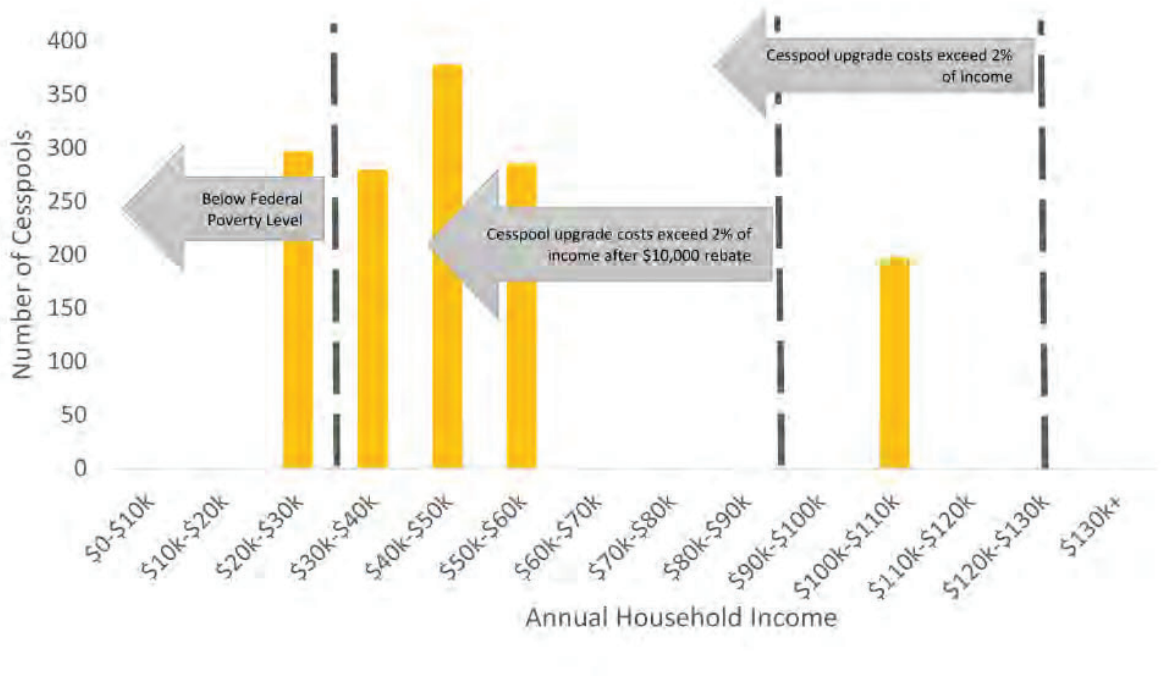


Figure 2.15 Moloka'i - Number of Cesspools Relative to Median Household Income Levels (1)

Notes:
(1) Assumes average cesspool conversion cost scenario of $210 per month.

Table 2.8 Molokaʻi – Number of Cesspools Projected to Exceed 2 Percent of Income

Priority Categories	Number of Cesspools	Number of Households Projected to Spend >2 percent of Income on Cesspool Conversion(1)		
		Low Cost	Average Cost	High Cost
1	0	NA	NA	NA
2	0	NA	NA	NA
3	0	NA	NA	NA
4	1,439	955	1,439	1,439
Totals	**1,439**	**955**	**1,439**	**1,439**

Notes:
(1) Based on the median household income for the census block group where the cesspool site resides. Assumes no financial assistance.
(2) NA = not applicable

Poverty Levels

It is estimated that 2.2 percent or 297 households with cesspools on Molokaʻi are below the FPL. While the percent of households assumed to be below the FPL is relatively in line with the rest of the state, Molokaʻi has the largest share of residents living between 100 and 200 percent of the FPL, the highest among any island and more than double the next highest (Hawaiʻi County). This significant share of residents living slightly above the poverty level is likely to result in significant affordability challenges for Molokaʻi residents.

Figure 2.16 shows the locations of Molokaʻi and Maui's cesspools relative to median household incomes and priority upgrade areas. Molokaʻi has Priority 1, 2, or 3 areas. Median household incomes range from $0 to $60,000 (below the affordability threshold), with a concentration of $110,000+ MHIs located in the Kaunakakai area (above the affordability threshold). The Priority 2 location in Upcountry Maui shows a wide range of incomes from $0-$110,000+ with most incomes ranging from $60,000-$100,000 (just below the affordability threshold). Non-priority upgrade areas on Maui show varying MHIs.

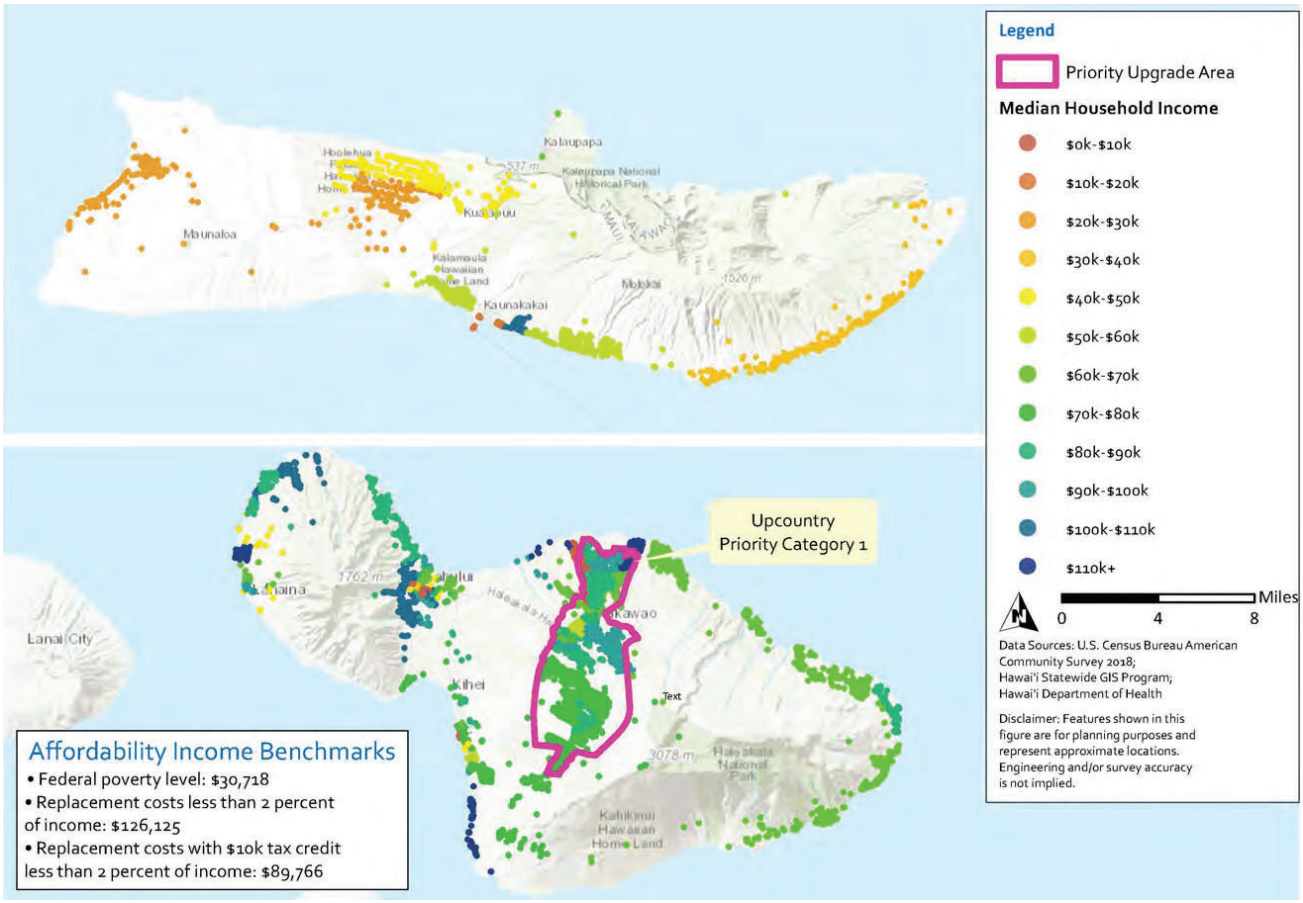


Figure 2.16 Maui and Moloka'i Cesspools and Median Household Income

2.5 Conclusions & Recommendations

The relative level of financial impact has important implications when allocating grants, loans, and other funding sources to cesspool conversion projects. Additional household level research is recommended prior to making decisions regarding allocation of these funds, but this analysis can guide the next steps as the state considers where to begin making investments and achieve the greatest affordability impact.

Significant affordability challenges are anticipated for cesspool conversions across the state. Table 2.9 summarizes the affordability analysis in terms of the number of cesspool homeowners based on key affordability criteria. It is projected that 97 percent of cesspool homeowners (82,424 homeowners) will pay more than 2 percent of their income for the cesspool conversions. This statistic decreases to 85 percent (71,799 homeowners) when assuming each cesspool homeowner could take advantage of a hypothetical $10,000 rebate. As a result, the conversions are likely to be a significant financial burden at the household level. Furthermore, measures of poverty and income-constraints show that most homeowners have little room in their household budgets for such a significant expense.

The analysis within this TM breaks down the cesspools by priority levels and households with the greatest financial needs. In combination with the funding mechanisms TM, the affordability analysis can be used to target priority areas and/or prioritize financial needs.

Following prioritization of cesspool upgrades, the state can evaluate how to best leverage any funding available to supplement the cost of conversions for households most impacted.

Table 2.9 Summary of the Cesspool Homeowners by County Based on Key Affordability Criteria[1]

Affordability Measure	County of Hawai'i	County of Kaua'i	County of Maui		City and County of Honolulu	Statewide
			Maui	Moloka'i		
Below Federal Poverty Level [2]	3,254	204	416	297	512	4,683
Below 2 Percent Median Household Income [3]						
With $10,000 Rebate	46,359	9,533	9,000	1,241	5,666	71,799
Without Hypothetical $10,000 Rebate	48,303	11,507	11,888	1,439	9,287	82,424

Notes:
(1) Affordability analysis was for the average scenario with $23,000 cesspool upgrade costs, and monthly costs of $210 if the cesspool conversion is financed over 20 years at 4 percent interest.
(2) Federal poverty level is $30,718 annual income.
(3) The 2 percent of median household income threshold is $126,125 annual income based on the USEPA definition of "cost burdened".

2.5.1 Funding Assistance Prioritization

With limited funds available to directly support conversions, it is important for the state to consider where the need for funds are concentrated. From an environmental standpoint, the priority upgrade locations identified in the 2018 Legislature Report are a useful starting point. From an economic standpoint, census block groups where average conversion cost is expected to exceed 2 percent of MHI is also useful.

Using the average conversion cost from Table 2.2, the estimated cost to replace all cesspools organized by 2 percent MHI thresholds and priority upgrade area is outlined in Table 2.10. The estimated conversion cost is provided based on the number of cesspools in each priority category and the affordability criteria. These cost data can be used for preliminary policy discussions and decisions by the CCWG and other advisors.

Table 2.10 Estimated Cost to Replace All Cesspools for Residents by Priority Category and Median Household Income

Priority Category	Number of Cesspools	Total Conversion Cost ($ millions)[1]
Below 2 percent Median Household Income Threshold[2]		
1	98	$2.3
2	179	$4.1
3	589	$13.5
4	1,427	$32.8
Subtotal	**2,293**	**$52.7**
Above 2 percent Median Household Income Threshold[3]		
1	8,434	$194.0
2	14,321	$329.4
3	17,717	$407.5
4	41,952	$964.9
Subtotal	**82,424**	**$1,895.8**
Total	**84,717**	**$1,948.5**

Notes:
(1) Based on average conversion cost of $23,000.
(2) Residents who may be able to afford cesspool conversions without financial assistance.
(3) Residents who are financially burdened by cesspool conversion costs and may require financial assistance.

2.5.2 Private Financing and What Can Be Afforded

To determine the amount of financial assistance that may be needed, it is also important to consider the portion of the cesspool conversions costs that *can* be afforded by homeowners. With the exception of those with estimated annual income below the FPL, it was assumed that homeowners could afford to privately finance an amount that results in a monthly payment less than or equal to 2 percent of their estimated monthly income less the average monthly maintenance cost for the selected replacement technology. If that amount is less than the average of conversion costs, it is assumed the difference would require financial aid. Table 2.11 summarizes the estimated amount of conversion costs that can be afforded or privately financed versus the amount of financial aid that may be required. It is anticipated that more than $900 million in financial aid is required to support cesspool conversions for homeowners who are financially burdened.

Table 2.11 Estimated Private Financing and Financial Aid Required for Cesspool Conversions[1]

Priority	Total Private Financing[2] ($ million)	Total Financial Aid Required[3] ($ million)
1	$89.8	$106.5
2	$94.2	$239.3
3	$164.7	$256.3
4	$557.6	$440.1
Totals	**$906.3**	**$1,042.2**

Notes:
(1) Based on average conversion cost of $23,000.
(2) Assumes residents can afford up to 2 percent of estimated household income for cesspool conversions, financed at 4 percent interest over 20 years.
(3) Assumes cesspool conversion costs in excess of 2 percent of estimated household income will require financial aid. Residents with income levels below the federal poverty limit are assumed to require financial support for all conversion costs.

2.6 References

Babcock, R., Barnes, M.D., Fung, A., Godell, W., and Oleson, K.L.L. 2019. Investigation of Cesspool Upgrade Alternatives in Upcountry Maui (Final Report). Prepared for the Hawaii Department of Health, Safe Drinking Water Branch.

Department of Health. 2018. Report to 29th Legislature, State of Hawaii, Relating to Cesspools and Prioritization for Replacement.

Fitch Ratings. 2016. "U.S. Water and Sewer Revenue Bond Rating Criteria—Effective Nov. 30, 2016 to Nov. 30, 2017" (2016): 4.

Raucher, R., Clements, J., Rothstein, E., Mastracchio, J., and Green, Z. 2019. Developing a New Framework for Household Affordability and Financial Capability Assessment in the Water Sector. Prepared for The American Water Works Association, the National Association of Clean Water Agencies, and Water Environment Federation.

Synchrony Financial and Houzz. 2018. "2018: Role of Credit Cards in U.S. Home Improvement" (https://st.hzcdn.com/static/econ/RoleofCreditCardsinU.S.HomeImprovement2018Final.pdf, 2018). Accessed July 2020.Teodoro, M.P. "Measuring Household Affordability for Water and Sewer Utilities." *Journal of American Water Works Association* 110, no. 1 (2018): 13

United for ALICE. 2020. "Alice in Hawai'i: A Financial Hardship Study" Retrieved from https://www.unitedforalice.org/Hawai'i.

U.S. Census Bureau. 2018. 2018 American Community Survey 5-year Public Use Microdata Samples. Retrieved from https://data.census.gov/mdat/#/.

USEPA (US Environmental Protection Agency). 1997. "Combined Sewer Overflows—Guidance for Financial Capability Assessment and Schedule Development. USEPA Office of Water (EPA 832-B-97-004)"

U.S. Environmental Protection Agency. 2008. Clean Watersheds Needs Survey 2004, Report to Congress. https://www.epa.gov/sites/production/files/2015-06/documents/2008_01_09_2004rtc_cwns2004rtc.pdf.

Appendix A

DOH OSWT AND DISPOSAL SYSTEM INSTALLATION COST DATA

OSWT Installation Costs from DOH

Average	$22,905.43
Median	$21,989.52
Max	$59,585.00
Min	$8,925.00
90th Percentile	$37,809.20
10th Percentile	$9,927.19

TMK	Address	Cost	Type	Bedrooms
141024003	41-890 Kakaina St., Waimanalo, Hawaii 96795	$21,204.18	ST	5
144023021	714 Old Mokapu Rd., Kailua, Hawaii 96734	$40,837.86	ST	5
146001030	46-047 Lilipuna Road, Kaneohe, Hawaii 96744	$38,972.00	ST	5
146017037	46-398 Holopu Place, Kaneohe, Hawaii 96744	$11,370.61	ST	5
146027028	46-426 Hololio Street, Kaneohe, Hawaii 96744	$30,062.00	ST	5
147014004	47-719 Kamehameha Hwy, Kaneohe, Hawaii 96744	$9,582.00	ST	5
147014004	47-719 Kamehameha Hwy, Kaneohe, Hawaii 96744	$9,582.00	ST	5
147014004	47-719 Kamehameha Hwy, Kaneohe, Hawaii 96744	$9,582.00	ST	5
147014004	47-719 Kamehameha Hwy, Kaneohe, Hawaii 96744	$9,582.00	ST	5
147014004	47-719 Kamehameha Hwy, Kaneohe, Hawaii 96744	$9,582.00	ST	5
147014030	47-121 Wailehua Road, Kahaluu, Hawaii	$38,221.76	ST	5
147046041	47-521 Melekula Rd., Kaneohe, Hawaii	$17,257.17	ST	5
153001016	53-133 Kamehameha Hwy, Hauula, Hawaii 96717	$28,803.00	ST	5
153002033	53-231 Kamehameha Highway, Hau'ula, Hawaii	$28,324.00	ST	5
153002046	53-215 Kamehameha Highway, Hauula, Hawaii	$32,971.62	ST	5
153003001	53-270 Kamehameha Hwy, Hauula, Hawaii 96717	$23,870.20	ST	5
154011038	56-233 Kamehameha Hwy, Hauula, Hawaii 96717	$21,989.52	ST	5
154012035	54-267 Kaipapau Loop, Hauula, Hawaii 96717	$22,000.00	ST	5
154018042	54-140 Kawaipuna Street, Hauula, Hawaii 96717	$22,700.00	ST	5
156001079	44-497 Kaneohe Bay Drive, Kaneohe, Hawaii 96744	$20,000.00	ST	5
157005003	57-477 Kamehameha Hwy, Kahuku, Hawaii	$26,476.24	ST	5
159003024	05-601 B Ke Iki Road, Haleiwa, Hawaii 96712	$24,432.72	ST	5
161012035	61-307 Kamehameha Hwy, Haleiwa, Hawaii 96714	$29,719.16	ST	5
166021020	66-437 Waialua Beach Road, Haleiwa, Hawaii 96712	$22,513.08	ST	5
167002021	67-631 Kahui Street, Waialua, Hawaii 96791	$19,750.00	ST	5
167008018	67-371 Kukea Circle, Waialua, Hawaii	$10,489.33	ST	5
167015044	67-007 Kahaone Place, Waialua, Hawaii 96791	$30,366.48	ST	5
168012009	66-136 Akule Street, Haleiwa, Hawaii 96791	$11,735.10	ST	5
168012017	68-147 Akule Street, Waialua, Hawaii 96791	$23,000.00	ST	5
223003063	2850 Omaopio Road, Kula, Hi 96790	$41,674.00	ST	5
235001007	310 Iao Valley Road, Wailuku, Hawaii 96793	$10,497.73	ST	5
235001105	11 Ua Place, Wailuku, Hawaii 96793	$14,698.15	ST	5
336010007	36-2270 Hawaii Belt Rd., Laupahoehoe, Hawaii 96764	$8,925.00	ST	5
413010033	8706 Kiowea Road, Kekaha, Hawaii 96752	$21,945.00	ST	5
424001026	2-3161 C Kaumualii Hwy, Kalaheo, Hawaii 96741 (Cesspool 1)	$25,965.00	ST	5
432003009	2461 Niumalu Road, Lihue, Hawaii 96766	$25,500.00	ST	5
432003009	2461 Niumalu Road, Lihue, Hawaii 96766	$25,500.00	ST	5
444002075	6611 Kipapa Road, Kapaa, Hawaii 96746	$27,297.00	ST	5
448013018	4721 Aliomanu Road, Anahola, Hawaii 96703	$35,070.00	ST	5
455001001	5069 Weke Road, Hanalei, Hawaii 96714	$22,510.87	ST	5
214005019	4933 Uakea Rd, Hana, Hawaii 96713	$59,585.00	ATU	5
455010067	5-5016 Kuhio Hwy, Hanalei, Hawaii 96714	$38,000.00	ST	5
424005037	2931 Wawae Road, Kalaheo, Hawaii 96741	$52,356.00	ST and 2	5
425006033	3641 Lawaiuka Rd., Lawai, Hawaii	$37,046.00	ATU	5
425006036	3644 Lawaiuka Road, Lawai, Hawaii 96765	$21,760.00	ATU	5
425006036	3644 Lawaiuka Road, Lawai, Hawaii 96765	$21,760.00	ATU	5
458012014	5-6920 Kuhio Highway, Wainiha, Kauai, Hawaii	$26,338.57	ATU	5
141005029	41-038 Manana Street, Waimanalo, Hawaii 96795	$28,248.00	ST	4

OSWT Installation Costs from DOH

Average	$22,905.43
Median	$21,989.52
Max	$59,585.00
Min	$8,925.00
90th Percentile	$37,809.20
10th Percentile	$9,927.19

TMK	Address	Cost	Type	Bedrooms
142103019	653 Manu Oo Street, Kailua, Hawaii 96734	$27,925.00	ST	4
144024060	68-505 Crozier Drive, Waialua, Hawaii 96791	$36,393.00	ST	4
158003089	58-034 Kapuai Place, Haleiwa, Hawaii 96712	$12,300.85	ST	4
159003042	05-605 Ke Iki Road, Haleiwa, Hawaii 96712	$31,308.89	ST	4
159004027	59-783 Kamehameha Hwy, Haleiwa, Hawaii 96712	$19,800.00	ST	4
159004027	59-783A Kamehameha Hwy, Haleiwa, Hawaii 96712	$19,800.00	ST	4
159004034	1931 Alaweo Street, Honolulu, Hawaii 96712	$45,550.00	ST	4
167006075	67-464 Haona St., Waialua, Hawaii	$21,170.68	ST	4
167006079	67-480 Haona Street, Waialua, Hawaii 96791	$11,050.76	ST	4
324021141	119 Likeke Street, Hilo, Hawaii	$9,786.65	ST	4
324061033	1621 Maunakai Street, Hilo, Hawaii, 96720	$11,826.58	ST	4
362010013	62-1148 Puahia Street, Kamuela, Hawaii	$10,692.19	ST	4
436008001	2922 Waa Road, Lihue, Hawaii 96766	$32,500.00	Presby	4
153014026	53-018 Pokiwai Pl., Hauula, Hawaii 96717	$20,000.00	ATU	3
167014030	67-003 Kaimanu Place, Waialua, Hawaii 96791	$24,159.58	Presby	3
199017039	99-118 Ululaau Place, Aiea, Hawaii 96701	$33,000.00	ST	3
214005023	4893 Uakea Rd, Hana, Hawaii 96713	$32,186.00	ST	3
235005038	3075 Alaneo Place, Wailuku, Hawaii 96793	$45,796.56	ST	3
321011001	39 Apapane Road, Hilo, Hawaii 96720	$10,500.00	ST	3
322019075	121 Barenaba Lane, Hilo, Hawaii 96720	$20,000.00	ST	3
323026057	277 Kaiulani Street, Hilo, Hawaii 96720	$14,789.62	ST	3
325024051	60 Kapaa Street, Hilo, Hawaii 96720	$9,525.00	ST	3
325028016	2065 Waianuenue Ave., Apt M, Hilo, Hawaii 96720-1207	$9,399.47	ST	3
326016013	442-A Wainaku Street, Hilo, Hawaii 96720	$11,561.00	ST	3
326016013	442-A Wainaku Street, Hilo, Hawaii 96720	$11,561.00	ST	3
326026006	18 Makakai Place, Hilo, Hawaii	$16,666.56	ST	3
382005008	82-6301 Puuhonua Rd., Captain Cook, Hawaii	$11,790.00	ST	3
442018040	374 Molo Street, Kapaa, Hawaii 96746	$25,000.00	ATU	3
455001029	5063-A Weke Road, Hanalei, Hawaii	$17,842.00	ST	3
314010013	14-4707 Alapaki Lane, Pahoa, Hawaii, 96778	$18,706.00	ATU	2
214005022	4896 Uakea Rd, Hana, Hawaii 96813	$26,406.00	ST	2
314010044	14-4949 Laimana Avenue, Pahoa, Hawaii 96778	$10,500.00	ST	2
343013043	43-2013 Paauilo Mauka Road, Paauilo, Hawaii 96776	$12,400.00	ST	2
227004002	77 Nahele Road, Haiku, Hawaii	$10,813.00	ST	1
456004008	5-5851 Kuhio Highway, Hanalei, Hawaii, 96714	$28,792.00	ST	1

Appendix B

ALTERNATIVE AFFORDABILITY MEASURES

Hours of Labor at Minimum Wage

Table B.1 summarizes the statewide results for the equivalent hours of minimum wage (HM) to pay for cesspool upgrades for the low, average, and high cost scenarios. For the entire state of Hawai'i, the average conversion cost scenario would require approximately 21 hours per month of labor at minimum wage in order to pay for cesspool conversion and maintenance costs, with a low- and high-end estimate of 10 and 34 hours respectively.

The HM metric was created to measure affordability as opposed to define it, however, there are no widely accepted guidelines or benchmarks for contextualizing HM. Eight hours or roughly a full day of work at minimum wage has been suggested a starting point for measuring affordability for water and wastewater service using the HM metric.[1] Like the MHI analysis, the HM analysis shows that the cesspool conversion program would prove to be a significant financial burden for many property owners, with the average conversion cost requiring more than three times as many hours at minimum wage, before even accounting for sewer costs.

Table B.1 Statewide Estimate for Hours of Minimum Wage Labor Needed for Cesspool Costs

Cost Description	Cesspool Conversion Cost Scenario		
	Low Cost	Average Cost	High Cost
Monthly Installation Repayment Cost	$61	$139	$230
Monthly Operating Cost	$33	$71	$109
Total Monthly Cesspool Conversion Cost	$94	$210	$339
Hours per Month of Labor at Minimum Wage	10	21	34

Notes:
(1) Based on the minimum, maximum, and median for water providers surveyed.

ALICE

The Federal Poverty Level (FPL) provides a benchmark for determining what households can be considered "impoverished" and thus qualify for assistance and support programs, but there is often a large segment of households that are above this threshold but struggle to make ends meet with their income. In fact, the FPL is so low for most states, that many references to the FPL are in terms of multiples of FPL, e.g. 200% of FPL or 400% of FLP. "The FPL, with its minimal and uniform national estimate of the cost of living, far underestimates the number of households that cannot afford to live and work in the modern economy" (ALICE Report, 2020).

Asset Limited, Income Constrained, Employed (ALICE is one measure used to define households who may not qualify for aid under FPL measures but still have significant challenges making ends meet. ALICE Household Budgets are intended to provide a more realistic estimate of how much income is necessary to both live and work in a given geography. This economic indicator has been in existence for about a decade. The 2018 ALICE Household Survival Budget for a family of four in Hawai`i is estimated at $90,828 per year (United for ALICE, 2020). This compares to the FPL for a family of four estimated at $28,870 in 2018. There have been 3 reports published based on 2016, 2017 and 2018 data. It typically takes about 2 years to analyze the data. Therefore, the current 2020 ALICE report is based on 2018 data.

[1] Teodoro, 2018.

While ALICE indicators are prepared for each state through census data, approximately 20 states[2] actively support additional economic research in their respective states to further understand the drivers of economic challenges in their communities. This research is led by a 27-person national advisory committee that represents the various states, including Hawai`i and is tasked with making sure that the data and research are applied independently and consistently towards the development of ALICE models and tools.

The ALICE budget is comprised of 9 categories indicated in below, with sources of data:

	CATEGORY	SOURCE
1.	Housing	HUD (State Dept of Housing and Urban Development)
2.	Child Care	State registered childcare homes
3.	Food	USDA's Thrifty Food Plan
4.	Transportation	AAA and Federal Hwy Administration
5.	Health Care	MEPS (Medical Expenditure Panel Survey) – a national database of medical spending
6.	Technology	Consumer Reports
7.	Taxes	Federal, state, and local taxes estimates from IRS and Tax Foundation
8.	Savings	No source reported
9.	Miscellaneous	Estimated at 10% of budget

The main conclusions of the most recent ALICE report for Hawai`i indicate a troubling trend. Despite strong economic growth until COVID-19 impacts hit the state in March 2020, the number of ALICE households rose from 22% in 2007 to 33% in 2018. The total number of households in Hawai`i is estimated at 455,100. This trend is exacerbated by the recent COVID-19 impacts with the ALICE report estimating that an additional 35,000 households would become ALICE households by the end of 2020.

As mentioned earlier, these data are compiled by local researchers using a standard methodology for calculating Hawai`i based costs for the 9 categories mentioned previously. The ALICE Research Advisory Committee for Hawai`i was comprised of the following individuals:

- Kathy Fujihara-Chong, M.B.A., HMSA
- Beth Giesting, M.S., Hawai'i Budget & Policy Center
- Janice Ikeda, M.A., Vibrant Hawai'i
- Joyce Lee-Ibarra, M.S., JLI Consulting
- Ivette Rodriguez Stern, M.S.W., University of Hawai'i, Center on the Family
- Janice Takahashi, M.U.R.P., State of Hawai'i, Hawai'i Housing Finance and Development Corporation
- Gavin Thornton, J.D., Hawai'i Appleseed Center for Law and Economic Justice
- Hua Zan, Ph.D., University of Hawai'i, Center on the Family

[2] AK, CT, FL, HI, ID, IL, IN, IO, LA, MA, MI, NJ, NY, OH, OR, PA, TN, TX, VA, WA and WI

Affordability Results by ALICE Statewide

Across the state, it is estimated that only 6 percent of homeowners with a cesspool reside in a census block group with an MHI below the federal poverty level or $30,718. However, over three-quarters of CBG would fall below the ALICE threshold.

This difference between the FPL and ALICE metrics highlights the significant challenges many residents face when paying for basic utilities like wastewater. Their income puts them above the thresholds often used for state and federal income assistance, but it is not enough to comfortably afford basic services. The ALICE metric aims to highlight this group of residents.

Figure B.1 shows the ALICE metric by county and statewide. Statewide, 85 percent of cesspool owners fall within the ALICE household metric. The County of Hawai`i has the most cesspool owners that fall within the ALICE household metric with 96 percent, followed by the County of Kaua`i (83 percent), County of Maui (76 percent), and the City and County of Honolulu (53 percent).

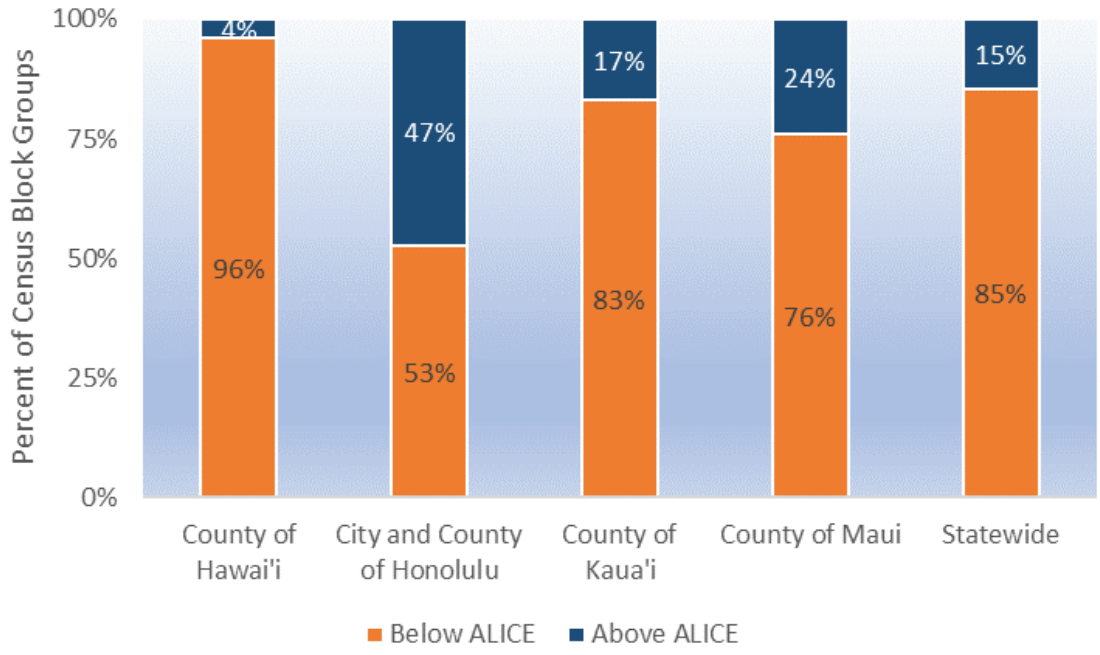


Figure B.1 Percent of Cesspool Homeowners by Census Block Groups and Asset Limited, Income Constrained, Employed (ALICE) Household Budgets

Figure B.2 depicts the income distribution for cesspools owners across the state, based on the median household income for the Census Block Group of the cesspool. Also shown is the annual income that would be needed for the cost of conversion to fall at or below 2 percent of income without the rebate ($126,125). For those cesspool owners who are eligible to apply for and receive the $10,000 rebate, the adjusted average cost of cesspool conversion is approximately $150 per month, which is 2 percent of an annual income of $89,766. The ALICE income threshold ($90,828) is also shown for comparison as the green, dashed line.

Table B.2 summarizes the affordability analysis in terms of the number of cesspool homeowners based on FLP, ALICE, and median household income. It is projected that 97 percent of cesspool homeowners (82,424 residents) will pay more than 2 percent of their income for the cesspool conversions. This statistic decreases to 85 percent (71,799 homeowners) when assuming each cesspool homeowner could take advantage of a

hypothetical $10,000 rebate. Using the ALICE household survival budget, 85 percent (72,487 residents) statewide will be financially burdened by the costs of cesspool upgrades without financial assistance. As a result, the conversions are likely to be a significant financial burden at the household level. Furthermore, measures of poverty and income-constraints show that most homeowners have little room in their household budgets for such a significant expense.

The following sections summarize the affordability analyses using the ALICE metric by county.

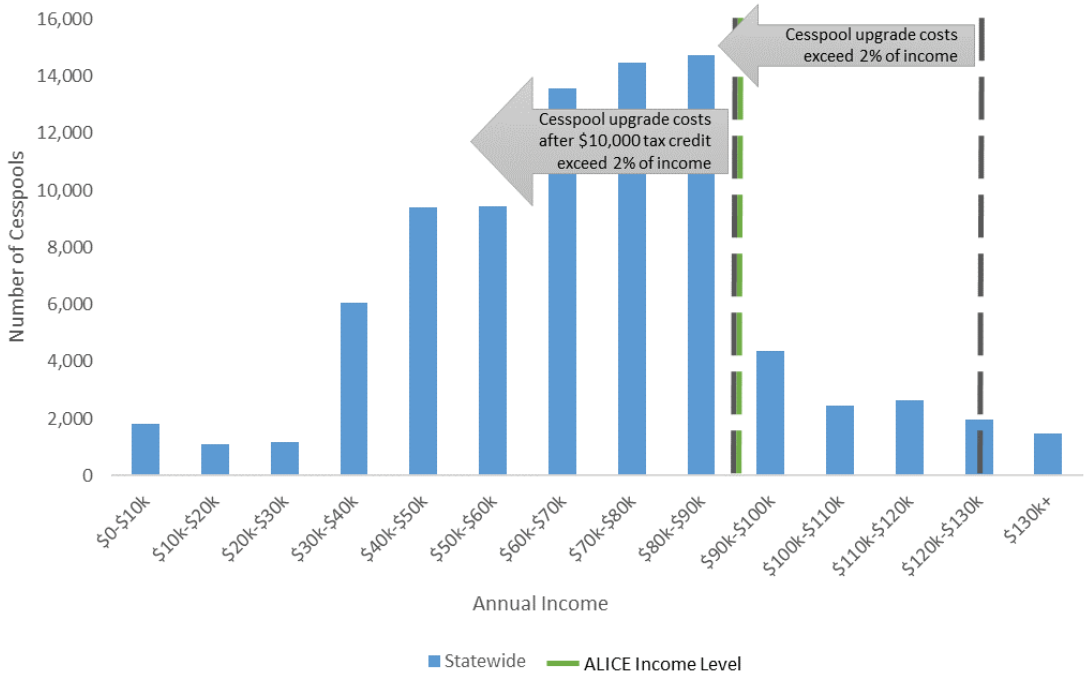


Figure B.2 Statewide Median Household Income Levels and Estimated Conversion Cost as Percent of Annual Income

Table B.2 Summary of the Cesspool Owners by County Based on Key Affordability Criteria

Affordability Measure	County of Hawai'i	County of Kaua'i	County of Maui		City and County of Honolulu	Statewide
			Maui	Moloka'i		
Below Federal Poverty Level(2)	3,254	204	416	297	512	4,683
Below ALICE Household Survival Budget(3)	46,359	10,094	9,104	1,241	5,689	72,487
Below 2 Percent Median Household Income(4)						
With Hypothetical $10,000 Rebate	46,359	9,533	9,000	1,241	5,666	71,799
Without Hypothetical $10,000 Rebate	48,303	11,507	11,888	1,439	9,287	82,424

Notes:
(1) Affordability analysis was for the average scenario with $23,000 cesspool upgrade costs, and monthly costs of $210 if the cesspool conversion is financed over 20 years at 4 percent interest.
(2) Federal poverty level is $30,718 annual income. Residents who have household incomes below the federal poverty level are likely to require financial assistance for cesspool conversions.
(3) Asset Limited, Income Constrained, Employed (ALICE) Household Survival Budget is $90,828 annual income for a family of four. Residents who have household incomes below ALICE level may be financially burdened by the costs of cesspool conversions.
(4) The 2 percent of median household income threshold is $126,125 annual income based on USEPA definition of "cost burdened". Residents who are financially burdened by cesspool conversion costs and may require financial assistance.

County of Hawai`i - ALICE Levels

Like the state as a whole, the majority of the County of Hawai`i's cesspool homeowners have incomes above the FPL. However, Hawai`i County has the most homeowners with cesspools that are considered below the ALICE threshold (94 percent), and thus under significant financial strain to afford the cesspool conversion costs. With such a large portion homeowners below the ALICE budget threshold, most Hawai`i County cesspools homeowners cannot afford cesspool upgrades without significant funding support.

City and County of Honolulu – ALICE Levels

The City and County of Honolulu has approximately 5 percent of cesspools located in Census Block Groups where the median household income is below the Federal Poverty Level. Notably though, the County has the lowest percentage of cesspools assumed to be below the ALICE threshold at 47 percent. This is nearly double the rate for Maui, the next highest county at 24 percent. This likely reflects the disparate income distribution across the City and County of Honolulu, with high levels of homeowners at both ends of the income spectrum.

County of Kaua`i – ALICE Levels

The County of Kaua`i has the smallest share of residents assumed to be living below the FPL across all counties in Hawai`i at 2 percent. Despite this low number, there is a significant percentage of residents that would fall below the ALICE survival budget threshold, with 83 percent of Kaua`i's cesspool owners assumed to be under this threshold. It is unlikely that these homeowners will be able to afford cesspool conversion costs without additional funding resources

Island of Maui – ALICE Levels

It is estimated that 3 percent of residents on Maui are below the FPL, while 75 percent of residents are estimated to fall below the ALICE threshold.

Island of Moloka`i – ALICE Levels

It is estimated that 3 percent of residents on Moloka`i are below the FPL, while 86 percent of residents are estimated to fall below the ALICE threshold. While the percent of households assumed to be below the FPL is relatively in line with the rest of the state, Moloka`i has the largest share of residents living between 100 and 200 percent of the FPL, the highest among any island and more than double the next highest (Hawai`i County). This significant share of residents living above the poverty level but by a very small amount is likely to result in significant affordability challenges for Moloka`i residents.

Appendix C

AFFORDABILITY ANALYSIS BY STATE LEGISLATIVE DISTRICT

Table C.1 Hawai'i County House District Affordability Measures

House District	Cesspools	Percent of Residents with Cesspools with Household Incomes Below FPL	Percent of Residents with Cesspools with Household Incomes Below ALICE	Percent of Residents with Cesspools Projected to Spend >2 percent of Household Income on Cesspool Conversion
1	7,568	5	100	100
2	5,159	11	92	100
3	8,742	0	100	100
4	9,334	15	100	100
5	7,100	13	94	94
6	4,845	0	93	93
7	5,549	0	85	85

Table C.2 Maui County House District Affordability Measures

House District	Island	Cesspools	Percent of Residents with Cesspools with Household Incomes Below FPL	Percent of Residents with Cesspools with Household Incomes Below ALICE	Percent of Residents with Cesspools Projected to Spend >2 percent of Household Income on Cesspool Conversion
8	Maui	1,062	1	50	50
9	Maui	205	21	47	53
10	Maui	849	0	71	71
11	Maui	1,016	1	96	96
12	Maui	6,212	0	75	99
13	Maui	2,740	14	80	91
13	Moloka'i	1,434	16	85	85

Table C.3 Kaua'i County House District Affordability Measures

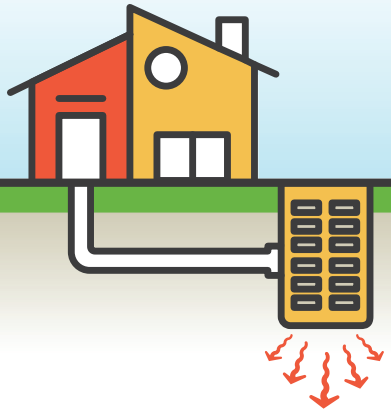
House District	Cesspools	Percent of Residents with Cesspools with Household Incomes Below FPL	Percent of Residents with Cesspools with Household Incomes Below ALICE	Percent of Residents with Cesspools Projected to Spend >2 percent of Household Income on Cesspool Conversion
14	4,679	2	87	94
15	2,838	2	83	83
16	4,568	0	80	85

Table C.4 City and County of Honolulu House District Affordability Measures

House District	Cesspools	Percent of Residents with Cesspools with Household Incomes Below FPL	Percent of Residents with Cesspools with Household Incomes Below ALICE	Percent of Residents with Cesspools Projected to Spend >2 percent of Household Income on Cesspool Conversion
17	164	1	1	1
18	139	0	4	12
19	346	3	25	40
20	144	0	49	70
21	23	9	100	100
22	84	1	95	96
23	133	5	25	34
24	431	0	9	9
25	165	5	55	56
26	114	24	71	81
27	89	6	60	70
28	31	0	23	55
29	136	1	88	100
30	310	62	95	95
31	23	17	83	83
32	8	0	63	63
33	133	7	10	11
34	16	0	63	94
35	52	25	58	100
36	54	0	37	37
37	25	0	52	72
38	17	0	53	53
39	87	0	61	61
40	963	0	41	54
41	126	2	32	50
42	117	0	59	67
43	540	30	99	99
44	828	5	58	100
45	836	0	100	100
46	44	0	70	100
47	2,785	0	56	64
48	849	0	42	42
49	181	8	10	12
50	159	0	1	1
51	577	0	25	70

Appendix C

Example Public Outreach Handout



RULES ARE CHANGING FOR YOUR

HOME CESSPOOL

CESSPOOLS NEED TO GO!

Cesspools are underground wells used to dispose of household wastewater into the groundwater table. In 2017, the Hawaii State Legislature passed Act 125 requiring the replacement of all cesspools by 2050 to prevent environmental contamination. Cesspools pose a high risk to drinking water sources and coastal ecosystems. Even if you don't plan on being in your house in 2050, having a cesspool will negatively effect the resale value of your home.

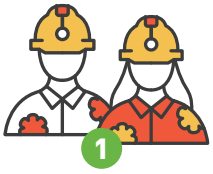
HOW DO I KNOW IF I HAVE A CESSPOOL?

You probably **don't** have a cesspool if:

- You pay a sewer bill or sewer charge on your water bill.
- Your home was built recently.
- An alternative wastewater system other than a cesspool is shown at your residence on the "OSDS" map found here: **geoportal.hawaii.gov**

Inquire with the Department of Health if you're unsure of whether or not you have a cesspool!

OK, SO HOW DO I FIX IT?



1. Hire a licensed civil engineer to help you make a plan



2. Submit your plan to the Department of Health for approval



3. Hire a licensed contractor to build new system



4. Engineer submits inspection report for approval

CAN I AFFORD THIS?

Check out our local financing options.

Typical replacement costs range from $9,000 to more than $60,000. For current financing opportunities, contact the Department of Health or visit their website listed below.



State or County Support (if available)



Home Refinancing



Federal Grants and Loans (if available)

For additional information contact the Department of Health at 808-586-4294 or visit their website at **health.hawaii.gov/wastewater**

CESSPOOL ALTERNATIVES

Different locations will require different levels of treatment! Follow this guide for an idea of what system you may need and then get in touch with a local engineer for a personalized estimate as prices may vary.



Is your property near an existing sewer system?

Recommendation: A



Is your property small[1], sloped[2], upcountry[3], in a floodzone, or near a body of water[4]?

Recommendation: B + C + D



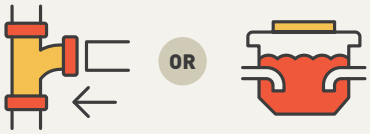
None of the above?

Recommendation: B + D

1 Less than 10,000 sf
2 Slope greater than 8%
3 Mauka of the UIC line (a boundary protecting drinking water aquifers)
4 Within 1,000 ft of a drinking water source, 50 ft of a waterbody, or 3 ft of water table

SEWER CONNECTION OR BASIC TREATMENT

Every property will need to either connect to an existing sewer system or install a septic tank to treat wastewater onsite! Septic tanks need annual maintenance while a sewer connection means you'll get a monthly sewer bill!



A Existing Sewer System

This is the lowest maintenance option but there is a connection fee and a monthly sewer bill!

B Septic Tank

This tank settles out and breaks down solids, which then need to be pumped out every few years by a licensed contractor.

C ADDITIONAL TREATMENT

Homes using onsite treatment near a vulnerable water resource need additional treatment with their septic tank to reduce the amount of nutrients discharged into the environment.



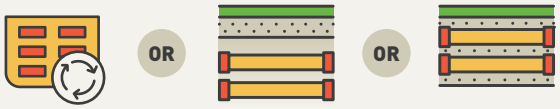
Alternative Toilets
These waterless toilets don't produce wastewater! The septic tank handles the rest of the water from your house.

Aerobic Treatment
In this case, the septic tank is smaller and an aerated zone is added for additional treatment.

Biofilter
A media like sand or gravel is used to polish the water leaving your septic tank.

D DISPOSAL

Treated water needs to be fed back into the ground.



Seepage Pit
Converting your cesspool into a seepage pit is the cheapest option but it's not always allowed.

Absorption Field
Tubes with tiny holes spread wastewater out underground so it can filter through the soil.

Evapotranspiration
This option is the same as the absorption field except it's shallow so the water feeds your plants then evaporates.

For additional information contact the Department of Health at 808-586-4294 or visit their website at **health.hawaii.gov/wastewater**

CITY AND COUNTY OF HONOLULU
Department of Budget and Fiscal Services
Real Property Assessment Division

Parcel Information

Parcel Number	560050240000
Location Address	56-1030 KAMEHAMEHA HWY
Project Name	
Legal Information	LOT 1194 37.581 AC MAP 153 LCAPP 1095 TOG/E; SUBJ/E
Property Class	AGRICULTURAL
Land Area (approximate sq ft)	1,637,028
Land Area (acres)	37.5810

Plat Map PDF GIS Parcel Map

Email us at bfsrpmailbox@honolulu.gov regarding Supplemental Plat Map PDFs.

Owner Information

Owner Names
CONTINENTAL PACIFIC LLC Fee Owner
OETF TRAINING LLC Fee Owner
DIVERSIFIED AG PROMOTIONS LLC Fee Owner
KAHUKU WIND POWER II LLC Lessee

⊟ Hide All Owners and Addresses

Owner Name	Owner Type
CONTINENTAL PACIFIC LLC	Fee Owner
OETF TRAINING LLC	Fee Owner
DIVERSIFIED AG PROMOTIONS LLC	Fee Owner
KAHUKU WIND POWER II LLC	Lessee
NSHE HI NARCISSUS LLC	Fee Owner
AMORIENT AQUACULTURE INTL	Lessee
FPI COMMERCIAL INC	Sub-Lessee
NSHE HI SUNFLOWER LLC	Fee Owner

Assessment Information

⊞ Show Historical Assessments

Assessment Year	Property Class	Assessed Land Value	Dedicated Use Value	Land Exemption	Net Taxable Land Value	Assessed Building Value	Building Exemption	Net Taxable Building Value	Total Property Assessed Value	Total Property Exemption	Total Net Taxable Value
2023	AGRICULTURAL	$901,900	$9,200	$0	$9,200	$0	$0	$0	$9,200	$0	$9,200

Note: ** record has changed from the original certified value or from a previously posted value
How to calculate real property taxes

The Assessment Information section contains records for the last 10 years.
For inquiries over 10 years and any other assessment data questions, please email the Real Property Assessment Division at bfsrpmailbox@honolulu.gov

Land Information

Land Classification	Square Footage	Acreage	Agricultural Use Indicator
AGRICULTURAL	1,637,028	37.581	Yes

Department of Planning and Permitting (DPP)

Agricultural Assessment Information

Acres in Production	Agricultural Type	Agricultural Value
38.186	PAST	$9,165

This parcel has land in agricultural usage and therefore agricultural usage assessments have been made.

Sales Information

Sale Date	Sale Amount	Instrument #	Instrument Type	Instrument Description	Valid Sale	Date of Recording	Land Court Document Number	Cert #	Book/Page
07/01/2021				Deed	Valid	07/01/2021	T11504192	1216921	
07/01/2021	$2,500,000		FEE CONVEYANCE		Valid				
02/22/2018			FEE CONVEYANCE	Route Slip		02/22/2018			

Recent Sales in Area

Sale date range:

From: 12/16/2019 To: 12/16/2022

Sales by Neighborhood

1500 Feet Sales by Distance

Treasury Division
Pay online at www.rphnlpay.com
Other Payment Options Click Here

Please call Treasury Division at (808)768-3980 if you have questions on your balance.

Historical Tax Information

Year	Tax	Payments and Credits	Penalty	Interest	Other	Amount Due
⊞ 2022	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2021	$300.00	($300.00)	($9.00)	($3.18)	$0.00	$0.00
⊞ 2020	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2019	$3,945.54	($3,945.54)	$0.00	$0.00	$0.00	$0.00

Treasury Division
How to calculate real property taxes

The Historical Tax Information section displays records for the last 10 years. For real property tax information inquiries over 10 years, please contact the Treasury division at bfstreasmailbox@honolulu.gov or (808)768-3980.

Map



No data available for the following modules: Condominium/Apartment Unit Information, Appeal Information, Residential Improvement Information, Residential Additions, Commercial Improvement Information, Sketches, Other Building and Yard Improvements, Permit Information, Current Tax Bill Information.

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Version 2.3.234

STATE OF HAWAII
OFFICE OF THE ASSISTANT REGISTRAR
RECORDED
July 1, 2021 8:01 AM
Doc No(s) T - 11504192
on Cert(s) 963335
Issuance of Cert(s) 1216921

/s/ LESLIE T KOBATA
ASSISTANT REGISTRAR

Pkg 11811700 FEH

Conveyance Tax: $11,875.00

LAND COURT | REGULAR SYSTEM

Return By Mail ☐ Pick-Up ☐ To:

CARLSMITH BALL LLP
ASB Tower, Suite 2100
1001 Bishop Street
Honolulu, Hawaii 96813

TITLE GUARANTY OF HAWAII HAS FILED THIS DOCUMENT FOR RECORD AS AN ACCOMMODATION ONLY. THIS DOCUMENT HAS NOT BEEN REVIEWED OR IN ANY WAY EXAMINED AS TO ITS EFFECT ON REAL PROPERTY.

TG: A 20211782 0-S

TGE: 210211800 35
BARBARA PAULO

Attention: Robert E. Strand
Telephone: (808) 523-2500

TITLE OF DOCUMENT:

LIMITED WARRANTY DEED WITH COVENANTS

PARTIES TO DOCUMENT:

GRANTOR: ABC DEVELOPMENT COMPANY, LLC
P.O. Box 17908
Honolulu, Hawaii 96817

GRANTEE: NSHE HI NARCISSUS, LLC, a Hawaii limited liability company, and NSHE HI SUNFLOWER, LLC, a Hawaii limited liability company
P.O. Box 717
Kahuku, Hawaii 96731-0717

TAX MAP KEY(S): (1) 5-6-005-024 (This document consists of 12 pages.)

LIMITED WARRANTY DEED WITH COVENANTS

ABC DEVELOPMENT COMPANY, LLC, a Hawaii limited liability company (the "Grantor"), whose address is P.O. Box 17908, Honolulu, HI 96817, in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other valuable consideration previously paid to Grantor by **NSHE HI NARCISSUS, LLC**, a Hawaii limited liability company, and **NSHE HI SUNFLOWER, LLC**, a Hawaii limited liability company, both of whose address is P.O. Box 717, Kahuku, Hawaii 96731-0717 (collectively, the "Grantee"), the receipt and sufficiency of which is hereby acknowledged by Grantor, and upon and subject to the covenants and conditions ~~herein set forth, does hereby~~ GRANT, BARGAIN, SELL, and CONVEY unto Grantee, and their respective successors and assigns, forever, that certain parcel of real estate (the "Property") situated at Kahuku, City and County of Honolulu, Island of Oahu, State of Hawaii, and more particularly described in **Exhibit A** attached hereto and incorporated herein by this reference, subject to the encumbrances herein and in **Exhibit A** attached hereto,

BUT EXPRESSLY EXCLUDING from the Property, the Kahuku Air Base water system, including the water well, commonly known as the Kahuku Air Base Well (State Well No. 4158 12), and all water rights in connection therewith; the water reservoir tank; all pumps, pump stations, water lines, pipes and equipment and any and all other facilities related to the well, the water and the rights thereto (collectively, the "KAB Water System");

TO HAVE AND TO HOLD the same unto Grantee as tenants in common as to an undivided one-half (1/2) interest each, and their respective successors and assigns, forever.

TOGETHER WITH the reversions, remainders, rents, issues and profits thereof, together with all buildings, improvements, tenements, rights, easements, privileges, and appurtenances to the same belonging or appertaining or held and enjoyed therewith, except as set forth herein, and all of the estate, right, title and interest of Grantor both at law and in equity therein and thereto.

AND RESERVING unto Grantor, the Kahuku Water Association, Inc., a Hawaii nonprofit corporation, the then current owner of the KAB Water System and each of their respective successors and assigns, the right to use and possess those portions of the Property on which the KAB Water System is located, including the well site and areas for access and utility purposes (the "Well Site"), and a nonexclusive perpetual easement over, under and across the Property, at least ten (10) feet wide, for installation, maintenance and replacement of a water line appurtenant to the lands adjoining the Property for delivery of water. Upon Grantor's written request, Grantee shall grant perpetual access and utility easements for the Well Site to the Kahuku Water Association, Inc., or the then current owner of the KAB Water System. Such owner and Grantee shall reasonably cooperate to identify the location of the easements, and any such easement and the equipment therein may be relocated from time to time by Grantee or the current owner of the KAB Water System at the expense of the party performing the relocation, provided water service shall not be substantially disrupted and so long as the relocated easement and equipment therein shall continue to serve the needs of the users of the KAB Water System as effectively as before the relocation. Additionally, as long as OETF Training LLC, a Hawaii limited liability company ("OETF"), continues to own the water pump and water lines in the KAB Water System, OETF shall also have access rights to service and repair and replace said pump and lines.

AND SUBJECT ALSO TO THE FOLLOWING COVENANTS AND AGREEMENTS:

1. Property in "As Is, Where Is" Condition.

a. No Warranties. Subject to the representations made by Grantor in paragraph S-6 of that certain unrecorded Commercial Real Property Purchase and Sale Agreement dated November 25, 2020 (the "PSA"), by and between Grantor and Grantee (the "PSA"), it is expressly understood and agreed that, except for the limited warranty of title contained herein, Grantor has not made any representation or warranty, express or implied, regarding any aspect of the Property, including (i) the soil, water, utilities, condition or location of any improvements, or other condition located upon or otherwise affecting the Property, or (ii) any laws, ordinances, regulations, licenses, permits, certificates or any legal, engineering or construction studies, estimates or matters relating to the Property, or (iii) the use or condition of the Property or any improvements thereon, or any development on the Property or the right so to do, or the feasibility thereof, and Grantor shall not be liable for any latent or patent defect therein, or (iv) the implied warranties of merchantability, fitness for a particular purpose, suitability, habitability, quality, physical condition and value, and Grantor hereby disclaims any and all liability for any and all such representations and warranties. Grantee agrees that they have examined and investigated the Property prior to the execution of this instrument and that Grantee has relied solely upon such examinations and investigations in acquiring the Property. Without limiting the generality of the foregoing, Grantee acknowledges that (i) they have made all inspections, investigations and analyses deemed necessary or appropriate to determine whether to proceed with Grantee's acquisition of the Property, and (ii) subject to the representations made by Grantor in paragraph S-6 of the PSA, Grantor has made no representation or warranty, express or implied, concerning the Property's compliance with environmental or other applicable laws.

b. "As Is" Condition. Grantee acknowledges and agrees that Grantee in acquiring the Property in its "as is, where is" condition, with all faults, and that Grantee has assumed all risks regarding all aspects of the Property, and the condition thereof, including, without limitation: (i) the risk of any physical condition affecting the Property including, without limitation, the existence of any soils conditions, or the existence of archeological or historical conditions on the Property; (ii) the risk of any damage or loss to the Property caused by any means including, without limitation, flood or earthquake; and (iii) the risk of use, zoning, habitability, merchantability or quality of the Property or the suitability of the Property for its present use or future development; and (iv) the activities of others on adjacent or nearby lands in compliance with applicable laws and regulations, and covenants, if any, applicable to such lands.

c. Government Approvals. Grantee acknowledges that Grantor has made and makes no representations regarding Grantee's ability to obtain or retain the zoning, governmental approvals or permits necessary to use, occupancy or further development of the Property.

d. Purchase Contract Addendum. In connection with the execution of the PSA, the Grantee also signed that certain Purchase Contract Addendum consisting of 5 pages that is made a part hereof by this reference under which Grantee has further agreed to accept the Property subject to the matters disclosed therein.

2. Section 1031 Exchange. The conveyance of the Property to Grantee is made in connection with a like-kind exchange of property pursuant to Section 1031 of the Internal Revenue Code under which Grantee will concurrently convey to Grantor certain property located in Haleiwa, Hawaii designated on the tax maps of the State of Hawaii as TMK: (1) 6-2-007:019.

3. Attorneys' Fees. In the event of a dispute under this instrument, the prevailing party shall be entitled to recover from the losing party all costs including reasonable attorneys' fees.

4. Governing Law. This instrument shall be governed by laws of the State of Hawaii.

5. Effect of Invalidity. The reservations, limitations, restrictions, covenants and conditions set forth herein shall be deemed independent and severable, and the invalidity or partial invalidity of any provision or portion thereof, of any such reservations, limitations, restrictions, covenants or conditions shall not affect the validity or enforceability of any other provisions hereof.

AND Grantor, for itself and its successors and assigns, does hereby covenant and agree with Grantee, its successors and assigns, that Grantor has done or suffered no act or thing whereby the Property described in **Exhibit A** is encumbered, except as in said **Exhibit A** as set forth; that the Property described in **Exhibit A** is free and clear of liens and encumbrances made or suffered by Grantor except for the encumbrances contained herein and as set forth in **Exhibit A**, and real property taxes not yet due and payable; and that Grantor will, and its successors and assigns shall, WARRANT AND DEFEND the same unto Grantee, and their respective successors and assigns, forever, against the loss or claims and demands of all persons claiming by, through or under Grantor except as aforesaid.

AND Grantee does hereby covenant to and with Grantor that Grantee will observe and comply with all of the terms, covenants, conditions and restrictions set forth in any declaration of covenants or deed of record with respect to the Property, as the same exist or may hereafter be amended from time to time in accordance with law and the terms of such declaration(s) of covenants or deed(s), on the part of the owner of the Property to be observed and performed, as and when required to do so, and will indemnify, defend and hold Grantor harmless from and against any failure to observe and comply with any such terms, covenants, conditions and restrictions.

The terms "Grantor" and "Grantee" wherever herein used shall be held to mean and include Grantor, its successors and assigns, and Grantee, and their respective successors and assigns, and this instrument shall be binding upon and shall inure to the benefit of the parties hereto and their said respective successors and assigns.

The parties hereto agree that this instrument may be executed in counterparts, each of which shall be deemed an original, and said counterparts shall together constitute one and the same agreement, binding all of the parties hereto, notwithstanding that all of the parties are not signatory to the original or the same counterpart.

[The following page is the signature page.]

IN WITNESS WHEREOF the parties have executed this Limited Warranty Deed with Covenants as of this 1st day of July, 2021.

Grantor:

ABC DEVELOPMENT COMPANY, LLC, a Hawaii limited liability company

By _____
Albert Y. Kanno
Its Manager

Grantee:

NSHE HI NARCISSUS, LLC, a Hawaii limited liability company

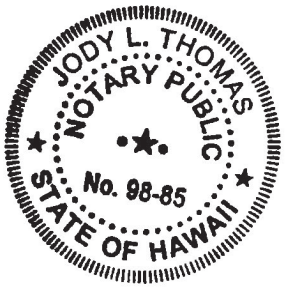
By _____
Name: Duke Pontin
Title: Member

NSHE HI SUNFLOWER, LLC, a Hawaii limited liability company

By _____
Name: Brandy Pontin
Title: Member

STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

On this 18th day of June, 2021, before me personally appeared ALBERT Y. KANNO, personally known/proved to me on the basis of satisfactory evidence, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.



(Notary Stamp or Seal)

Jody L. Thomas

Name: Jody L. Thomas

Notary Public, State of Hawaii

My commission expires: 2/17/2022

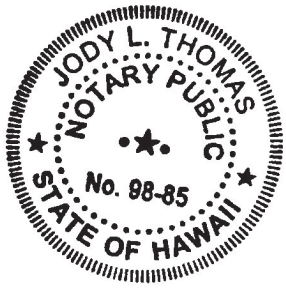
NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Limited Warranty Deed with Covenants

Document Date: undated at the time of notary

No. of Pages: Twelve (12) including this page

Jurisdiction (in which notarial act is performed): First Circuit



(Notary Stamp or Seal)

Jody L. Thomas

Signature of Notary

6/18/2021
Date of Notarization and Certification Statement

Jody L. Thomas

Printed Name of Notary

Date of Notary Commission Expiration: 2/17/2022

STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

On this _____ day of JUN 2 6 2021, 2021, before me personally appeared DUKE PONTIN, personally known/proved to me on the basis of satisfactory evidence, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

Barbara T. Paulo

Name: _____

Notary Public, State of Hawaii BARBARA T. PAULO
EXPIRATION: December 14, 2022

My commission expires: _____

BARBARA T. PAULO NOTARY 96-314 PUBLIC STATE OF HAWAII

(Notary Stamp or Seal)

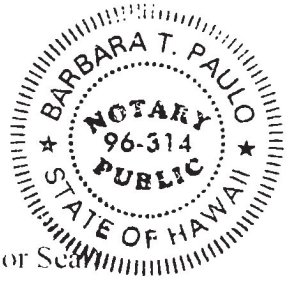
NOTARY CERTIFICATION STATEMENT	
Document Identification or Description:	Limited Warranty Deed with Covenants
Document Date:	Undated at Time of Notarization
No. of Pages:	12
Jurisdiction (in which notarial act is performed):	First Circuit
Signature of Notary	Date of Notarization and Certification Statement JUN 2 6 2021
Printed Name of Notary	BARBARA T. PAULO EXPIRATION: December 14, 2022
Date of Notary Commission Expiration:	

BARBARA T. PAULO NOTARY 96-314 PUBLIC STATE OF HAWAII

(Notary Stamp or Seal)

STATE OF HAWAII)
) ss.
CITY AND COUNTY OF HONOLULU)

On this _____ day of JUN 2 6 2021, 2021, before me personally appeared BRANDY PONTIN, personally known/proved to me on the basis of satisfactory evidence, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.



(Notary Stamp or Seal)

Name: _____

Notary Public, State of Hawaii

My commission expires: BARBARA T. PAULO EXPIRATION: December 14, 2022

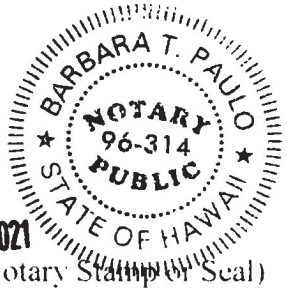
NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Limited Warranty Deed with Covenants

Document Date: Undated at Time of Notarization

No. of Pages: 12

Jurisdiction (in which notarial act is performed): First Circuit



(Notary Stamp or Seal)

Signature of Notary

Date of Notarization and Certification Statement JUN 2 6 2021

Printed Name of Notary BARBARA T. PAULO

Date of Notary Commission Expiration: EXPIRATION: December 14, 2022

EXHIBIT A

All of that certain parcel of land situate at Kahuku, District of Koolauloa, City and County of Honolulu, State of Hawaii, described as follows:

LOT 1194, area 37.581 acres, more or less, as shown on Map 153, filed in the Office of the Assistant Registrar of the Land Court of the State of Hawaii with Land Court Application No. 1095 of the Trustees under the Will and of the Estate of James Campbell, Deceased;

TOGETHER WITH a nonexclusive easement for ingress and egress and utility purposes, over a Portion of Easement "26", as shown on Map 51, located within Lot 1190 as shown on Map 153, Lot 200 as shown on Map 17 and Lot 1167 as shown on Map 137, as granted by GRANT OF EASEMENT FOR ACCESS AND UTILITY RIGHTS dated July 23, 2002, filed as Land Court Document No. 2824843, as assigned by instrument dated July 27, 2005, filed as Land Court Document No. 3304477; and subject to the terms and provisions, contained therein.

TOGETHER FURTHER WITH a Grant of Access and Utility Easement dated September 4, 2019 made a Diversified Ag Promotions, LLC in favor of ABC Development Company, LLC, recorded in the Bureau of Conveyances of the State of Hawaii as Document No. A-71861028.

TOGETHER FURTHER a Grant of Access and Utility Easement as set forth in an instrument dated February 12, 2021, filed in said Office of the Assistant Registrar as Land Court Document No. T11372379 and noted on Certificate of Title No. 963,335 and recorded in said Bureau as Document No. A-77200934.

Being land(s) described in Transfer Certificate of Title No. 963,335 issued to ABC DEVELOPMENT COMPANY, LLC, a Hawaii limited liability company.

SUBJECT, HOWEVER, to the following:

1. A perpetual easement appurtenant for right of way necessity to the nearest public highway over such ways as now exist or may hereafter be substituted therefore, as set forth in Original Certificate of Title No. 17,854.

2. DESIGNATION OF EASEMENT "ROAD 7"

   PURPOSE: roadway
   SHOWN: on Map 4, as set forth by Land Court Order No. 3094, filed April 21, 1938

3. The terms and provisions contained in the following:

   INSTRUMENT: DECLARATION OF RESERVATION OF RIGHTS

   DATED: December 28, 2001
   FILED: Land Court Document No. 2765650

The rights of TRUSTEES UNDER THE WILL AND OF THE ESTATE OF JAMES CAMPBELL, DECEASED, was assigned to JAMES CAMPBELL COMPANY LLC, a Delaware limited liability company, by ASSIGNMENT OF RIGHTS dated June 14, 2007, filed as Land Court Document No. 3615076.

4. The terms and provisions contained in the following:

INSTRUMENT: TRUSTEES LIMITED WARRANTY DEED AND QUITCLAIM DEED WITH RESTRICTIONS, COVENANTS AND RESERVATION OF RIGHTS

DATED: July --, 2002 (acknowledged July 9, 2002 and July 11, 2002)
FILED: Land Court Document No. 2824842
RECORDED: Document No. 2002-127617

The foregoing includes, but is not limited to, matters relating to drainage, access and utility rights, right to grant easements and other rights and rights of kuleana owners.

5. The terms and provisions contained in the following:

INSTRUMENT: LIMITED WARRANTY DEED AND QUITCLAIM DEED WITH COVENANTS

DATED: July 27, 2005
FILED: Land Court Document No. 3304476
RECORDED: Document No. 2005-149155

6. The terms and provisions contained in the following:

INSTRUMENT: WATER DELIVERY AGREEMENT

DATED: June 15, 2007
FILED: Land Court Document No. 3615682
PARTIES: CONTINENTAL PACIFIC, LLC, a Delaware limited liability company authorized to do business in Hawaii, DIVERSIFIED AG PROMOTIONS, LLC, a Delaware limited liability company authorized to do business in Hawaii, and NORTH SHORE WIND POWER, LLC, a Delaware limited liability company

Said Agreement was amended by AMENDMENT OF WATER DELIVERY AGREEMENT; GRANT OF EASEMENT AND CANCELLATION OF EXISTING EASEMENT (BENEFITING TMK NO. (1) 5-6-005-007) DATED March 22, 2021, filed as Land Court Documents Nos. 4065958 thru 4065960, by and among ABC DEVELOPMENT COMPANY, LLC, a Hawaii limited liability company, "Lot 194 owner", KAHUKU WIND POWER, LLC, a Delaware limited liability company, "Lot 1167 Owner", and KAHUKU WATER ASSOCIATION, INC., a Hawaii non-profit corporation (successor in interest to Diversified Ag Promotions, LLC, under said Water

Delivery Agreement pursuant to that certain unrecorded Transfer and Assumption Agreement dated December 29, 2010), "KWA".

7. The terms and provisions contained in the following:

INSTRUMENT: WATER DELIVERY AGREEMENT

DATED: September 5, 2008
FILED: Land Court Document No. 3786705
PARTIES: CONTINENTAL PACIFIC, LLC, a Delaware limited liability company authorized to do business in Hawaii, DIVERSIFIED AG PROMOTIONS, LLC, a Delaware limited liability company authorized to do business in Hawaii, and CPP OAHU 27 LLC, a Hawaii limited liability company

8. The terms and conditions contained in the following:

LIMITED WARRANTY DEED WITH COVENANTS

DATED: November 4, 2009
FILED: Land Court Document No. 3912674

PARTIES: CONTINENTAL PACIFIC, LLC, a Delaware limited liability company and authorized to do business in Hawaii and ABC DEVELOPMENT COMPANY, LLC, a Hawaii limited liability company.

9. Unrecorded Water Delivery Agreement dated August 6, 2009, made by and between Continental Pacific, LLC, a Delaware limited liability company, and Duke Hancock Pontin, Brandi Ann Pontin, Cove Kirkwood Pontin and Keal Thomas Pontin, as amended by Amendment of Water Delivery Agreement; Grant of Easement and Cancellation of Easement dated as of August 28, 2020, filed as Land Court Document No. T-11372379 and recorded in said Bureau as Document No. A-77200934.

10. Unrecorded Access Agreement dated August 6, 2009, made by and between Continental Pacific, LLC, a Delaware limited liability company, and Duke Hancock Pontin, Brandy Ann Pontin, Cove Kirkwood Pontin and Keal Thomas Pontin, as amended by instrument dated August 28, 2020, filed as Land Court Document No. 11327156.

11. Claims arising out of customary and traditional rights and practices, including without limitation those exercised for subsistence, cultural, religious, access or gathering purposes, as provided for in the Hawaii Constitution or the Hawaii Revised Statutes.

12. Water rights, claims or title to water, whether or not shown by the public records.

13. Discrepancies, conflicts in boundary lines, shortage in area, encroachments or any other matters which a correct survey or archaeological study would disclose.

14. Matters shown on corrected maps, Sheets 1 to 3, inclusive, prepared by Erik S. Kaneshiro, Land Surveyor, with Austin, Tsutsumi & Associates, Inc., dated January 26, 2017, and approved by the Department of Planning and Permitting, City and County of Honolulu, 2011/SUB-166, on November 10, 2016 and February 10, 2017.

Tax Map Key No. (1) 5-6-005-024

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9, 144, 145 and 146

[FRL–6482–2]

RIN 2040–AB83

Revisions to the Underground Injection Control Regulations for Class V Injection Wells

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: Today the Environmental Protection Agency (EPA) is promulgating revisions to the Class V Underground Injection Control (UIC) regulations. This rule adds new requirements for two categories of endangering Class V wells to ensure protection of underground sources of drinking water. In particular, it: bans existing motor vehicle waste disposal wells in ground water protection areas and other sensitive ground water areas with a provision that allows well owners and operators to seek a waiver from the ban and obtain a permit; and bans new motor vehicle waste disposal wells and new and existing large-capacity cesspools nationwide. The preamble also discusses EPA's decision to postpone finalization of new requirements for the industrial well category as defined in the proposed rule. EPA believes it would be worthwhile to further study this well category and will finalize the rule for industrial wells at a later date.

DATES: This rule will be effective April 5, 2000.

ADDRESSES: The rule and supporting documents, including public comments and EPA responses, are available for review in the UIC Class V W–98–05 Water Docket at the U.S. Environmental Protection Agency; 401 M Street, SW., EB57, Washington, D.C. 20460. For information on how to access Docket materials, please call (202) 260–3027 between 9 a.m. and 3:30 p.m. Eastern Time, Monday through Friday.

FOR FURTHER INFORMATION CONTACT: For general information, contact the Safe Drinking Water Hotline, phone 800–426–4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding federal holidays, from 9 a.m. to 5:30 p.m. Eastern Time. For technical inquiries, contact Robyn Delehanty, Underground Injection Control Program, Office of Ground Water and Drinking Water (mailcode 4606), EPA, 401 M Street, SW., Washington, DC, 20460. Phone: 202–260–1993. E-mail: delehanty.robyn@epamail.epa.gov.

SUPPLEMENTARY INFORMATION: *Regulated Entities:* Although certain clarifications to the UIC regulations apply to owners or operators of any type of Class V well, the entities regulated by additional requirements are owners or operators of Class V motor vehicle waste disposal wells and large-capacity cesspools. Potentially regulated categories and entities include:

Category	Examples of regulated entities (if they have a Class V well)
Industry and Commerce	*Motor Vehicle Facilities:* gasoline service stations, new and used car dealers, any facility that does any vehicle repair work (e.g., body shops, transmission repair shops, and muffler repair shops). *Large-Capacity Cesspools:* residential or commercial facilities such as campgrounds, multi-unit residences, churches, schools.
State and Local Government	*Motor Vehicle Facilities:* road facilities, fire stations. *Large-Capacity Cesspools:* campgrounds, rest stops.
Federal Government	Any Federal Agency that owns or operates one of the above entities.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities, of which EPA is currently aware, that are potentially regulated by this action. Other types of entities not listed in the table could also be regulated. To determine whether your injection well is regulated by this action, you should carefully examine the applicability criteria in §§ 144.81 and 144.85 of the rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

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I. Format and Scope of Rule

Today's notice consolidates Class V UIC regulations in a new Subpart G to 40 CFR Part 144. This subpart is written in a simple-to-understand, plain-English format. Before reading the rest of this preamble, Class V well owners/operators should review the final regulation that presents the enforceable legal requirements they need to know about. This preamble does not repeat many of the requirements contained in the final rule, but rather provides background and additional rationale not included in the regulation.

II. Background

A. Statutory and Regulatory Framework

Class V wells are regulated under the authority of Part C of the Safe Drinking Water Act (SDWA or the Act) (42 U.S.C. 300h *et seq.*). The SDWA is designed to protect the quality of drinking water in the United States, and Part C specifically mandates the regulation of underground injection of fluids through wells. The Agency has promulgated a series of underground injection control (UIC) regulations under this authority.

Section 1421 of the Act requires EPA to propose and promulgate regulations specifying minimum requirements for State programs to prevent underground injection that endangers drinking water sources. EPA promulgated administrative and permitting regulations, now codified in 40 CFR parts 144 and 146, on May 19, 1980 (45 FR 33290), and technical requirements in 40 CFR part 146 on June 24, 1980 (45 FR 42472). The regulations were subsequently amended on August 27, 1981 (46 FR 43156), February 3, 1982 (47 FR 4992), January 21, 1983 (48 FR 2938), April 1, 1983 (48 FR 14146), July 26, 1988 (53 FR 28118), December 3, 1993 (58 FR 63890), June 10, 1994 (59 FR 29958), December 14, 1994 (59 FR 64339), and June 29, 1995 (60 FR 33926).

Section 1422 of the Act provides that States may apply to EPA for primary enforcement responsibility to administer the UIC program; those States receiving such authority are referred to as ''Primacy States.'' Where States do not seek this responsibility or fail to demonstrate that they meet EPA's minimum requirements, EPA is required by regulation to prescribe a UIC program for such States. These direct implementation (DI) programs regulations were issued in two phases, on May 11, 1984 (49 FR 20138) and November 15, 1984 (49 FR 45308). For the remainder of this preamble, references to the UIC Program ''Director'' mean either the Director of the EPA program (where the program is implemented directly by EPA) or the Director of the Primacy State program (where the State is responsible for implementing the program). Also, currently all Class V UIC Programs in Indian Country are directly implemented by EPA. Therefore, for the remainder of this preamble, references to DI Programs include Class V programs in Indian Country.

B. History of This Rulemaking

1. 1994 Consent Decree With the Sierra Club

On August 31, 1994, EPA entered into a consent decree with the Sierra Club that required that no later than August 15, 1995, the EPA Administrator sign a notice to be published in the **Federal Register** proposing regulatory action that fully discharges the Administrator's rulemaking obligation under section 1421 of the SDWA, 42 U.S.C. 300h, with respect to Class V injection wells.

2. 1995 Proposed Rule

On August 15, 1995, the Administrator signed a notice of proposed rulemaking that proposed a regulatory determination and minor revisions to the UIC regulations for Class V injection wells (60 FR 44652, August 28, 1995). In this notice, EPA proposed not to adopt additional federal regulations for any types of Class V wells. Instead, the Agency proposed to address the risks posed by certain wells using existing authorities and a Class V management strategy designed to (1) speed up the closure of potentially endangering wells and (2) promote the use of best management practices to ensure that other Class V wells of concern do not endanger underground sources of drinking water (USDWs). Several factors led EPA to propose this approach, including: (1) The wide diversity in the types of fluids being injected, ranging from high risk to not likely to endanger; (2) the large number of facilities to be regulated; and (3) the nature of the regulated community, which consists of a large proportion of small businesses.

EPA received many comments that supported the Agency's proposal to not impose more regulations for Class V wells. However, EPA also received a number of comments that raised concerns about the proposal. In particular, several commentors questioned whether a UIC program without additional requirements for relatively high-risk well types would prevent endangerment to drinking water sources as required by the SDWA. Others questioned whether the proposal was really the best EPA could do given the known threat to USDWs that some wells present.

3. 1997 Modified Consent Decree

Based on comments received on the 1995 proposal, EPA decided to reconsider that proposed approach. Because this reconsideration would extend the time necessary to complete the rulemaking for Class V wells, EPA and the Sierra Club entered into a modified consent decree on January 28, 1997 (D.D.C. No. 93–2644) that extended the dates for rulemaking that had been in the 1994 decree. The modified decree requires three actions.

First, by no later than June 18, 1998, the EPA Administrator was required to sign a notice to be published in the **Federal Register** proposing regulatory action that fully discharges the Administrator's rulemaking obligation under section 1421 of the SDWA with respect to those types of Class V injection wells presently determined to be high risk for which EPA does not need additional information. A thirty-day extension was granted; the Administrator signed the notice on July 17, 1998. The Administrator is required to sign a final determination for these endangering Class V wells by no later than October 29, 1999, although the decree provides the Administrator with discretion to exercise another 30-day extension.

Second, by no later than September 30, 1999, EPA must complete a study of all Class V wells not included in the first rulemaking on endangering Class V injection wells. EPA has completed this study. Based on this study, EPA may find that some of these other types of Class V wells also pose an endangerment to drinking water.

Third, by no later than April 30, 2001, the EPA Administrator must sign a notice to be published in the **Federal Register** proposing to discharge the Administrator's rulemaking obligations under section 1421 of the SDWA with respect to all Class V injection wells not included in the first rulemaking for Class V injection wells. The Administrator must sign a final determination for these remaining Class V wells by no later than May 31, 2002.

4. 1998 Proposed Rule

On July 29, 1998 (63 FR 40586), in response to the first action required under the modified consent decree, EPA proposed revisions to the Class V UIC regulations that would add new requirements for three categories of Class V wells that were believed to endanger drinking water. According to this proposal, Class V motor vehicle waste disposal wells in ground water protection areas (as defined in Section IV.A.1 of the preamble) would either be banned or would have to get a permit that requires fluids released in those wells to meet the drinking water maximum contaminant levels (MCLs) and other health-based standards at the point of injection. Class V industrial waste disposal wells in ground water protection areas also would be required to meet the MCLs and other health-based standards at the point of injection, and large-capacity cesspools in such areas would be banned.

EPA discussed the 1998 proposal with several stakeholders and small entity representatives. During January and February of 1998, EPA convened three stakeholder meetings to inform potentially affected entities of the requirements under consideration and to solicit feedback. In addition, as required by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), EPA conducted outreach to representatives of small entities affected by the rule. In consultation with the Small Business Administration, EPA identified 17 representatives of small entities that were most likely to be affected by the proposal.

A Small Business Advocacy Review Panel met for 60 days in 1998 to identify small entity concerns with the proposed rulemaking. The 1998 proposal incorporated all recommendations on which the Panel reached consensus (see 63 FR 40590, July 29, 1998).

III. Actions Taken After Close of the Public Comment Period

A. Public Comment

The 1998 proposed rule was initially open for public comment for 60 days. In response to a request to extend the comment period, EPA published a notice in the **Federal Register** (63 FR 51882) which reopened the comment period for an additional 60 days.

Ninety-seven commentors addressed the proposal. EPA has developed a response to comment document addressing all public comments received on motor vehicle waste disposal wells and large-capacity cesspools, which are the well types addressed in this rulemaking. This document is available at the Water Docket. In addition, some comments are discussed in today's preamble. Public comment received regarding regulation of industrial wells will be considered and addressed when the final determination for those wells is published.

B. National Drinking Water Advisory Council

The National Drinking Water Advisory Council (NDWAC) was established by the SDWA Section 1446 to provide practical and independent advice, consultation, and recommendations to the Agency on the activities, functions and policies related to the SDWA. At its April 1997 meeting, NDWAC decided to form a Federal Advisory Committee Act (FACA) working group to address the Class V Underground Injection Control and Source Water Protection Program integration issues.

The EPA UIC and Source Water working group represents a broad range of public interests including: State, federal and local government representatives; public interest groups, including environmental organizations; universities; industry; and utility operators. The group met twice in 1999 to discuss the proposed Class V regulation, as well as issues addressed in public comment.

The full NDWAC council considered the working group's conclusions during their May 1999 meeting. The full council then made formal recommendations to the Administrator.

C. Notice of Data Availability

EPA published a notice of data availability (NODA) and further request for comment related to the 1998 proposed rule on May 21, 1999 (64 FR 27741). A total of 14 public comment letters were received in response to this request.

The NODA was published in response to additional information received during and after the close of the comment period. It outlined additional data and issues EPA was considering in developing the final rule, including the following information that is discussed in separate sections below: contamination incident information and injectate quality data from the Class V study; a draft report on contaminant occurrence in public water systems; and injectate quality and contamination incident data from EPA Regions II and VIII. Two other categories of information presented in the NODA, Class V well closure cost data from Penske Truck Leasing Company and Source Water Assessment Plans submitted to EPA, are discussed in section V.A of today's preamble relating to the economic impact analysis.

The following sections only address the NODA as it pertains to motor vehicle waste disposal wells and large-capacity cesspools targeted in today's rule. As discussed in more detail in section IV.B of this preamble, several public commentors on the 1998 proposal questioned the basis for regulating all industrial wells in the same manner, given the diversity of wells that exist within that category as it was proposed and the Agency has decided not to go final with the 1998 proposal for industrial wells at this time.

1. Class V Study

EPA has completed a study of Class V injection wells to meet the requirements of a modified consent decree in *Sierra Club* v. *Browner* (D.D.C. Mo. 93–2644). This consent decree required the Agency to study Class V wells not included in today's rulemaking. The information was collected from both State and EPA Regional offices using survey questionnaires and selected site visits, and from other sources, such as trade associations, research institutions and universities. Information from the study will be used to determine if additional Class V regulations are needed to protect USDWs from Class V injection wells not regulated by today's rulemaking. The focus of the study consisted of an information collection effort for 23 subclasses of Class V wells.

Through the study, States and EPA Regional offices were also asked to supply information on the three well types addressed in the proposed rule: motor vehicle waste disposal wells: industrial waste disposal wells and large-capacity cesspools. Before the study was completed and the final methods and results were fully documented, information received on the three well types targeted by the proposed Class V rule were compiled in a single notebook and made available through the NODA. The data was presented in three sections. The first section provided the latest State inventory information for each of the three well types as reported in survey responses. The second provided information on contamination incidents identified by the States. The third contained injectate quality data collected from motor vehicle and industrial waste disposal wells.

In the NODA, EPA stated its plan to use this new information to help assess the threat posed by the different well

types and to better project the number of affected entities. Below, EPA describes how the recently obtained injectate quality and contamination case information presented in the NODA supports the Agency's regulatory determination in today's final rule-making. The new inventory data presented in the NODA is discussed in Section V of this preamble.

As part of the Class V Study EPA received limited injectate sampling data for motor vehicle waste disposal wells. In ''Analyses from Sampling at Class V Industrial and Motor Vehicle Waste Disposal Wells,'' A. Melcer and N. Wiser, USEPA Region 5, examined the analytical results of liquid and sludge injectate taken from 26 motor vehicle waste disposal wells in Indiana, Michigan, and Minnesota. Approximately 50 percent of the liquid samples collected exceeded MCLs and approximately 19 percent of the samples exceeded toxicity characteristic (TC) hazardous waste limits. Approximately 80 percent of the sludge leachate samples analyzed exceeded MCLs and 30 percent qualified as hazardous waste. Laboratory results submitted by another motor vehicle facility indicated that some organic constituents in the injectate were above MCLs. As a result, the permit for the Class V UIC well was denied. A database containing thirty cases of soil and/or ground water contamination caused by the operation of such wells was also submitted as part of the Study. Most of the contamination cases are for service stations in New York but the database does not provide specific details.

Six public commentors said this information did not support the Agency's proposed high-risk conclusion and a ban for motor vehicle waste disposal wells. These commentors believed the information shows that motor vehicle wells can be safely operated under certain circumstances, that the contamination cases are few in number and possibly not representative of today's operating practices, and that the information is too vague and anecdotal to support informed decision making.

2. Region II and VIII Data

The Region II and VIII data provide additional evidence that fluids released in motor vehicle waste disposal wells commonly exceed MCLs and that these wells have been linked with environmental contamination. For example, one report shows that out of 38 motor vehicle facilities in the State of New York, 20 had injectate above MCLs entering drywells and 19 had injectate above MCLs entering septic systems. Out of 27 case study files reviewed in Region II, nine had documented incidents of ground water and/or soil contamination. Region VIII submitted both laboratory reports from motor vehicle waste disposal facilities in Montana and two reports from South Dakota which included injectate sampling data. All facilities exceeded primary drinking water standards in one or more sampling events for volatile organic compounds (VOCs) and/or heavy metals. For example, benzene was detected in some samples at 1.1 to 22 times the MCL. Tetrachloroethylene levels were seen ranging from 1.1 to 38 to 280 times MCL and methylene chloride at 96 times the MCL. Some metals were found to exceed the hazardous waste toxicity characteristic levels.

Only one commentor addressed these data specifically. This commentor believed the data support their contention that motor vehicle wells cannot be categorically classified as high risk. The commentor noted that less than one percent of all Class V well contamination cases in Region II involved ground water contamination.

EPA believes the injectate data and contamination cases cited in the NODA from the study and Regions II and VIII support the 1998 proposal that motor vehicle waste disposal wells warrant additional federal regulation. The additional information confirm that samples of injectate exceed the MCLs for volatile organic compounds and metals. In some cases, contaminants exceeded RCRA toxic characteristic levels. This data is consistent with information collected to support the proposed rule making and supports EPA concerns about potential endangerment of drinking water by these wells. However, the Agency recognizes that there may be situations in which an owner or operator of a Class V motor vehicle waste disposal well could implement best management practices (BMPs) and/or install treatment measures such that the waste injected would not exceed the MCL or other health based standards and could therefore remain open without endangering USDWs. For that reason, today's rule allows owners and operators of existing Class V motor vehicle waste disposal wells to seek a waiver from the ban and apply for a permit.

3. Contaminant Occurrence Report

This report summarizes occurrence data from finished water collected from 14 different State databases for public drinking water systems. In total, the data include over 10 million analytical results from over 25,000 public water systems. Only contaminants that were tested in a significant number of systems (e.g., several hundred or more) in at least one of the State databases were evaluated in the report. Twenty-three contaminants known or believed to be associated with motor vehicle waste disposal wells were selected for analysis. Each of the 23 contaminants were detected in ground water based systems at concentrations greater than the MCL.

The results of the analysis show that contaminants associated with Class V wells occur in public drinking water systems across the nation. Contaminant occurrence varied widely from State to State. For example, 12.8% and 19.4% of the ground water systems in certain States detected trichloroethene and 1,1,1-trichlororethane, respectively. Furthermore, all contaminants were detected at levels that exceeded the MCL. In certain States, 2.0% of ground water systems exceeded the MCL for mercury and 5.7% of ground water systems exceeded the MCL for tetrachloroethylene (PCE). Determining the source of the contamination was beyond the scope of this report, but the occurrence data clearly demonstrates that contaminants known to be associated with Class V wells occur nationally in public water systems.

IV. Description of Today's Action

Today EPA is finalizing additional requirements for motor vehicle waste disposal wells and large capacity cesspools, to embrace priorities and help achieve goals defined under the 1996 Amendments to the SDWA, and to fulfill the first phase of the Agency's requirements under the 1997 consent decree with the Sierra Club.

Class V wells are currently authorized by rule as long as (1) they do not endanger USDWs, and (2) the well owners or operators submit basic inventory and assessment information. If a Class V well may endanger USDWs, UIC Program Directors can require the owner/operator to apply for a permit, order preventive actions (including closure of the well) to prevent the violation, require remediation to assure USDWs are protected, or take enforcement action. These, and other existing federal requirements and authorities will continue as basic elements of EPA's Class V strategy, applicable to all Class V wells in all areas.

Consistent with the 1997 decree, EPA is taking a step-wise approach to supplement the existing program and ensure Class V injection wells do not endanger USDWs. This approach

consists of (1) an initial rule creating additional requirements for some of the Class V well types determined by EPA, as an initial matter, to be higher risk, and (2) further study of other types of Class V wells not covered in the initial rule to provide the factual basis for further regulatory action, as necessary.

As the first step of its Class V strategy, EPA is today finalizing additional requirements for two categories of Class V injection wells determined by EPA to be a source of endangerment to drinking water. Specifically, the rule covers: (1) Existing motor vehicle waste disposal wells located in ground water protection areas delineated for community water systems and non-transient non-community water systems that use ground water as a source and other sensitive ground water areas as delineated by States; and, (2) new and existing large-capacity cesspools and new motor vehicle waste disposal wells nationwide. The conclusion that these Class V wells pose an endangerment is based on substantial information and the combined professional judgment of EPA and State geologists and engineers that are responsible for implementing the Class V UIC program.

In the case of motor vehicle waste disposal wells, today's rule has been developed to use and promote linkages between the Class V UIC program and EPA's State Drinking Water Source Assessment and Protection Program. Both programs are authorized by the SDWA. The UIC Program is designed to protect all current and potential USDWs from contamination by injection wells. The State Drinking Water Source Assessment and Protection Program is structured to identify all potential sources of contamination within areas that provide short-term recharge to public water supply wells and surface water intakes.

The focus on ground water protection areas and other State delineated sensitive ground water areas is a key element for the protection of current and future drinking water sources. Areas delineated under the State Drinking Water Source Assessment and Protection Program represent, at a minimum, areas designated to receive top priority for the protection of existing public drinking water supplies. Sensitive ground water areas are ground water areas identified by the State as needing additional protection from Class V wells with injectate likely to endanger drinking water. Consistent with this prioritization, this rule uses a phased-in approach that targets motor vehicle waste disposal wells in ground water protection areas first, and State designated sensitive ground water areas at a later date. This allows States to prioritize critical ground water areas initially and phase-in other priority protection areas at a later time.

The decision to regulate motor vehicle waste disposal wells is based on the high potential for these wells to endanger USDWs. Motor vehicle waste disposal wells are located throughout the country—mainly in populated areas—at a variety of facilities, such as automobile service stations, car dealerships, automotive repair shops, and specialty repair shops (e.g., transmission shops, muffler shops, body shops). They tend to be shallow, with injection occurring into or above USDWs. They also tend to be uncased, which could allow contaminated fluids to move more easily into USDWs. Given all of these factors, the quality of fluids they inject becomes very important in determining whether these wells are a threat to USDWs.

Although the development and use of BMPs by the automotive industry have improved recycling and waste disposal practices over the past decade, EPA is concerned about motor vehicle-related facilities which inject fluids with little or no treatment. These fluids, which may be injected intentionally for waste disposal or accidentally as a result of spills or leaks, include spilled gasoline and oil, waste oil, grease, engine cleaning solvents, brake and transmission fluids, and antifreeze. Such fluids contain potentially harmful contaminants, often in high concentrations. For example, fluids containing waste oils or gasoline generally include benzene, toluene, xylenes, and other volatile contaminants. Waste oils and antifreeze also contain some priority pollutant heavy metals, such as barium, cadmium, chromium, and lead. Other contaminants that may be injected include methylene chloride, a compound found in many degreasers, and ethylene glycol, a component of antifreeze. All of these contaminants can be toxic above certain levels. Some, such as benzene and toluene, have the potential to cause cancer.

Data collected for the 1987 Report to Congress and from later EPA Regional investigations indicate that fluids being injected may exceed health-based limits for contaminant levels in water by 10 to 100 times (see p. 5–19 of the August 1989 Class V Task Force Report available in the docket). These data were confirmed for a number of motor vehicle service stations during the implementation of a 1991 National Administrative Order addressing failures to submit inventory information required under 40 CFR 144.26 and 146.52(a). Analyses of fluids disposed at a group of facilities subject to this order found a total of 13 contaminants present in concentrations above the drinking water MCL, although not all contaminants exceeded the MCL in every sample at every facility (see Data from the National Administrative Order on Motor Vehicle Waste Disposal Wells, March 16, 1998, available in the docket). For example, benzene concentrations exceeded the drinking water MCL at 19 of the 20 facilities tested and in 32 of 35 samples analyzed. The highest measured benzene concentration was 40 times the MCL. Similarly, arsenic exceeded the MCL at 11 of 17 facilities and in 18 of 30 samples, with the highest arsenic concentration being 31 times the MCL.

The injection of used petroleum products may leave behind an oily residue within the wells. A 1995 report on natural bioattenuation of hazardous organic compounds in the subsurface states: ''Most organic contaminants, however, enter the subsurface as an oily liquid, such as a fuel spill or release of chlorinated solvent. Groundwater moving through the material dissolves a small portion of the contaminant, which becomes a plume of groundwater contamination. Because the contaminant mass in the oily material is much greater than that dissolved in the groundwater, the spill can continue to maintain the plume more or less indefinitely. As the plume moves away from its source natural biological processes may attenuate the contamination in the groundwater.'' [1]

Examples of instances where motor vehicle waste disposal wells have endangered USDWs include a case in Missoula, Montana, a sole-source aquifer area, where investigations starting in June of 1988 discovered that PCE from operating drainage wells at auto service stations had contaminated community wells serving approximately 45,000 people.[2] [3] Three community wells were closed and another 15 have elevated levels of PCE. In Gilford, New Hampshire, a March 1988 assessment of a site with a garage, a tire center, auto body shop, and a U.S. Army Reserves maintenance shop discovered that operating floor drains had contaminated

[1] Anderson, William, Innovative Site Technology, Bioremediation, Chapter 3.4, page 1, 1995

[2] Background Paper prepared by Alan English, Missoula City-County Health Department for U.S. EPA Underground Injection Control Program, February 1992.

[3] An Investigation of the Volatile Organic Content of Sludges, Soils and Liquids Entering the Missoula Aquifer from Selected Sources,'' prepared by the Missoula City-County Health Department, Environmental Health Division, Contributors: Tom Barger and Alan English, July 27, 1990.

the ground water, the soil, and an on-site water supply with PCE.[4] In Exton, Pennsylvania, trichloroethylene (TCE), PCE, and 1,1,1-trichloroethane from a stone bed drain field connected to floor drains of an auto repair/body shop operating until 1984, contaminated ground water that supplies drinking water to about 76,700 people.[5] In Liberal, Kansas, solvents disposed in a septic system by an engine repair shop resulted in volatile organic compound (VOC) contamination of several water supply wells in 1982; concentrations of VOCs in the septic system were as high as 32,000 ug/l.[6] As presented in Section III.C, additional data from Region II, Region VIII and the Class V study show exceedences of the MCLs for volatile organic compounds and metals in Class V motor vehicle waste disposal well injectate.

EPA believes many of the industries that operate motor vehicle waste disposal wells are making efforts to implement best management practices, waste minimization techniques, and recycling to reduce their impact on the environment and lower operating costs. However, more recent information presented in the NODA and EPA's experience implementing Class V programs across the country indicate that contamination of drinking water supplies from endangering motor vehicle waste disposal wells is a problem that still needs to be addressed.

Some commentors opposed the proposed approach for motor vehicle waste disposal wells. They felt motor vehicle waste disposal wells did not pose a risk to USDWs when located in ground water protection areas and should not be banned. They contended that the industry has instituted BMPs and recycling, and therefore, are no longer disposing of motor vehicle wastes in these wells. While EPA agrees that the use of BMPs and recycling have improved, motor vehicle waste disposal wells in ground water protection areas and sensitive ground water areas still pose a potential endangerment to USDWs. However, there are indications that with treatment, BMPs and recycling, facilities can meet MCLs and continue to use their wells. Therefore, existing motor vehicle waste disposal wells are banned in ground water protection areas and other sensitive ground water areas, but owners and operators can seek a waiver from the ban and obtain a permit. Additionally, EPA is banning new motor vehicle waste disposal wells statewide. The Agency will also issue guidance on conversion of motor vehicle wells to another type of Class V well if owners and operators take certain steps to prevent motor vehicle waste from entering the well. EPA has also extended the compliance time from 90 days to one year to enable owners and operators to explore all options available for compliance.

Large-capacity cesspools have a high potential to contaminate USDWs because: they are not designed to treat sanitary waste; they frequently exceed drinking water MCLs for nitrates, total suspended solids and coliform bacteria; and, they may contain other constituents of concern such as phosphates, chlorides, grease, viruses, and chemicals used to clean cesspools such as trichloroethane and methylene chloride. Pathogens in untreated sanitary waste released into large-capacity cesspools could contaminate the water supply sources such as transient systems and pose an ''acute'' risk if consumed (meaning there could be a serious health risk with a single exposure given the nature of contamination). This is a particular concern for Class V cesspools located in hydrogeologic settings that would permit pathogens to migrate to a ground water supply well that serves a transient system with inadequate disinfection of the water or individual wells. To further limit the acute risk associated with large-capacity cesspools, EPA expanded today's large-capacity cesspool requirements nationwide.

EPA proposed additional requirements for industrial waste disposal wells to meet the MCLs and other health based standards at the point of injection. Many commentors questioned why the Agency chose to regulate a wide range of industries with different disposal practices with one approach. Some commentors suggested requirements similar to those proposed for motor vehicle waste disposal wells, to either ban industrial wells or require site specific permits. Still others felt the industrial category was too diverse and types of industrial waste streams should be regulated based on their specific characteristics and risks. After consideration of these comments, EPA agrees that the industrial category is diverse and represents a variety of waste streams. For this reason, EPA is not including requirements for industrial waste disposal wells in today's final rule. Industrial waste disposal wells will be studied further and addressed in a future rule making.

EPA underscores that this initial rule targets certain ground water protection areas for the purpose of prioritizing national policy. The rule does not establish differential levels of protection for different areas, but rather proposes specific measures EPA believes are necessary to ensure that potentially problematic Class V wells do not endanger USDWs in the highest priority areas. The prohibition against endangerment of USDWs, found in § 144.12 of the existing UIC regulations, continues to apply to all Class V wells and all areas, whether or not a State has a completed its State Drinking Water Source Assessment and Protection Program. Section 144.12(a) in particular provides that no injection-related activity may be conducted ''in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 142 or may otherwise adversely affect the health of persons.'' Similarly, § 144.12(c) and (d) authorize a variety of actions if a Class V well may cause a violation of primary drinking water regulations or otherwise adversely affect the health of persons.

In addition to § 144.12, other existing UIC authorities continue to be available to control Class V wells on a case-by-case basis, as needed to protect USDWs in any area. These can include requiring a permit under §§ 144.25 and/or requiring submission of additional inventory information under § 144.26. In States with EPA-administered programs, the inventory requirements under § 144.26 can be supplemented by additional information requirements, including ground water monitoring, analysis of injected fluids, or submission of geologic information under § 144.27.

EPA expects and strongly encourages States to use these existing authorities to take whatever measures are needed to ensure Class V wells are not endangering USDWs in any other areas beyond ground water protection areas and sensitive ground water areas. If believed to be necessary, States should apply the same requirements in this rule to these and other areas and/or to other Class V wells. Nothing in this rule precludes a State or local government from promulgating more stringent requirements above and beyond the existing UIC authorities.

[4] Background information titled ''5X28 Service Station, Gilford, NH'' available in the docket. This background information was obtained from U.S. EPA Region 1 staff in May 1990.

[5] Superfund Site Fact Sheet, A.I.W. Frank/Mid-County Mustang Site, Pennsylvania, EPA ID# PAD004351003, Last Update: March 1998. http://www.epa.gov/reg3hwmd/super/aiwfrank/pad.htm.

[6] Site Description Printout for the Panhandle Eastern Pipeline Site, from Teresa Hattan, Kansas Department of Health and Environment, July 15, 1998.

A. Definitions/Terminology

1. Ground Water Protection Areas

At § 144.85, the proposal specified that only those owners or operators of motor vehicle waste disposal wells and large-capacity cesspools that are located in delineated source water protection areas for community or non-transient non-community water systems that use ground water as a source must meet the requirements of the rule. However, EPA's Final Guidance for Source Water Assessments and Protection Programs (8/97), does not require States to call their delineated areas ''Source Water Protection Areas'' and the State Drinking Water Source Assessment and Protection Programs submitted to EPA to date indicate that States may identify these areas by other names (e.g., source water assessment areas, ground water areas). Therefore, to avoid the confusion these terms may cause, the term ''ground water protection areas'' will be used in this rule to identify areas delineated and assessed under section 1453 of the Safe Drinking Water Act for community and non-transient non-community water systems that use ground water as a source , and are therefore subject to this rule. In cases where the State delineates zones or areas representing various levels of protection, the State would determine which areas correspond to ground water protection areas for the purposes of this rule.

2. Sensitive Ground Water Areas

The phrase ''sensitive ground water area'' was not used in the proposed Class V rule. However, the proposal recognized that areas beyond ground water protection areas might warrant additional protection and requested public comment on whether the new Class V regulations should apply beyond these areas, possibly statewide, to ensure protection of USDWs.

EPA received many comments recommending that the rule requirements extend beyond ground water protection areas in order to protect future sources of drinking water and to protect the public health of persons using individual wells. EPA agrees with those commentors and expanded the requirements to owners or operators of motor vehicle waste disposal wells located in additional sensitive ground water areas, as designated by the program director. The phrase ''sensitive ground water areas'' in this rule refers to ground water areas that are critical for public health protection because of hydrogeologic and other features that would cause USDWs to be vulnerable to contamination from the well-types regulated by this action. A general definition of other ''sensitive ground water areas'' has been included in the final rule at § 144.86. This definition should act as a guide to regulators when delineating sensitive ground water areas. At § 145.23 EPA requires States, as part of their Class V program revision, to submit a plan for delineating other sensitive ground water areas (unless the State chooses to implement the program statewide). Program revisions are subject to public review and, therefore, the public will have the opportunity to comment on the States approach to delineating other sensitive ground water areas. EPA is not requiring States to submit a plan for ground water protection areas as part of their program revision because, as required under 1453 of the Safe Drinking Water Act, each State's Drinking Water Source Assessment and Protection Program outlines the States plan for conducting ground water protection area assessments and has already undergone public review and is undergoing EPA review. EPA also intends to provide States with further guidance on delineating sensitive ground water areas. Guidance documents will be made available from EPA Regional Offices or through the Safe Drinking Water Hotline.

3. Point of Injection

In the proposed Class V rule, the phrase ''point of injection'' was used at § 144.88 to establish where fluids injected into a well would be required to meet MCLs and other health-based standards. The proposal, however, did not define the term ''point of injection.''

Several commentors requested that this term be defined to avoid confusion. Other commentors expressed concern about where the ''point of compliance'' would be and suggested various points to measure compliance, ranging from ''point of use'' to the property boundary. Others recommended not defining the point of injection, because a highly prescriptive definition of the ''point of injection'' would be difficult to implement due to the many different engineering configurations of Class V wells.

To resolve this issue, EPA sought public comment in the May 21, 1999, NODA on the need for the final Class V regulation to clearly define the ''point of injection.'' The majority of the commentors on the NODA supported defining the point of injection for Class V wells as the distribution box (for the case of septic systems) or the end of the pipe for injection wells. One commentor stressed the need to give UIC Directors the authority to determine the point of injection on a case by case basis.

In response to public comment, EPA has decided to define ''point of injection.'' Taking into account the difficulties of applying a specific definition to a variety of wells, ''point of injection'' is defined as, ''the last accessible sampling point prior to waste fluids being released into the subsurface environment,'' at § 144.3. For septic systems, the last accessible sampling point might be the distribution box, for injection wells the last accessible point prior to injection would be the end of the pipe. This definition, in addition to a guidance document, should act as a guide to regulators and Class V well owners and operators, regardless of well configuration, when determining the most appropriate sampling point to determine compliance.

4. Motor Vehicle Waste Disposal Wells

In its proposal, EPA determined that injection wells located in ground water protection areas that receive waste fluids from the servicing of motor vehicles pose an endangerment to underground sources of drinking water. Motor vehicle waste disposal wells are defined at § 144.81 (16) as follows ''Motor vehicle waste disposal wells receive or have received fluids from vehicular repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealership, specialty repair shop (*e.g.,* transmission and muffler repair shop), or any facility that does any vehicular repair work.''

B. Industrial Waste Disposal Wells

In the July 29, 1998 notice, EPA proposed additional requirements for the group of Class V wells categorized as ''industrial'' when located in ground water protection areas because these well types may pose an endangerment to underground sources of drinking water. The proposed industrial well category included a wide range of industries disposing of wastes from such various industries as animal hospitals, environmental laboratories, dry cleaners, and oil refineries. In addition to representing a wide range of industrial discharges, these wells vary in construction, depth, and operation. The Agency solicited comment on the appropriateness of designating industrial wells as high risk and regulating them under this rule.

Based on public comment, EPA now believes that, although these wells may pose high risks to underground sources of drinking water, the well category as defined in the proposal may be too diverse to follow the same regulatory

approach. EPA believes that more information is needed to formulate an effective program for these wells and wastestreams. As a result, EPA has decided to defer finalization of the 1998 proposal for this category of wells.

C. Coverage of the Rule

1. Large-Capacity Cesspools

The proposed rule banned large-capacity cesspools in ground water protection areas. However, in the preamble to the proposed rule, the Agency recognized that there may be instances where pathogens in untreated sanitary waste released from Class V large-capacity cesspools could pose an acute heath risk (*i.e.,* a person could become ill by taking one drink from an affected drinking water supply) and sought comment on the merits of broadening the coverage of the rule to include ground water protection areas for transient public water systems and possibly statewide. Many commentors supported the idea of extending the ban on large-capacity cesspools, due to concerns over one-time exposure to pathogens in drinking water. Some commentors supported extending the ban to ground water protection areas delineated for transient non-community systems that use ground water as a source, but the majority of commentors supported statewide coverage, primarily because of the acute risk these wells pose, the nature of the contaminants and the on-site disposal alternatives available to owners or operators.

Based on these public comments, EPA has decided to ban new and existing large-capacity cesspools nationwide. EPA believes that extending the rule's coverage is the most appropriate course of action given that many States already ban new large-capacity cesspools, the acute nature of the risks posed by these wells, and the relative ease of developing alternative means to dispose of sanitary waste on-site.

2. Motor Vehicle Waste Disposal Wells

The proposal would have regulated motor vehicle waste disposal wells in ground water-based community and non-transient, non-community ground water protection areas, but encouraged States to use existing UIC authorities to ensure Class V wells are not endangering USDWs beyond those areas. However, the proposal recognized that additional areas might warrant additional protection and requested public comment on whether the new Class V regulations should apply to motor vehicle waste disposal wells beyond ground water protection areas.

One-third of the commentors on this issue opposed expanding the rule. These commentors believed existing authority adequately protected USDWs outside of ground water protection areas, EPA would be exceeding its authority, limited resources and the need for State flexibility would inhibit implementation of the rule in additional areas, and additional regulatory burden would be placed on well owners or operators outside ground water protection areas.

About one-half of the commentors on this subject favored expanding the requirements for motor vehicle waste disposal wells beyond ground water protection areas. A number of these commentors specified additional areas where the regulation should apply, including impaired ground water areas, critical aquifer protection areas, sole-source aquifers, aquifer storage and recovery areas, sand/gravel/karst aquifers, national parks, possible future USDWs, rural areas with private wells, and the entire State. Some commentors suggested phasing in additional sensitive ground water areas over time.

Commentors supporting expansion sought to ensure protection of all USDWs and uniform application of the regulations. Others believed that expansion of the rule is needed to protect future sources of drinking water, private drinking wells, and other sensitive ground water areas not included in ground water protection areas.

The NODA requested comment on an approach to expand the rule beyond ground water protection areas to other sensitive ground water areas that the State identified and phasing in the implementation of the rule in these additional areas. Eleven commentors addressed the addition of sensitive ground water areas and nine commentors addressed the phased approach to implementation. For expansion of the rule beyond ground water protection areas, seven commentors supported the need to protect additional areas with two of the commentors recommending statewide coverage of the rule. Three commentors opposed expansion, stating that limiting the rule to ground water protection areas adequately protected USDWs. Seven commentors supported phasing in the regulations beyond ground water protection areas. They agreed that the given time frame allowed adequate time for owners/operators and States to implement the rule, and the phase in would assist States in prioritizing areas for implementation of the rule. Two commentors opposed the phasing in of any additional sensitive ground water areas.

EPA agrees with those commentors suggesting additional areas need to be covered by this rulemaking. The State Source Water Protection Program provides protection for areas directly around public drinking water supplies and does not consider or protect drinking water sources that are not currently being used. In addition, limiting the rule to ground water protection areas does not take into consideration factors such as contaminants that could readily migrate to existing water supplies, sole source aquifers, and individual well fields. Therefore, the Agency feels it is important to extend the rule beyond ground water protection areas to fulfill its mandate to protect current and future drinking water sources. Thus, EPA, at § 144.85, regulates existing motor vehicle wells in both ground water protection areas and other sensitive ground water areas, as delineated by the Director and bans new motor vehicle waste disposal wells nationwide. In delineating sensitive ground water areas, both Primacy States and EPA Regions (for DI States) should evaluate the hydrogeologic setting and consider such factors as: the presence or absence of karst topography, fractured bedrock, sandstone, and/or confining layers; the depth to ground water; significance as a drinking water source; and future uses of the land. Primacy States and EPA Regions (for DI States) must implement the rule for existing motor vehicle waste disposal wells in ground water protection areas within one year of the completion of the local assessments, and must delineate sensitive ground water areas by January 1, 2004 and implement the rule in these areas by January 1, 2007.

D. Ban of Large-Capacity Cesspools

As discussed in section IV of this preamble, concerns over ''acute'' health risks have led EPA to extend the ban of large-capacity cesspools to all large-capacity cesspools nationwide. Separate from this issue of the rule coverage, however, is whether large-capacity cesspools should be banned.

The majority of commentors supported the ban. The prevailing opinion among these commentors was that strong steps need to be taken to keep pathogens from these wells from entering drinking water sources. The use of new large-capacity cesspools is recognized as an inferior method of disposing of waste that can be remedied by the installation of a septic system and has already been banned by many States. Thus, in response to the many

concerns expressed regarding acute contaminants in cesspools, EPA has banned new and existing large-capacity cesspools nationwide.

E. Requirements for Motor Vehicle Waste Disposal Wells

1. Ban New Wells and Require Existing Wells To Either Close or Get a Permit

EPA co-proposed a ban and a ban with a waiver for existing motor vehicle waste disposal wells. The alternative allowing a waiver for existing wells would include a permit requiring waste fluids to meet MCLs and other health-based standards at the point of injection, owners or operators to adopt practices such as BMPs, and provide injectate and sludge monitoring.

Half of the commentors opposed the idea of waivers, believing a ban was necessary to prevent endangerment of current and future drinking water sources. Commentors' concerns with a permit program included: inadequacy of monitoring and sampling; limited technical knowledge on the part of many owners/operators to ensure that USDWs are not being threatened; and the burden on regulating agencies to satisfactorily implement and enforce a permit program. Pointing to the vulnerability of motor vehicle waste disposal wells to accidental spills of motor vehicle fluids, some commentors thought that any well left open would violate the existing non-endangerment provision in 40 CFR 144.12(a) of the UIC regulations. Some of these commentors recommended that if the waiver option was chosen, the permit must: (1) include sampling to determine the baseline quality of ground water; (2) specify that injection of waste must not degrade the current quality of the ground water, or must meet MCLs, whichever is more stringent; (3) include continued ground water sampling; (4) specify, based on the baseline quality of ground water, that no new substances can be introduced; and (5) specify that MCLs, other health-based standards, or Best Available Technologies (BATs) are utilized, whichever is most stringent.

Some of the commentors favored the waiver option, viewing a ban to be unnecessary and supporting the additional flexibility a waiver would allow States and industry. Commentors suggested a range of permit requirements including monitoring, sampling, training, and technology requirements. Some States expressed concern with sampling costs, site-specific criteria, and compliance assurance.

EPA believes there is a high potential for endangerment of drinking water sources from motor vehicle waste disposal wells located in ground water protection areas and other sensitive ground water areas. However, EPA recognizes that treatment technologies and BMPs, if properly implemented, could allow wastewater to meet MCLs and other health-based standards at the point of injection. Therefore, today's final rule promulgates a ban with a waiver option for existing motor vehicle waste disposal wells. UIC Directors should use their best judgment when issuing waivers from the ban, and consider factors such as cost effectiveness, maintenance of treatment systems, potential for impacting water systems, a facility's compliance history, and records showing waste recycling.

The specific permit requirements could vary from one well to the next, but would have to include the following three conditions at a minimum. First, owners or operators would have to make sure fluids released in their wells meet the primary drinking water MCLs and other appropriate health-based standards at the point of injection. Second, owners or operators would have to follow specified BMPs for motor vehicle-related facilities. Third, owners or operators would have to monitor the quality of their injectate and sludge (if present in dry wells or tanks holding injectate) both initially and on a continuing basis in order to demonstrate compliance with the MCLs. The rule, however, does not specify monitoring requirements that must be followed, leaving those instead to the discretion of the Director to specify in the permit.

When all of these requirements are put together, EPA believes the permit would specify the following kinds of monitoring requirements, but recognizes that States will design monitoring requirements appropriate to the situation. As a first step, owners or operators might be required to characterize the quality of their injectate and any sludge. If liquid from the sludge has chemical concentrations below the MCLs, owners or operators might be required to analyze the injectate quarterly for the first three years and then annually if it is consistently below the MCLs. They also might be required to analyze their sludge annually. If the injectate is below the MCLs but liquid from the sludge is above the MCLs, then owners or operators might have to follow the same monitoring requirements as above plus pump and properly dispose of their sludge. Finally, if the injectate is above the MCL and the liquid from the sludge is above the MCL, then the owner or operator would need to: (1) Install treatment to meet permit requirements to meet MCLs and other health based standards at the point of injection; (2) pump and properly dispose of their sludge; (3) perform quarterly sampling of injectate for the first three years and then annually if consistently below the MCLs; (4) perform annual sampling of the sludge; and (5) other requirements established by the Director to protect USDWs.

Although the rule envisions that States will issue individual permits, States are not precluded from issuing a general permit to a group of facilities that have similar characteristics. For instance, there may be a number of service stations in an area that have similar waste streams, BMP's, good compliance histories and for which the permit conditions would be identical. Another example could be a group of facilities owned by a municipality that are used for a similar purpose, have similar waste streams and follow that same procedure, including BMPs. General permits would have to specify the initial and ongoing monitoring requirements, BMPs, and that MCLs and other health based standards must be met at the point of injection. State regulations would have to include provisions for these general permits, including their conditions and where they could apply.

2. MCLs at the Point of Injection

Under the ban with a waiver option proposed for existing motor vehicle waste disposal wells, such wells would be allowed to stay open subject to a permit that, among other things, requires waste fluids to meet MCLs and other health-based standards at the point of injection. As discussed in the preamble to the proposed rule, some members of the Small Business Advocacy Review Panel thought that EPA should allow MCLs to be exceeded (e.g., by 10 or 100 times) for certain contaminants under certain conditions. These Panel members pointed out that metals and some other contaminants are attenuated as they migrate through soil prior to reaching the water table and are diluted within an aquifer prior to reaching a drinking water withdrawal well.

The majority of commentors supported the proposal to meet MCLs and other health-based standards at the point of injection. In general, these commentors believed that allowing injection at levels above the MCL would be the same as providing ''a permit to pollute,'' and that it would be illogical for EPA to use the MCLs as cleanup benchmarks at Superfund sites, yet allow new ground water contamination by permitting injection above the MCLs.

Several of these commentors also believed it was not realistic to expect small businesses that own or operate motor vehicle waste disposal wells to be able to determine whether their site-specific conditions were suitable to safely allow injection at levels higher than the MCLs.

A few commentors were concerned that MCLs at the point of injection was not protective enough, believing instead that background concentrations in ground water should be used as the standard or that the rule should prohibit the introduction of any potentially hazardous chemical into USDWs, even when present in concentrations below MCLs. About a third of the commentors opposed the proposed requirement, believing that it was unnecessary to protect USDWs where contaminant dilution and/or attenuation was expected to be significant and that it would impose an undue burden on well owners or operators.

Based on these public comments, today's final rule requires fluids released into motor vehicle waste disposal wells to meet MCLs and other appropriate health-based standards at the point of injection, as one of the permit conditions that have to be met when such wells remain open under the waiver option. EPA also believes that developing a set of conditions within which a motor vehicle waste disposal well could release fluids that exceed drinking water standards without endangering USDWs is not a viable option for most small businesses and regulatory authorities because of the difficulty and expense involved in collecting the site-specific hydrologic, geologic, and soil information needed to determine that injection above the MCLs does not endanger USDWs. EPA believes that requiring MCLs and other health based standards to be met at the point of injection is necessary to ensure that motor vehicle waste disposal wells meet the non-endangerment provision in § 144.12(a). In future rulemaking, the regulatory controls needed to prevent endangerment from other types of Class V wells will be evaluated on a case by case basis. House Report 13002 (July 10, 1974) stated that the UIC endangerment standard should be ''liberally construed so as to effectuate the preventive and public health protective purposes'' of the SDWA (A Legislative History of the Safe Drinking Water Act, Committee Print, February, 1982, at 564). More specifically, in defining endangerment, the House Report states that ''actual contamination of drinking water is not a prerequisite either for the establishment of regulations or permit requirements or for the enforcement thereof.'' *Id.*

3. Reclassification of Certain Motor Vehicle Wells

The proposed rule did not address specific conditions or requirements for converting a Class V motor vehicle waste disposal well to another kind of Class V well. The preamble to the proposed rule, however, did discuss how a motor vehicle service facility might continue to operate its Class V well if all motor vehicle waste fluids generated at the facility were segregated and only other liquids, such as stormwater, ice melt, and wastewater from carwashes, were allowed to enter the injection well. The preamble to the proposed rule suggested actions that could result in a well being converted, including performing motor vehicle maintenance in areas that do not drain into the Class V well, or installing a semi-permanent plug (also known as a plumber's plug) in the sump outlet leading to the injection well.

The proposal advised that for the use of a semi-permanent plug to be acceptable, the plug would truly have to be semi-permanent. It could not be easily removed, as this would create the potential for the well to remain open and subject to abuse. Because of these concerns, the proposal specifically requested comment on the use of semi-permanent plugs, particularly on their limitations and on circumstances where their use is or is not appropriate.

Most of the public comment received on motor vehicle waste disposal well conversions addressed the use of semi-permanent plugs, with the majority opposing their use. Concerns included potential for improper disposal of wastes, economic incentives to dispose of automotive wastes in the well, and the regulatory program's inability to maintain an adequate field presence to ensure such plugs are being properly used. The majority of these commentors preferred permanent closure of the well.

Supporters of semi-permanent plugs maintained that inappropriate wastes would not enter the drain, adding that the flexibility to inject appropriate fluids while avoiding the costs of well closure is an important option for small businesses. Commentors suggested provisions be added to ensure abuse does not occur.

EPA agrees with commentors concerned with the potential misuse and/or abuse of floor drains in motor vehicle-related facilities. However, because of the need expressed by small businesses, EPA will allow motor vehicle waste disposal well conversions at the UIC Directors' discretion as long as no motor vehicle waste can enter the well. The Director must ensure that all motor vehicle fluids are physically segregated from the fluid being injected and the unintentional or illicit discharge of motor vehicle waste is unlikely based on a facility's compliance history and records showing proper waste disposal. Based on the concerns expressed through public comment, the use of semi-permanent plugs will not be considered as a viable means to segregate waste. EPA believes that in order to meet the requirements for well conversion, owners or operators of converted Class V wells in motor vehicle related facilities will need to implement BMPs. In addition, in order to meet the requirements for well conversion, owners and operators must take measures to ensure that motor vehicle waste fluids are physically segregated from the injection well. EPA plans to develop a guidance document for the conversion of motor vehicle waste disposal wells.

4. Storm Water Wells at Motor Vehicle Waste Disposal Sites

During stakeholder meetings and through public comment, commentors expressed concern over the classification of storm water drainage wells located at motor vehicle facilities. In the proposed rule, EPA solicited comment on ways of defining storm water wells and distinguishing them from motor vehicle waste disposal and industrial wells. While this final rule does not address industrial or storm water injection wells, it is important to clarify EPA's position regarding storm water wells located at motor vehicle facilities.

Storm water drainage wells located at motor vehicle facilities that are intended for storm water management but that also may receive insignificant amounts of fuel due to unintentional small volume leaks, drips, or spills at the pump are not considered motor vehicle waste disposal wells and are not subject to this rule. The Agency will develop guidance to assist owners /operators in determining if their well is a motor vehicle waste disposal or drainage well.

F. Compliance Period

At § 144.87, the proposed regulation provided 90 days after the local assessment for ground water protection areas is completed for owners/operators of existing motor vehicle waste disposal wells in those areas to either close their wells or submit an application for a waiver, if allowed. The UIC Program Director would have the flexibility of extending the 90-day deadline for up to one year.

While one commentor supported the proposed compliance period, the majority of the commentors opposed the 90-day deadline. Reasons for opposition included the burden on small businesses and States, as well as potential difficulties in disseminating information and finding alternative means for wastewater disposal within that time frame. These commentors recommended that the deadline be extended anywhere from 180 days to two years, with the majority suggesting a one-year compliance period.

EPA agrees with the majority of the commentors that a 90-day compliance period may not be sufficient to comply with the new requirements. Therefore, EPA has extended the compliance period to one year after completion of the local assessment for ground water protection areas. However, EPA strongly encourages owners and operators who wish to apply for a waiver to do so within 90 days of the completion of their local assessment for ground water protection areas to insure they are operating under permit conditions within the one year compliance period. The additional time will allow State UIC staff to conduct outreach and will provide owners and operators additional time to achieve compliance. In addition, as proposed, the UIC Director may grant a one-year extension if the most efficient compliance option is connection to a sanitary sewer or installation of new treatment technologies.

G. Deadlines for Delineations of Covered Areas

1. Drinking Water Source Assessment Program Not Completed On Time

The proposed rule, at § 144.87(b), states that if a State does not complete its EPA approved Drinking Water Source Assessment Program for its community water systems and non-transient non-community water systems by May 2003, the regulations will apply statewide permanently. This deadline was chosen because it assumed all States would meet the deadlines in Section 1453 of the SDWA and that EPA would approve an eighteen month extension for States to complete assessments, which would be in May of 2003. The proposal requested comments on alternative approaches.

About one quarter of the commentors on this issue agreed that the requirements should apply statewide if a State's Drinking Water Source Assessment Program is not complete by May 2003, noting that this option would maintain consistency throughout each State.

The remaining commentors on this issue opposed either permanent statewide application of the rule or the May 2003 deadline. Many of those opposed were concerned with the burden on owners and operators. A few commentors asserted that statewide implementation would exceed EPA's authority under the SDWA, that States do not need an added incentive to complete Drinking Water Source Assessment Programs, or that permanent statewide application of the rule would discourage partnerships between States and owners or operators.

Several commentors suggested variations on the statewide proposal, such as: phased implementation linked to Drinking Water Source Assessment completion; exempting wells on a case-by-case basis from a statewide ban; and, exempting areas of the State where delineations were completed but Drinking Water Source Assessments were not.

Commentors who opposed the proposal also expressed concern that the pressure to complete a State's Drinking Water Source Assessment Program by the May 2003 deadline may hinder a State's effort to develop an effective program. Other commentors supported an extension in May 2003 if a State could show significant progress on its Drinking Water Source Assessments or utilizing financial incentives to encourage States to complete their Drinking Water Source Water Assessment Program on time.

In response to many of these comments, for purposes of this rule EPA has extended the deadline. The final rule specifies at § 144.87 (b) that the rule applies statewide on January 1, 2004 if the local ground water assessments for community water systems and non transient non community water systems under an EPA approved Drinking Water Source Assessment Program are not completed. The extra time accounts for possible modifications to State programs submitted during EPA's review process. Further, the later date provides additional time for affected owners and operators to be informed of the application of this rule to their facilities and come into compliance. In addition, States can apply to the EPA for an extension to up to one year if they have made reasonable progress in completing their assessments for ground water protection areas. States must apply to EPA for an extension by June 1, 2003.

EPA retained statewide implementation, if a State Drinking Water Source Assessment Program is not completed because this is the only preventive approach practical given that it would be difficult to ascertain which areas are most vulnerable if assessments are not completed. At the same time, EPA believes that all States will complete assessments for community water systems and non transient non community water systems before the January 1, 2004 deadline. There are approximately 170,000 public water systems for which States must develop source water assessments. Of those systems 40,820 are community water systems, 18,660 are non transient non community water systems and 87,870 are transient water systems. Thus, for the purposes of this rule, States must complete less than half of their assessments by this deadline and EPA believes that if a State does encounter difficulties it will prioritize its efforts and complete the community and non-transient non-community systems first. In addition, many States have received early approval of their programs and have begun their assessments ahead of schedule. In addition, a review of the State's Source Water Assessment Plans, which have been submitted to EPA for approval, indicate that many States intend to use their EPA approved Well Head Protection Program as the basis for developing their ground water protection areas. Approved Well Head Protection Programs include two of the three steps required to complete the ground water portion of a State Source Water Protection Plan. States that adopt their existing Well Head Protection Plan will have met the majority of the requirements for the ground water portion of the State Drinking Water Source Assessment and Protection Program. Therefore, if a State fails to complete all local assessments for ground water protection areas by January 1, 2004 (or January 1, 2005 with an extension) the rule will apply statewide for existing motor vehicle waste disposal wells.

2. Sensitive Ground Water Areas Not Delineated on Time

Both Primacy States and EPA Regions (for DI States) must delineate sensitive ground water areas by January 1, 2004. If States have not delineated their other ''sensitive ground water areas'' by that time, the regulations affecting motor vehicle waste disposal wells will apply statewide permanently by January 1, 2007. Existing motor vehicle waste disposal wells (in delineated sensitive ground water areas but outside of ground water protection areas) in Primacy States and EPA Regions (for DI States) must achieve compliance by January 1, 2007.

The January 1, 2004 date was chosen as a deadline for delineation of sensitive ground water areas to allow States time

to delineate these areas. EPA is confident that States will delineate sensitive ground water areas well before the January 2004 deadline. States can delineate sensitive ground water areas based on existing information such as State specific geologic and hydro-geologic maps. An assessment and inventory of contaminant sources within these areas will not have to be completed. In addition, States already have knowledge of these areas, and some States and EPA Regions (for direct implementation States) have already mapped sensitive ground water areas. Phased implementation will allow resources to be spent on sensitive ground water areas once the rule has already been implemented in ground water protection areas. However, States may apply to the EPA for an extension for up to one year to complete delineations for sensitive ground water areas if they are making reasonable progress in identifying these areas. States must apply for this extension by June 1, 2003. EPA will consider and decide the merits of the extension requests separately for completing assessments for ground water protection areas and for identifying other sensitive areas.

3. Assessments for Ground Water Protection Areas Completed Before UIC Primacy Revisions Are Approved

EPA believes that, based on the current status of States in developing State Drinking Water Source Assessment and Protection Programs and EPA in approving them, most programs will likely be approved by the end of 1999. Once approved, States will begin to complete their local assessments for ground water protection areas. It is likely, therefore, that some local assessments will be completed before certain Primacy States have had an opportunity to revise and receive EPA approval for their updated Class V UIC programs. In this case, owners and operators of existing motor vehicle waste disposal wells (located in a ground water protection area with a completed assessment) have one year from the date of EPA's approval of their State's Class V UIC program revision to comply with the new Class V requirements.

H. Pre-Closure Notification

The proposal, at § 144.88 (table), required owners or operators of large-capacity cesspools and motor vehicle waste disposal wells in States where the UIC Program is directly implemented by EPA to notify the Program Director of their intent to close their well at least 30 days prior to closure.

These requirements were proposed for DI programs based on the need to track high-priority well closures in EPA-administered programs. In the interest of flexibility, the proposal did not require State-administered UIC programs to adopt the same pre-closure notification. EPA solicited comments on the merits and potential impacts on Primacy States of requiring pre-closure notification.

The majority of commentors were in favor of requiring pre-closure notification in Primacy States, as this would allow for a more accurate inventory, and would provide a mechanism for State oversight of well closures.

For these reasons, EPA has decided to extend pre-closure notification for large-capacity cesspools and motor vehicle waste disposal wells to Primacy States in all areas covered by the rule at § 144.88 (table).

I. Exclusion Criteria for Cesspools and Septic Systems

EPA proposed to revise the exclusion criteria for septic systems and cesspools receiving solely sanitary wastes to exclude from the UIC regulations both septic systems and cesspools with the capacity to serve fewer than 20 persons per day and those serving individual or single family residences. The proposal eliminated the distinction between residential and non-residential systems and set the exclusion criteria at systems with the capacity to serve fewer than 20 people per day. While most commentors supported the 1995 proposal, the vast majority of people addressing this issue added that the 20 persons-per-day threshold should be changed. These commentors, many of which were States, generally favored a criterion that was based on waste flow rate or septic tank size. However, it was not clear to EPA if any of the alternative criteria that were suggested could be adopted on a national level without significantly disrupting many State programs nor that such a change was needed to improve USDW protection.

To shed further light on this issue, the 1998 proposal asked for further comments on whether the criterion needed to be changed to fix a significant problem. In general, the comments received were similar to those received for the 1995 proposal. The majority of the commentors suggested EPA use a flow rate (ranging from less than 400 to 20,000 gallons per day). Some commentors thought the 20 persons criterion was too low and should be set at 25. Still others suggested that there is less waste per person from industrial/commercial sites than residential sites.

EPA recognizes that the current criterion as written in § 144.1(g) has weaknesses. However, because no commentor recommended an alternative criterion that would not disrupt existing State programs or that was necessary to ensure better protection of USDWs, today's rule retains the criterion at § 144.1(g). Under this criterion, non-residential cesspools, septic systems or similar waste disposal systems are covered under the UIC program if they are used solely for the disposal of sanitary waste, and have the capacity to serve 20 or more persons a day. Residential large-capacity cesspools and septic systems are covered by the UIC program if they are used by a multiple dwelling, community or regional system for the injection of waste.

EPA will re-evaluate this issue in the context of a future Class V rulemaking, using information collected during the Class V Study of all wells not covered by todays rule, including septic systems.

J. Other Amendments

EPA is finalizing other minor revisions originally proposed in the August 28, 1995 notice, in order to provide a complete and coherent picture of all Class V UIC changes being contemplated. These revisions address (1) a few definitions in §§ 144.3 and 146.3, and (2) the classification of radioactive waste disposal wells in §§ 144.6 and 146.5. In addition, certain existing Class V requirements are being reiterated in or moved to the plain-English version of the consolidated Class V regulations in 40 CFR 144 Subpart G.

1. Categories of Class V Wells

In the 1995 and 1998 Class V proposals, EPA solicited comment on a proposed reclassification scheme for all Class V well subtypes. Some commentors objected to the new classification scheme. Additionally, preliminary information gathered as a part of the Class V study indicates the proposed categorization scheme may not appropriately group the Class V subtypes and could be a source of confusion to Class V owners and operators in future rules.

In response to the public comment, EPA will retain the current Class V well type definitions found in § 146.5 (e) with one exception. The current list of Class V wells at § 146.5 does not include a definition of Motor Vehicle Waste Disposal wells. Therefore, EPA is finalizing the definition for Motor Vehicle Waste Disposal wells at §§ 146.5 (e)(16) and 144.81 as it was proposed.

2. Sections 144.3 and 146.3—Definitions

The regulation adds new definitions for ''cesspool,'' ''drywell,'' ''improved sinkhole,'' ''point of injection'', ''sanitary waste,'' ''septic system,'' and ''subsurface fluid distribution system.'' The rule also revises the existing definitions for ''well'' and ''well injection.''

An ''improved sinkhole'' is defined as a type of injection well regulated under the UIC program. Today's definition codifies EPA's interpretation that the intentional disposal of waste waters in natural depressions, open fractures, and crevices (such as those commonly associated with the cooling of lava flows or weathering of limestone) fits within the statutory definition of underground injection. A ''subsurface fluid distribution system,'' which is a term used in the new definition of ''septic system,'' is defined with a standard engineering description. The definition of ''well'' has been revised to clarify that a ''well'' includes improved sinkholes and subsurface fluid distribution systems.

The definition of ''well injection'' has been revised to eliminate a redundancy and simply state that well injection means the subsurface emplacement of fluids through a well.

3. Sections 144.6 and 146.5—Classification of Wells

The regulation revises § 144.6(a) and § 146.5(a) by adding a paragraph (3) to move Class V radioactive waste disposal wells injecting below all USDWs into the Class I category. Such Class V wells, in fact, are similar to Class I wells in terms of their design, the nature of fluids that they inject, and their potential to endanger USDWs. In particular, like Class I wells, such radioactive waste injection wells inject below all USDWs and warrant the same level of control.

The Agency believes that all of these wells are located in Texas, which already regulates them as Class I wells. Existing Class V radioactive waste disposal wells, therefore, should not be subject to any additional regulatory requirements. However, the Agency believes that Class I requirements related to permitting, construction, operating, monitoring, reporting, mechanical integrity testing, area of review, and plugging and abandonment are needed to prevent any new radioactive waste disposal wells from endangering USDWs. The Agency, thus, has reclassified Class V wells that inject radioactive waste below the lowermost USDW as Class I wells and subject them to the full set of existing Class I requirements. This approach is administratively simpler and more straightforward than keeping the wells in the Class V universe and developing identical requirements under the Class V program.

EPA wishes to clarify that this reclassification of Class V radioactive waste disposal wells does not affect the disposal of naturally occurring radioactive material (NORM) in Class II wells as part of oil and gas field operations. The injection of fluids associated with oil and natural gas production, including such fluids containing NORM, would continue to be regulated under existing Class II UIC requirements or under applicable regulations prescribed by the Primacy State agency.

4. Existing Regulations Being Reiterated or Replaced in 40 CFR Part 144, Subpart G

The existing description of the five classes of injection wells in § 144.6 has been reiterated in § 144.80 in the new Subpart G. Similarly, the existing prohibition of fluid movement in § 144.12 has been reiterated in § 144.82.

The description of when Class V injection is authorized by rule in § 144.24 has been deleted and moved to §§ 144.84 in the new Subpart G.

5. Part 145—State UIC Program Requirements

The Agency has amended § 145.11 to be consistent with the changes in 40 CFR Part 144. These amendments insert a set of new requirements in § 144.88 that State programs must have the legal authority to implement.

These amendments to Part 145 are technical corrections to incorporate the changes to 40 CFR Part 144. The corrections include a reference to the new section and a redesignation of paragraphs to accommodate the new references.

6. Sections 144.23 and 146.10—Class IV Wells

The August 28, 1995 notice proposed to add a new § 144.23(c) to clearly rule authorize Class IV wells used to inject treated water into the formation from which it came if such injection is approved by EPA or a State as part of a RCRA or CERCLA remediation program. The 1995 notice also proposed to add a new paragraph in § 146.10(b) to reiterate that owners or operators of Class IV wells in EPA-administered programs have to close their well in accordance with the existing requirements in § 144.23(b) prior to abandonment. Both of these proposals, which are described in more detail in the preamble of the 1995 proposal (see 60 FR 44665), are not related to Class V wells and thus were discussed but not revisited in the 1998 proposed revisions to the Class V regulations (63 FR 40587).

In general, public commentors supported the August 28, 1995 proposal as it related to section 144.23. Therefore, EPA is finalizing new language at § 144.23 as proposed in 1995 as part of this rulemaking action.

No commentors addressed the proposed addition in § 146.10(b) presumably because it simply reiterates the existing Class IV well closure requirement in § 144.23(b) for the sake of clarity. Accordingly, EPA is finalizing the new § 146.10(b) as proposed in 1995.

V. Cost of the Rule

The Agency has prepared an Economic Analysis (EA) of today's final rule to assess its costs. This section summarizes the burden of the final rule on Class V large-capacity cesspool and motor vehicle waste disposal well owner/operators and the methods employed to calculate this impact. The complete EA has been placed in the rule-making docket.

A. Methodology Overview

EPA's methodology for estimating the national cost of the rule is largely identical to the methodology used to analyze the July 1998 proposed rule. The analysis was modified in certain respects, however, to reflect changes in the rule in response to public comment on the proposal and to make use of data that was not available at the time of proposal. On May 21, 1999, EPA published a Notice of Data Availability or ''NODA'' (64 FR 27741) to describe and request public comment on the additional data obtained by the Agency since its publication of the proposed rule in July 1998.

The following discussion summarizes the revisions to the Economic Analysis based data obtained after the proposal. The complete analytic methodology, along with the detailed results of the analysis, are presented in the Economic Analysis document available in the public docket.

1. Revised Estimates of the Numbers of Affected Wells

The Economic Analysis reflects new estimates of the number of wells that will be affected by today's rule. These estimates are based on information collected as a part of the ''Class V Study'' described in Section III.C of this preamble and the notice of data availability publish on May 21, 1999. The Class V Study provides the latest

State inventory information (*i.e.,* on the documented and estimated number of wells of motor vehicle wells and large-capacity cesspools) reported to EPA in questionnaires completed by staff in the States and EPA Regions. The Economic Analysis uses the Class V Study to determine the national universe of potentially affected Class V UIC wells. (In contrast, the prior analysis developed national estimates of the number of waste disposal wells by employing a number of assumptions, because survey data on the number of wells were not available.)

EPA received comments on the use of this data from five commentors. These commentors expressed concern that there are uncertainties associated with these data. EPA understands the concerns of the commentors and recognizes that a certain amount of uncertainty exists with this (and any other) facility inventory data. However, EPA believes that the new data presented in the NODA represents the best available information to use in the economic analysis supporting today's rule. EPA further believes that using this new information to estimate the economic impact of the Class V requirements is a vast improvement over the economic analysis for the proposed rule. In that analysis, EPA had to make numerous assumptions, relating to Class V well inventories, to estimate the economic burden of the new requirements.

The Class V study also collected State Class V regulations. EPA reviewed State regulations to determine which States had requirements that were at least as stringent as today's final rule. The analysis then excluded wells in States with UIC programs that are at least as stringent as today's final rule. For example, the analysis excludes large-capacity cesspools in States that already have banned them in their regulations.

To calculate the number of motor vehicle waste disposal wells that fall within ground water protection areas, EPA assumed that States will delineate ground water protection areas by using areas of one-half mile radius around water supply wells for ground water community water systems (G–CWS) and of one-quarter mile radius around water supply wells for ground water non-transient non-community water systems (G–NTNCWS). This methodology is consistent with the 1998 economic analysis. However in the Economic Analysis for the final rule, EPA used data from State Drinking Water Source Assessment and Protection Programs, when available, to refine actual G–CWS and G–NTNCWS radii on a State by State basis. These State Drinking Water Source Assessment and Protection Programs were described in the NODA of May 21, 1999.

The Economic Analysis estimates the number of wells assumed to fall within sensitive ground water areas based on State-specific data regarding the presence of certain conditions that might be considered sensitive for purposes of ground water protection (*e.g.,* sole source aquifers, shallow unconsolidated aquifers, karst, fractured bedrock). The NODA requested public comment on applying the rule to wells in sensitive ground water areas.

As a result of the new data and estimation methodology and the modified scope of the rule as applied to motor vehicle waste disposal wells in sensitive ground water areas, the number of wells estimated to be affected by the rule has changed relative to EPA's estimates for the proposed rule. The number of affected large-capacity cesspools is now estimated at 2,723 (compared to 55 estimated for the proposed rule). The number of affected motor vehicle wells is now estimated at to range from 3,035 to 9,903 (compared to 7,045 estimated for the proposed rule). This range is based on the amount of land area that States may delineate as sensitive.

2. Phase-in Assumptions

The Economic Analysis has been revised to more realistically model when the rule will take effect. This is important primarily due to one aspect of how the final rule differs relative to the proposed rule. Specifically, with regard to motor vehicle wells, the final rule applies not only to wells in ground water protection areas (as did the proposed rule), but also to wells in sensitive ground water areas. However, the rule requires wells in ground water protection areas to come into compliance with the rule no later than 2004, whereas motor vehicle wells in sensitive ground water areas must come into compliance over a slightly longer period (by 2007). Moreover, even for large-capacity cesspools and for motor vehicle wells in ground water protection areas, it is unrealistic to assume that all wells will come into compliance in the same year.

To accurately evaluate the costs of the rule, the Economic Analysis has been revised to recognize the different time periods over which wells are expected to come into compliance. For motor vehicle wells in ground water protection areas, this period is 2001–2004. For motor vehicle wells in sensitive ground water areas, this period is 2004–2007. For large-capacity cesspools, this period is 2001–2005.

3. Higher Closure Costs

EPA has increased the estimated well closure costs associated with the final rule based on data obtained from several sources following the publication of the proposed Class V rule (63 FR 40586, July 29, 1998). Specifically, EPA obtained additional well closure cost data from EPA Region II, as well as cost data submitted by the Penske Truck Leasing Company (Penske). Each of these sources was discussed in the NODA of May 21, 1999. EPA also considered the cost data submitted by the American Trucking Association (ATA) during the public comment period for the proposed rule.

- *EPA Region II Data.* EPA obtained well closure cost data from EPA Region II during a staff visit in March 1999 to review case files on Class V wells. This visit provided additional information on Class V motor vehicle wells found within the State of New York. Among the information obtained were a limited number of detailed cost breakdowns used as cost data references for the revised economic analysis.
- *Penske Truck Leasing Company (Penske).* The Penske data included closure cost information for seven Class V well closures, as well as a summary of closure costs for fifteen wells closed by Penske. EPA used two of the seven well closure reports that provided an itemized list of well closure costs. In addition, the EPA used the general summary sheet to obtain information on the costs associated with various alternative motor vehicle wastewater management strategies. The Penske information reflected, in particular, the costs of well closure activities at larger truck maintenance and washing facilities, rather than smaller automobile service facilities.
- *American Trucking Association (ATA).* During the public comment period on the proposed rule, the ATA submitted a set of comments presenting a variety of actual well closure costs and approximate cost ranges (*e.g.,* minimum and maximum costs). The appendices included summaries with non-itemized closure costs for 24 different motor vehicle facilities (including some of the same facilities described in the Penske data) as well as other summaries presenting partially-itemized closure costs and costs associated with alternative wastewater disposal strategies (*e.g.,* connection to a sanitary sewer). Most of the well closure cost data provided by the ATA were aggregated in a manner that made it difficult to determine costs for specific well closure activities. Consequently, EPA relied primarily on certain

summary sheets included in the appendices.

EPA compared these data to the costs used in the economic analysis for the proposed rule. Specific cost elements (*e.g.,* soil waste disposal fees) used in the 1998 economic analysis were compared to the corresponding cost elements found in cost data from the three sources. Average costs were used when various cost estimates were available. Some cost elements could not be compared to cost elements reported in other sources (ATA, Penske, EPA Region II) because the other sources presented only aggregated costs or they categorized costs in a different manner.

As part of the comparison, EPA also considered the scope and context of the new data. For example, larger facilities that perform truck maintenance and truck washing may generate a larger amount of wastewater, with different wastewater constituents, than most smaller automobile service facilities; therefore, the facilities might have a larger or different type of Class V well. In addition, more extensive contamination might occur at such sites, requiring more extensive well closure activities which in turn led to higher well closure costs. Well closures and clean ups performed voluntarily by the facility owner (*e.g.,* to obtain an optional no-liability verification letter from the State environmental authority) or as a result of a notice of violation or EPA Administrative Order could be more extensive than would be required by the new Class V rule.

EPA's cost comparison and analysis of the new data indicated that EPA's closure cost estimates in the proposal were generally reasonable or even overestimated the cost of some activities. However, the comparison also revealed that EPA had underestimated the fees that contractors, consultants, and/or engineers would charge for their well closure services. Specifically, EPA's prior estimates did not take into account the fact that motor vehicle facilities sometimes hire consultants and/or engineers to lead the well closure efforts. EPA therefore increased the estimate for the average cost of closing a motor vehicle waste disposal well to account for hiring consultants and engineers. However, because the rule does not require a facility to hire a consultant or engineer to close a well, EPA estimates that only 10 percent of the motor vehicle facilities will do so. The new estimates therefore reflect a prorated average cost of hiring consultants and/or engineers. EPA has concluded that no other adjustments to the unit costs used in the economic analysis are necessary.

B. National Cost of the Rule

The Agency estimates the total annual cost of the rule ranges from $18.1 million to $40.3 million. This estimate assumes that all large-capacity cesspools will be affected by the rule, but that only those motor vehicle wells located in ground water protection areas or sensitive ground water areas will be affected. This assumption is consistent with EPA's belief that all States will complete their assessments of ground water protection areas by January 2004 and will delineate sensitive ground water areas by January 2004. In the event that a State fails to delineate ground water protection areas, or elects not to delineate sensitive ground water areas, then the provisions of the rule would apply to all motor vehicle wells in the State permanently. However, the Agency believes it unlikely that the rule will be applied to motor vehicles State-wide in any State because most State Drinking Water Assessment Programs will be approved by EPA by the end of the year and all States appear to be on track to meet the milestones established in the new Class V requirements for ground water protection areas. Further, States can receive a one year extension if they are making reasonable progress in completing assessments for ground water protection areas.

C. Facility Impacts

The final rule results in an estimated average annual cost per facility to owners/operators of motor vehicle waste disposal wells of between $4,450 and $11,000 depending on the waste streams generated by the facility. The estimated average annual cost per facility to owner/operators of large-capacity cesspools is $3,626. These per facility costs are amortized over 20 years at a discount rate of 7 percent.

EPA estimates that companies in at least 18 SIC codes will be affected by the final rule. EPA estimates the total number of facilities affected by the rule to be 5,300 for motor vehicle wells and 2700 for large-capacity cesspools. Approximately 98 percent of the affected facilities are classified as small businesses under the Small Business Administration regulations. See Section VI.D for a discussion of impacts to small businesses. For the final rule, EPA estimates that 2,600 of the entities (or 50 percent the total businesses affected) will have to incur a cost of greater than one percent of sales to comply with the proposed rule. An estimated 945 businesses will incur costs greater than three percent of sales under the final rule. The cost per facility includes the full cost owners and operators would incur to implement BMPs such as recycling and waste reduction. A recent survey of motor vehicle related facilities indicated that a majority of facilities are already implementing some BMPs. Therefore, EPA believes that the number of facilities affected at greater that three percent of sales might be overestimated.

The rule also affects about 380 small government entities. EPA did not estimate the total number of governments that are affected by the final rule. Governments are expected to incur a cost of less than one percent of their net revenue.

VI. Effect on States With Primacy

According to regulations at 40 CFR 145.32, Primacy States would have 270 days from the effective date of the final rule to submit to EPA documents demonstrating that proper legal authority and regulations exist to administer and enforce the new requirements for Class V cesspools and motor vehicle waste disposal wells. Depending on the existing State program and authorities, these documents could include a modified program description that outlines the structure, coverage, and processes of the State's Class V UIC program. Revisions to State UIC Programs needed to incorporate the new requirements will be subject to public notice and comment requirements.

Reasonable efforts by States to implement and enforce the new requirements as part of their ongoing programs should not be overly burdensome, because the new requirements are primarily directed toward well owners/operators, not UIC program authorities. For example, the ban on new motor vehicle waste disposal wells is self-implementing by owners or operators, with no new reporting, inspection, or other administrative requirements for Primacy States. However, there may be an increased burden on States that choose to use the waiver option for existing motor vehicle wells to review the permit application and appropriate conditions for each facility or facilities wishing to keep its motor vehicle waste disposal well open. Based on this review, States have to either deny the application or develop and enforce permit requirements to make sure the well does not endanger USDWs. Secondly, Primacy States may delineate other sensitive ground water areas or choose to implement the rule statewide. States will submit a plan to the EPA with their primacy program revision. The plan will outline how they intend to conduct the delineations.

VII. Administrative Requirements

A. Executive Order 12866

Under Executive Order 12866, [58 FR 51,735 (October 4, 1993)] the Agency must determine whether the regulatory action is ''significant'' and therefore subject to OMB review and the requirements of the Executive Order. The Order defines ''significant regulatory action'' as one that is likely to result in a rule that may: (1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a ''significant regulatory action.'' As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations are documented in the public record.

B. Children's Health Protection and Executive Order 13045

Executive Order 13045, entitled ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to the Executive Order because it is not economically significant according to the criteria for economic significance in E.O. 12866. Further, the Agency does not have reason to believe the rule concerns environmental health or safety risks that may have a disproportionate affect on children. The environmental health and safety issues addressed by this rule are the protection of public drinking water sources used by all sectors of the population.

C. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in this rule under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) and has assigned OMB control number 2040–0214.

Several types of information will be collected under the rule. Owners and operators of large-capacity cesspools (which are banned under today's rule) will be required to submit a pre-closure notification to the State or EPA indicating their intention to close their large-capacity cesspool. Similarly, some owners and operators of Class V motor vehicle waste disposal wells located within a ground water protection areas or State-delineated sensitive ground water areas will close and must also submit a pre-closure notification. The pre-closure notifications will enable EPA and States to ensure that wells are closed properly.

Other motor vehicle well owners and operators that receive waivers will be required to obtain a permit and to meet the monitoring requirements as specified in the permit. While EPA has not specified the frequency of monitoring, for the purposes of the ICR, annual sludge monitoring and quarterly injectate monitoring for the first three years after the permit is received and annual monitoring thereafter was assumed in order to calculate information collection costs. The permit application and monitoring reports will enable the States and EPA to evaluate whether continued operation of the well will pose an unacceptable threat to ground water.

At the State level, primacy States will need to prepare revised primacy applications to demonstrate their readiness to implement the rule. Also, States and EPA (for direct implementation States), are likely to delineate sensitive ground water areas within their State including karst, fractured bedrock, shallow unconsolidated aquifers, and sole source aquifers. This process will entail preparing a plan outlining the proposed methods for delineation that will be submitted with the States primacy program revision. The delineations will enable States and EPA to determine which motor vehicle waste disposal wells are affected by today's final rule.

EPA believes the information discussed above is essential to protecting each State's ground water drinking supplies. EPA uses information on all classes of injection wells, including Class V wells, to track the performance of the UIC Program toward meeting its goal of protecting USDWs from potential threats due to injected wastes. Responses to the request for information will be mandatory in accordance with provisions in 40 CFR 144.83 (Underground Injection Control). Pre-closure notifications allow UIC Programs to track the success of the Program in closing those wells that pose the greatest threat to USDWs. The Agency uses the information supplied in permit applications to track the location and numbers of Class V wells. Monitoring data provide information on the types of wastes injected and will be used to determine whether or not injection should be allowed to continue and under what conditions. State Drinking Water Source Assessment and Protection Programs may use information on permitted or closed Class V injection wells if they choose to update their contaminant source inventories.

Any Class V injection well operator may request that information submitted be kept confidential, as provided in 40 CFR 144.5 (Confidentiality of Information). All confidential information is treated in accordance with the provisions of 40 CFR part 2 (Public Information). Respondents to the information collection requirements may claim confidentiality by stamping the words ''confidential business information'' on each page containing such information. However, the Agency will not consider the following information confidential:

- The name and address of any facility with a Class V waste disposal well.
- Information regarding the existence, absence, or level of contaminants in drinking water.

If no claim of confidentiality is made at the time of submission, EPA may make the information available to the public without further notice.

EPA has estimated the burden associated with the specific record keeping and reporting requirements (summarized above) of the rule in an accompanying Information Collection Request (ICR). Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and

disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

The ICR estimates the hourly burden and cost to owners and operators of affected Class V wells for complying with the requirements. EPA estimates that, over the three years covered by the information collection request, the number of owners and operators of Class V injection wells responding to the information collection request will be 1,463. The average annual hours per response for notification of well closure is 4.5 hours at a cost of $115 for large-capacity cesspools and 7 hours at a cost of $621 for motor vehicle waste disposal wells. The notification is a one time only requirement. There are no operation and maintenance costs associated with well closure. For owners and operators of motor vehicle waste disposal wells who seek a waiver and obtain a permit, the average annual hours per permit application is 58 hours at a cost of $1,358. The costs for quarterly injectate monitoring and annual sludge monitoring, and annual reporting is $2,057 per facility per year.

Over the three years covered by the ICR, a total of 1,192 Class V wells (including motor vehicle waste disposal wells and large-capacity cesspools) may be closed. In addition, 271 operators of motor vehicle waste disposal wells are expected to seek a waiver from the ban and apply for permits requiring them to monitor their injectate and sludge.

The total respondent burden associated for the 3-year period is estimated to be 63,024 hours (an average of 21,008 hours per year), and the present value cost will be $2,680,674 (an average of $954,075 per year). The average annual burden per owner/operator is 75.5 hours; the cost per response is $5,203. The average annual burden per State is 984 hours; their cost per response is $26,143.

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15. EPA is amending the table in Part 9 of currently approved ICR control numbers issued by OMB for various regulations to list the information requirements contained in this final rule.

D. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's rule on small entities, a small entity is defined as: (1) A small business based on the definition of small business found in the Small Business Act (SBA); (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

In accordance with section 603 of the RFA, EPA prepared an initial regulatory flexibility analysis (IRFA) for the proposed rule and convened a Small Business Advocacy Review Panel to obtain advice and recommendations of representatives of the regulated small entities in accordance with section 609(b) of the RFA (see 63 FR 40586). A detailed discussion of the Panel's advice and recommendations is found in the Panel Report (W–98–05 A). A summary of the Panel's recommendations is presented at 63 FR 40590.

As required by section 604 of the RFA, EPA also prepared a final regulatory flexibility analysis (FRFA) for today's final rule. The FRFA addresses the issues raised by public comments on the IRFA, which was part of the proposal of this rule. The FRFA is available for review in the docket and is summarized below.

The final rule adds new requirements for two categories of endangering Class V wells to ensure protection of underground sources of drinking water. In particular, it affects the owners and operators of existing motor vehicle waste disposal wells in ground water protection areas and other sensitive ground water areas and owners and operators of new motor vehicle waste disposal wells and large-capacity cesspools nationwide (both types of Class V wells are discussed in the FRFA). As discussed in Section V.B, EPA estimates that approximately 5,300 motor vehicle wells and approximately 2,700 cesspools would be subject to the final rule.

EPA's analysis to determine the impacts on small businesses uses the same methodology as the economic analysis for all businesses, as discussed in Section V, except the SBA size thresholds for small businesses were used to determine the number of small businesses affected. The SBA size thresholds were used in conjunction with 1992 census data to determine the percentage of small businesses in each of the 18 SIC categories believed to have affected wells. Approximately 4,800 small businesses and 380 small governments are affected by the motor vehicle well provisions of the final rule. EPA has limited data on the type of entities that use large-capacity cesspools and therefore has not estimated the number of small entities affected. EPA did not receive any public comment on the initial regulatory flexibility analysis.

The rule bans existing motor vehicle waste disposal wells in ground water protection areas and other sensitive ground water areas, but allows them to continue to operate if they seek a waiver from the ban and obtain a permit. The final rule also bans new motor vehicle waste disposal wells and new and existing large-capacity cesspools nationwide. EPA estimates that about 50 percent of the affected small entities may incur costs for closure or obtaining a permit that represent more than 1 percent of their sales (or revenue for small governments). EPA estimates that about 18 percent of the affected small entities may incur costs that represent more than 3 percent of their sales (or revenue for small governments). Based on these estimates, EPA has determined that the final rule might have a significant economic impact on a substantial number of small entities.

To reduce the impact of the final rule on small entities, EPA has attempted to keep permitting, reporting, and other administrative requirements to a minimum to provide regulatory relief to small entities while protecting drinking water supplies. In fact, the final rule incorporates many of the consensus recommendations offered by the Small Business Advocacy Review Panel that was convened by EPA to obtain advice and recommendations from representatives of affected small entities in accordance with Section 609(b) of the Act. In particular, the Panel recommended that the rule offer alternatives to the ban of Class V motor vehicle waste disposal wells. Therefore, the final rule allows owners/operators of existing motor vehicle waste disposal wells to seek a waiver from the ban and

obtain a permit. EPA also adopted the Panel recommendations that UIC Program Directors be allowed to extend the time to comply with the new requirements from 90 days to up to a year in certain situations. The final rule allows owners and operators one year to comply with the new requirements, and allows the UIC Program Director to extend the deadline for up to an additional year if necessary to install treatment or hook up to a sewer system.

In the proposed rule, one option and one alternative were proposed for existing motor vehicle waste disposal wells: a ban; and rule authorization with additional requirements. The ban was not selected because, while it would offer the greatest protection to USDWs, the Agency recognized that there are some facilities that might be able to meet MCLs at the point of injection and could therefore seek a waiver from the ban and obtain a permit that allows them to continue using their well without endangering USDWs. The Agency did not choose the rule authorization option because it would not insure adequate protection of USDWs.

Other changes made in response to Panel recommendations include the following: The preamble clarifies that Class V wells at motor vehicle service facilities may not be subject to the rule if motor vehicle waste fluids are prevented from entering the well; the supporting economic analysis has been revised to acknowledge and account for the cleanup requirements that may be triggered by the rule to close certain Class V wells and to account for the likely overlap between areas where Class V wells are located and source water protection areas; owners and operators of existing motor vehicle waste disposal well can take steps to convert their well to another Class V well type; and the regulatory language has been expanded to identify ways in which well owners or operators can learn whether they are in a source water protection area.

EPA is requiring owner/operators of large-capacity cesspools and facilities with motor vehicle waste disposal wells that will close their well as a result of the rule to submit a single notification of their intent to close their wells. The collection of the pre-closure notification is necessary to track high-priority closures. Some motor vehicle waste disposal wells may choose to remain in operation based on a one-time waiver application from the ban to obtain a permit. The ICR assumes that States may require as a permit condition the collection of quarterly injectate monitoring and annual sludge monitoring data during the first three years, in order to provide information for owners and operators and the State on the injection of potentially threatening wastes. Individual States will determine whether less frequent collection may be appropriate for wells in their States. The majority of the information collection, reporting and recordkeeping required by this rule can be done by technical and clerical staff.

As required by section 212 of SBREFA, EPA also is preparing a small entity compliance guide to help small entities comply with this rule. Small entities can obtain a copy of the compliance guide by contacting the Safe Drinking Water Hotline at (800) 426–4791, their State or EPA Regional UIC Director or the EPA website (http://www.epa.gov/ogwdw/). The small entity compliance guide will be available in April 2000.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.'' Under Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law unless the Agency consults with State and local officials early in the process of developing the proposed regulation.

If EPA complies by consulting, Executive Order 13132 requires EPA to provide to the Office of Management and Budget (OMB), in a separately identified section of the preamble to the rule, a federalism summary impact statement (FSIS). The FSIS must include a description of the extent of EPA's prior consultation with State and local officials, a summary of the nature of their concerns and the agency's position supporting the need to issue the regulation, and a statement of the extent to which the concerns of State and local officials have been met. Also, effective November 2, 1999, when EPA transmits a draft final rule with federalism implications to OMB for review pursuant to Executive Order 12866, EPA must include a certification from the agency's Federalism Official stating that EPA has met the requirements of Executive Order 13132 in a meaningful and timely manner.

This final rule will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. Thus, the requirements of section 6 of the Executive Order do not apply to this rule. This rule establishes requirements for owners and operators of certain Class V UIC wells. There will also be some costs to the implementing agency to administer this rule, however, EPA does not believe the incremental cost to administer the new requirements in the rule will be substantial. States and local governments may own or operate a well subject to this rule. However, the number of wells owned by States and local governments are limited and therefore there will not be substantial direct effects.

Although section 6 of Executive Order 13132 does not apply to this rule, EPA did consult with State and local officials throughout the development of this rule. EPA consulted with States during numerous Ground Water Protection Council meetings, stakeholder meetings held prior to rule proposal (63 FR 40590), and the National Drinking Water Advisory Council UIC/ Source Water working group meetings. States primarily were concerned with a provision in the proposed rule stated the requirements would applied statewide if States failed to complete their Drinking Water Source Assessment and Protection Programs. The final rule allows States to apply to EPA for up to a one year extension for to complete their assessments (and sensitive ground water area delineations) if they have made reasonable progress. State comments on the proposed rule are addressed in the response to comment document.

F. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not

required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments ''to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities.''

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments because there are ten documented wells on tribal lands, and the majority of those are owned by private businesses not by Tribal governments. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule. However, EPA did conduct outreach to Indian tribal governments during the comment period for the proposed rule. EPA Regions distributed information to tribal representatives through; presentations at water association meetings; distributing the proposed rule to Indian health services; direct mailings and notifying national tribal organizations.

G. Unfunded Mandates

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements. EPA consulted with State and local governments, as described in section VI.E. and tribes as discussed in section VI.F.

EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector in any one year. Specifically, the annualized costs of this rule to the regulated community are estimated to range from $18.1 million to $40.3 million. The annualized cost estimates for State governments are $254,000. Thus, today's rule is not subject to the requirements of section 202 and 205 of the UMRA.

EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small local governments. Because EPA estimates that any small local government entities affected by this final rule will incur a cost of less than one percent of their net revenue, EPA has determined that this rule contains no regulatory requirements that might significantly or uniquely affect small local governments.

H. National Technology Transfer and Advancement Act

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995 (''NTTAA''), Pubic Law No. 104–113 section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.,* materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

As explained in the proposal, this rule does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards, and no commentor suggested otherwise or suggested any application.

I. Environmental Justice

Pursuant to Executive Order 12898 (59 FR 7629, February 16, 1994), the Agency has considered environmental justice related issues with regard to the potential impacts of this action on the environmental and health conditions in low-income and minority communities. The Agency believes that today's rule provides equal public health protection to communities irrespective of their socio-economic condition and demographic make-up.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2). This rule will be effective April 5, 2000.

List of Subjects

40 CFR Part 9

Environmental protection, Reporting and recordkeeping requirements.

40 CFR Part 144

Administrative practice and procedure, Hazardous waste, Indians-lands, Water supply.

40 CFR Part 145

Confidential buisness information, Indians-lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Water supply.

40 CFR Part 146

Hazardous waste, Indians-lands, Reporting and recordkeeping requirements, Water supply.

Dated: November 23, 1999.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, title 40, chapter I of the Code of Federal Regulations is amended as follows:

PART 9—AMENDED

1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135 et seq., 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 et seq., 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 et seq., 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

2. In § 9.1 the table is amended under the indicated heading by adding new entries in numerical order to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control No.
* * * * *	
Underground Injection Control Program	
* * * * *	
144.79–144.89	2040–0214
* * * * *	
145.23	2040–0214
* * * * *	

PART 144—UNDERGROUND INJECTION CONTROL PROGRAM

3. The authority citation for part 144 continues to read as follows:

Authority: Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*; Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq.*

4. Section 144.1 is amended by adding a new paragraph (f)(1)(vii), revising paragraphs (g)(1) introductory text, (g)(1)(iii), and (g)(2)(v) to read as follows:

§ 144.1 Purpose and scope of part 144.

* * * * *

(f) * * *

(1) * * *

(vii) Subpart G of this part sets forth requirements for owners and operators of Class V injection wells.

* * * * *

(g) * * *

(1) *Specific inclusions.* The following wells are included among those types of injection activities which are covered by the UIC regulations. (This list is not intended to be exclusive but is for clarification only.)

* * * * *

(iii) Any well used by generators of hazardous waste, or by owners or operators of hazardous waste management facilities, to dispose of fluids containing hazardous waste. This includes the disposal of hazardous waste into what would otherwise be septic systems and cesspools, regardless of their capacity.

(2) * * *

(v) Any dug hole, drilled hole, or bored shaft which is not used for the subsurface emplacement of fluids.

* * * * *

5. Section 144.3 is amended by adding new definitions in alphabetical order for ''Cesspool,'' ''Drywell,'' ''Improved sinkhole,'' ''Point of injection, '' ''Sanitary waste,'' ''Septic system,'' and ''Subsurface fluid distribution system,'' and by revising the definitions of ''Well'' and ''Well injection'' to read as follows:

§ 144.3 Definitions.

* * * * *

Cesspool means a ''drywell'' that receives untreated sanitary waste containing human excreta, and which sometimes has an open bottom and/or perforated sides.

* * * * *

Drywell means a well, other than an improved sinkhole or subsurface fluid distribution system, completed above the water table so that its bottom and sides are typically dry except when receiving fluids.

* * * * *

Improved sinkhole means a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface.

* * * * *

Point of injection means the last accessible sampling point prior to waste fluids being released into the subsurface environment through a Class V injection well. For example, the point of injection of a Class V septic system might be the distribution box—the last accessible sampling point before the waste fluids drain into the underlying soils. For a dry well, it is likely to be the well bore itself.

* * * * *

Sanitary waste means liquid or solid wastes originating solely from humans and human activities, such as wastes collected from toilets, showers, wash basins, sinks used for cleaning domestic areas, sinks used for food preparation, clothes washing operations, and sinks or washing machines where food and beverage serving dishes, glasses, and utensils are cleaned. Sources of these wastes may include single or multiple residences, hotels and motels, restaurants, bunkhouses, schools, ranger stations, crew quarters, guard stations, campgrounds, picnic grounds, day-use recreation areas, other commercial facilities, and industrial facilities provided the waste is not mixed with industrial waste.

* * * * *

Septic system means a ''well'' that is used to emplace sanitary waste below the surface and is typically comprised of a septic tank and subsurface fluid distribution system or disposal system.

* * * * *

Subsurface fluid distribution system means an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground.

* * * * *

Well means: A bored, drilled, or driven shaft whose depth is greater than the largest surface dimension; or, a dug hole whose depth is greater than the largest surface dimension; or, an improved sinkhole; or, a subsurface fluid distribution system.

Well injection means the subsurface emplacement of fluids through a well.

6. Section 144.6 is amended by adding a new paragraph (a)(3) and revising paragraph (e) to read as follows:

§ 144.6 Classification of wells.

(a) * * *

(3) Radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within one quarter mile of the well bore.

* * * * *

(e) Class V. Injection wells not included in Class I, II, III, or IV. Specific types of Class V injection wells are described in § 144.81.

7. Section 144.23 is amended by adding a new paragraph (c) to read as follows:

§ 144.23 Class IV Wells

* * * * *

(c) Notwithstanding the requirements of paragraphs (a) and (b) of this section, injection wells used to inject contaminated ground water that has been treated and is being injected into the same formation from which it was drawn are authorized by rule for the life of the well if such subsurface emplacement of fluids is approved by EPA, or a State, pursuant to provisions for cleanup of releases under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. 9601–9675, or pursuant to requirements and provisions under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901–6992k.

8. Section 144.24 is amended by revising paragraph (a) to read as follows:

§ 144.24 Class V wells.

(a) A Class V injection well is authorized by rule, subject to the conditions in § 144.84

* * * * *

9. Section 144.26 is amended by revising paragraph (b)(1)(iii)(B) and removing paragraph (e).

§ 144.26 Inventory Requirements.

* * * * *

(b) * * *

(1) * * *

(iii) * * *

(B) Radioactive waste disposal wells that are not Class I wells (40 CFR 146.5 (e)(11))

* * * * *

10. Subpart G is added to read as follows:

Subpart G—Requirements for Owners and Operators of Class V Injection Wells

Sec.

144.79 General.

Definition of Class V Injection Wells

144.80 What is a Class V injection well?
144.81 Does this subpart apply to me?

Requirements for All Class V Injection Wells

144.82 What must I do to protect underground sources of drinking water?
144.83 Do I need to notify anyone about my Class V injection well?
144.84 Do I need to get a permit?

Additional Requirements for Class V Large-Capacity Cesspools and Motor Vehicle Waste Disposal Wells

144.85 Do these additional requirements apply to me?
144.86 What are the definitions I need to know?
144.87 How does the identification of ground water protection areas and other sensitive areas affect me?
144.88 What are the additional requirements?
144.89 How do I close my Class V injection well?

Subpart G—Requirements for Owners and Operators of Class V Injection Wells

§ 144.79 General.

This subpart tells you what requirements apply if you own or operate a Class V injection well. You may also be required to follow additional requirements listed in the rest of this part. Where they may apply, these other requirements are referenced rather than repeated. The requirements described in this subpart and elsewhere in this part are to protect underground sources of drinking water and are part of the Underground Injection Control (UIC) Program established under the Safe Drinking Water Act. This subpart is written in a special format to make it easier to understand the regulatory requirements. Like other EPA regulations, it establishes enforceable legal requirements.

Definition of Class V Injection Wells

§ 144.80 What is a Class V injection well?

As described in § 144.6, injection wells are classified as follows:

(a) *Class I.* (1) Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to inject hazardous waste beneath the lowermost formation containing, within one-quarter mile of the well bore, an underground source of drinking water.

(2) Other industrial and municipal disposal wells which inject fluids beneath the lowermost formation containing, within one quarter mile of the well bore, an underground source of drinking water;

(3) Radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within one quarter mile of the well bore.

(b) *Class II.* Wells which inject fluids:

(1) Which are brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection.

(2) For enhanced recovery of oil or natural gas; and

(3) For storage of hydrocarbons which are liquid at standard temperature and pressure.

(c) *Class III.* Wells which inject fluids for extraction of minerals including:

(1) Mining of sulfur by the Frasch process;

(2) *In situ* production of uranium or other metals; this category includes only in situ production from ore bodies which have not been conventionally mined. Solution mining of conventional mines such as stopes leaching is included in Class V.

(3) Solution mining of salts or potash.

(d) *Class IV.* (1) Wells used by generators of hazardous waste or of radioactive waste, by owners and operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste into a formation which within one quarter (¼) mile of the well contains an underground source of drinking water.

(2) Wells used by generators of hazardous waste or of radioactive waste, by owners and operators of hazardous waste management facilities, or by owners or operators of radioactive waste disposal sites to dispose of hazardous waste or radioactive waste above a formation which within one quarter (¼) mile of the well contains an underground source of drinking water.

(3) Wells used by generators of hazardous waste or owners or operators of hazardous waste management facilities to dispose of hazardous waste, which cannot be classified under paragraph (a)(1) or (d)(1) and (2) of this section (e.g., wells used to dispose of hazardous waste into or above a formation which contains an aquifer which has been exempted pursuant to 40 CFR 146.04).

(e) *Class V.* Injection wells not included in Class I, II, III or IV. Typically, Class V wells are shallow wells used to place a variety of fluids directly below the land surface. However, if the fluids you place in the ground qualify as a hazardous waste under the Resource Conservation and Recovery Act (RCRA), your well is either a Class I or Class IV well, not a Class V well. Examples of Class V wells are described in § 144.81.

§ 144.81 Does this subpart apply to me?

This subpart applies to you if you own or operate a Class V well, for example:

(1) Air conditioning return flow wells used to return to the supply aquifer the water used for heating or cooling in a heat pump;

(2) Large capacity cesspools including multiple dwelling, community or regional cesspools, or other devices that receive sanitary wastes, containing human excreta, which have an open bottom and sometimes perforated sides. The UIC requirements do not apply to single family residential cesspools nor to non-residential cesspools which receive solely sanitary waste and have the capacity to serve fewer than 20 persons a day.

(3) Cooling water return flow wells used to inject water previously used for cooling;

(4) Drainage wells used to drain surface fluids, primarily storm runoff, into a subsurface formation;

(5) Dry wells used for the injection of wastes into a subsurface formation;

(6) Recharge wells used to replenish the water in an aquifer;

(7) Salt water intrusion barrier wells used to inject water into a fresh aquifer to prevent the intrusion of salt water into the fresh water;

(8) Sand backfill and other backfill wells used to inject a mixture of water and sand, mill tailings or other solids into mined out portions of subsurface mines whether what is injected is a radioactive waste or not.

(9) Septic system wells used to inject the waste or effluent from a multiple dwelling, business establishment, community or regional business establishment septic tank. The UIC requirements do not apply to single family residential septic system wells, nor to non-residential septic system wells which are used solely for the disposal of sanitary waste and have the capacity to serve fewer than 20 persons a day.

(10) Subsidence control wells (not used for the purpose of oil or natural gas production) used to inject fluids into a non-oil or gas producing zone to reduce or eliminate subsidence associated with the overdraft of fresh water;

(11) Injection wells associated with the recovery of geothermal energy for heating, aquaculture and production of electric power;

(12) Wells used for solution mining of conventional mines such as stopes leaching;

(13) Wells used to inject spent brine into the same formation from which it was withdrawn after extraction of halogens or their salts;

(14) Injection wells used in experimental technologies.

(15) Injection wells used for in situ recovery of lignite, coal, tar sands, and oil shale.

(16) Motor vehicle waste disposal wells that receive or have received fluids from vehicular repair or maintenance activities, such as an auto body repair shop, automotive repair shop, new and used car dealership, specialty repair shop (e.g., transmission and muffler repair shop), or any facility that does any vehicular repair work. Fluids disposed in these wells may contain organic and inorganic chemicals in concentrations that exceed the maximum contaminant levels (MCLs) established by the primary drinking water regulations (see 40 CFR part 142). These fluids also may include waste petroleum products and may contain contaminants, such as heavy metals and volatile organic compounds, which pose risks to human health.

Requirements for All Class V Injection Wells

§ 144.82 What must I do to protect underground sources of drinking water?

If you own or operate any type of Class V well, the regulations below require that you cannot allow movement of fluid into USDWs that might cause endangerment, you must comply with other Federal UIC requirements in 40 CFR parts 144 through 147, and you must comply with any other measures required by your State or EPA Regional Office UIC Program to protect USDWs, and you must properly close your well when you are through using it. You also must submit basic information about your well, as described in § 144.83.

(a) *Prohibition of fluid movement.* (1) As described in § 144.12(a), your injection activity cannot allow the movement of fluid containing any contaminant into USDWs, if the presence of that contaminant may cause a violation of the primary drinking water standards under 40 CFR part 141, other health based standards, or may otherwise adversely affect the health of persons. This prohibition applies to your well construction, operation, maintenance, conversion, plugging, closure, or any other injection activity.

(2) If the Director of the UIC Program in your State or EPA Region learns that your injection activity may endanger USDWs, he or she may require you to close your well, require you to get a permit, or require other actions listed in § 144.12(c), (d), or (e).

(b) *Closure requirements.* You must close the well in a manner that complies with the above prohibition of fluid movement. Also, you must dispose or otherwise manage any soil, gravel, sludge, liquids, or other materials removed from or adjacent to your well in accordance with all applicable Federal, State, and local regulations and requirements.

(c) *Other requirements in Parts 144 through 147.* Beyond this subpart, you are subject to other UIC Program requirements in 40 CFR parts 144 through 147. While most of the relevant requirements are repeated or referenced in this subpart for convenience, you need to read these other parts to understand the entire UIC Program.

(d) *Other State or EPA requirements.* 40 CFR parts 144 through 147 define minimum Federal UIC requirements. EPA Regional Offices administering the UIC Program have the flexibility to establish additional or more stringent requirements based on the authorities in parts 144 through 147, if believed to be necessary to protect USDWs. States can have their own authorities to establish additional or more stringent requirements if needed to protect USDWs. You must comply with these additional requirements, if any exist in your area. Contact the UIC Program Director in your State or EPA Region to learn more.

§ 144.83 Do I need to notify anyone about my Class V injection well?

Yes, you need to provide basic ''inventory information'' about your well to the UIC Director, if you haven't already. You also need to provide any additional information that your UIC Program Director requests in accordance with the provisions of the UIC regulations.

(a) *Inventory requirements.* Unless you know you have already satisfied the inventory requirements in § 144.26 that were in effect prior to the issuance of this Subpart G, you must give your UIC Program Director certain information about yourself and your injection operation.

Note: This information is requested on national form ''Inventory of Injection Wells,'' OMB No. 2040–0042.

(1) The requirements differ depending on your well status and location, as described in the following table:

If your well is . . .	And you're in one of these locations (''Primacy'' States, where the State runs the Class V UIC Program): Alabama, Arkansas, Commonwealth of Northern Mariana Islands, Connecticut, Delaware, Florida, Georgia, Guam, Idaho, Illinois, Kansas, Louisiana, Maine, Maryland, Massachusetts, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Puerto Rico, Rhode Island, South Carolina, Texas, Utah, Vermont, Washington, West Virginia, Wisconsin, or Wyoming	Or you're in one of these locations (''Direct Implementation'' or DI Programs, where EPA runs the Class V UIC Program): Alaska, American Samoa, Arizona, California, Colorado, Hawaii, Indiana, Iowa, Kentucky, Michigan, Minnesota, Montana, New York, Pennsylvania, South Dakota, Tennessee, Virginia, Virgin Islands, Washington, DC, or any Indian Country
(i) New (prior to construction of your well)	. . . then you must contact your State UIC Program to determine what you must submit and by when..	. . . then you must submit the inventory information described in (a)(2) of this section prior to constructing your well.
(ii) Existing (construction underway or completed).	. . . then you must contact your State UIC Program to determine what you must submit and by when..	. . . then you must cease injection and submit the inventory information. You may resume injection 90 days after you submit the information unless the UIC Program Director notifies you that injection may not resume or may resume sooner.

(2) If your well is in a Primacy State or a DI Program State, here is the information you must submit:

(i) No matter what type of Class V well you own or operate, you must submit at least the following information for each Class V well: facility name and location; name and address of legal contact; ownership of facility; nature and type of injection well(s); and operating status of injection well(s).

(ii) *Additional information.* If you are in a Direct Implementation State and you own or operate a well listed below you must also provide the information listed in paragraph (a) (2) (iii) as follows:

(A) Sand or other backfill wells (40 CFR 144.81(8) and 146.5(e)(8) of this chapter);

(B) Geothermal energy recovery wells (40 CFR 144.81(11) and 146.5 (e)(12) of this chapter);

(C) Brine return flow wells (40 CFR 144.81(13) and 146.5 (e)(14) of this chapter);

(D) Wells used in experimental technology (40 CFR 144.81(14) and 146.5 (e)(15) of this chapter);

(E) Municipal and industrial disposal wells other than Class I; and

(F) Any other Class V wells at the discretion of the Regional Administrator.

(iii) You must provide a list of all wells owned or operated along with the following information for each well. (A single description of wells at a single facility with substantially the same characteristics is acceptable).

(A) Location of each well or project given by Township, Range, Section, and Quarter-Section, or by latitude and longitude to the nearest second, according to the conventional practice in your State;

(B) Date of completion of each well;

(C) Identification and depth of the underground formation(s) into which each well is injecting;

(D) Total depth of each well;

(E) Construction narrative and schematic (both plan view and cross-sectional drawings);

(F) Nature of the injected fluids;

(G) Average and maximum injection pressure at the wellhead;

(H) Average and maximum injection rate; and

(I) Date of the last inspection.

(3) Regardless of whether your well is in a Primacy State or DI Program you are responsible for knowing about, understanding, and complying with these inventory requirements.

(b) *Information in response to requests.* If you are in one of the DI Programs listed in the table above, the UIC Program Director may require you to submit other information believed necessary to protect underground sources of drinking water.

(1) Such information requirements may include, but are not limited to:

(i) Perform ground water monitoring and periodically submit your monitoring results;

(ii) Analyze the fluids you inject and periodically submit the results of your analyses;

(iii) Describe the geologic layers through which and into which you are injecting; and

(iv) Conduct other analyses and submit other information, if needed to protect underground sources of drinking water.

(2) If the Director requires this other information, he or she will request it from you in writing, along with a brief statement on why the information is required. This written notification also will tell you when to submit the information.

(3) You are prohibited from using your injection well if you fail to comply with the written request within the time frame specified. You can start injecting again only if you receive a permit.

§ 144.84 Do I need to get a permit?

No, unless you fall within an exception described below:

(a) *General authorization by rule.* With certain exceptions listed in paragraph (b) of this section, your Class V injection activity is ''authorized by rule,'' meaning you have to comply with all the requirements of this subpart and the rest of the UIC Program but you don't have to get an individual permit. Well authorization expires once you have properly closed your well, as described in § 144.82(b).

(b) *Circumstances in Which Permits or other Actions are Required.* If you fit into one of the categories listed below, your Class V well is no longer authorized by rule. This means that you have to either get a permit or close your injection well. You can find out by contacting the UIC Program Director in your State or EPA Region if this is the case. Subpart D of this Part tells you how to apply for a permit and describes other aspects of the permitting process. Subpart E of this Part outlines some of the requirements that apply to you if you get a permit.

(1) You fail to comply with the prohibition of fluid movement standard in § 144.12(a) and described in § 144.82(a) (in which case, you have to get a permit, close your well, and/or comply with other conditions

determined by the UIC Program Director in your State or EPA Region);

(2) You own or operate a Class V large-capacity cesspool (in which case, you must close your well as specified in the additional requirements below) or a Class V motor vehicle waste disposal well in a ground water protection area or sensitive ground water area (in which case, you must either close your well or get a permit as specified in the additional requirements in this subsection). New motor vehicle waste disposal wells and new cesspools are prohibited as of April 5, 2000;

(3) You are specifically required by the UIC Program Director in your State or EPA Region to get a permit (in which case, rule authorization expires upon the effective date of the permit issued, or you are prohibited from injecting into your well upon:

(i) Failure to submit a permit application in a timely manner as specified in a notice from the Director; or

(ii) Upon the effective date of permit denial);

(4) You have failed to submit inventory information to your UIC Program Director, as described in § 144.83(a) (in which case, you are prohibited from injecting into your well until you comply with the inventory requirements); or

(5) If you are in a DI State and you received a request from your UIC Program Director for additional information under § 144.83(b), and have failed to comply with the request in a timely manner (in which case, you are prohibited from injecting into your well until you get a permit).

Additional Requirements for Class V Large-Capacity Cesspools and Motor Vehicle Waste Disposal Wells

§ 144.85 Do these additional requirements apply to me?

(a) *Large-Capacity Cesspools.* The additional requirements apply to all new and existing large-capacity cesspools regardless of their location. If you are using a septic system for these type of wastes you are not subject to the additional requirements in this subpart.

(b) *Motor Vehicle Waste Disposal Wells Existing on April 5, 2000.* If you have a Class V motor vehicle waste disposal well these requirements apply to you if your well is located in a ground water protection area or other sensitive ground water area that is identified by your State or EPA Region. If your State or EPA Region fails to identify ground water protection areas and/or other sensitive ground water areas these requirements apply to all Class V motor vehicle wells in the State.

(c) *New Motor Vehicle Waste Disposal Wells.* The additional requirements apply to all new motor vehicle waste disposal wells as of April 5, 2000.

§ 144.86 What are the definitions I need to know?

(a) *State Drinking Water Source Assessment and Protection Program.* This is a new approach to protecting drinking water sources, specified in the 1996 Amendments to the Safe Drinking Water Act at Section 1453. States must prepare and submit for EPA approval a program that sets out how States will conduct local assessments, including: delineating the boundaries of areas providing source waters for public water systems; identifying significant potential sources of contaminants in such areas; and determining the susceptibility of public water systems in the delineated areas to the inventoried sources of contamination.

(b) *Complete Local Source Water Assessment for Ground Water Protection Areas.* When EPA has approved a State's Drinking Water Source Assessment and Protection Program, States will begin to conduct local assessments for each public water system in their State. For the purposes of this rule, local assessments for community water systems and non-transient non-community systems are complete when four requirements are met: First, a State must delineate the boundaries of the assessment area for community and non-transient non-community water systems. Second, the State must identify significant potential sources of contamination in these delineated areas. Third, the State must ''determine the susceptibility of community and non-transient non-community water systems in the delineated area to such contaminants.'' Lastly, each State will develop its own plan for making the completed assessments available to the public.

(c) *Ground Water Protection Area.* A ground water protection area is a geographic area near and/or surrounding community and non-transient non-community water systems that use ground water as a source of drinking water. These areas receive priority for the protection of drinking water supplies and States are required to delineate and assess these areas under section 1453 of the Safe Drinking Water Act. The additional requirements in § 144.88 apply to you if your Class V motor vehicle waste disposal well is in a ground water protection area for either a community water system or a non-transient non-community water system, in many States, these areas will be the same as Wellhead Protection Areas that have been or will be delineated as defined in section 1428 of the SDWA.

(d) *Community Water System.* A community water system is a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

(e) *Non-transient Non-community Water System.* A public water system that is not a community water system and that regularly serves at least 25 of the same people over six months a year. These may include systems that provide water to schools, day care centers, government/military installations, manufacturers, hospitals or nursing homes, office buildings, and other facilities.

(f) *Delineation.* Once a State's Drinking Water Source Assessment and Protection Program is approved, the States will begin delineating their local assessment areas. Delineation is the first step in the assessment process in which the boundaries of ground water protection areas are identified.

(g) *Other Sensitive Ground Water Areas.* States may also identify other areas in the State in addition to ground water protection areas that are critical to protecting underground sources of drinking water from contamination. These other sensitive ground water areas may include areas such as areas overlying sole-source aquifers; highly productive aquifers supplying private wells; continuous and highly productive aquifers at points distant from public water supply wells; areas where water supply aquifers are recharged; karst aquifers that discharge to surface reservoirs serving as public water supplies; vulnerable or sensitive hydrogeologic settings, such as glacial outwash deposits, eolian sands, and fractured volcanic rock; and areas of special concern selected based on a combination of factors, such as hydrogeologic sensitivity, depth to ground water, significance as a drinking water source, and prevailing land-use practices.

§ 144.87 How does the identification of ground water protection areas and other sensitive ground water areas affect me?

(a) You are subject to these new requirements if you own or operate an existing motor vehicle well and you are located in a ground water protection area or an other sensitive ground water area. If your State or EPA Region fails to identify these areas within the specified time frames these requirements apply to all existing motor vehicle waste disposal wells within your State.

(b) *Ground Water Protection Areas.* (1) For the purpose of this subpart, States are required to complete all local source water assessments for ground water protection areas by January 1, 2004. Once a local assessment for a ground water protection area is complete every existing motor vehicle waste disposal well owner in that ground water protection area has one year to close the well or receive a permit. If a State fails to complete all local assessments for ground water protection areas by January 1, 2004, the following may occur:

(i) The new requirements in this subpart will apply to all existing motor vehicle waste disposal wells in the State and owners and operators of motor vehicle waste disposal wells located outside of completed assessments for ground water protection areas must close their well or receive a permit by January 1, 2005.

(ii) EPA may grant a State an extension for up to one year from the January 1, 2004 deadline if the State is making reasonable progress in completing the source water assessments for ground water protection areas. States must apply for the extension by June 1, 2003. If a State fails to complete the assessments for the remaining ground water protection areas by the extended date the rule requirements will apply to all motor vehicle waste disposal wells in the State and owners and operators of motor vehicle waste disposal wells located outside of ground water protection areas with completed assessments must close their well or receive a permit by January 1, 2006.

(2) The UIC Program Director may extend the compliance deadline for specific motor vehicle waste disposal wells for up to one year if the most efficient compliance option for the well is connection to a sanitary sewer or installation of new treatment technology.

(c) *Other Sensitive Ground Water Areas.* States may also delineate other sensitive ground water areas by January 1, 2004. Existing motor vehicle waste disposal well owners and operators within other sensitive ground water areas have until January 1, 2007 to receive a permit or close the well. If a State or EPA Region fails to identify these additional sensitive ground water areas by January 1, 2004, the new requirements of this rule will apply to all motor vehicle waste disposal wells in the State effective January 1, 2007 unless they are subject to a different compliance date pursuant to paragraph (b) of this section. Again, EPA may extend the January 1, 2004 deadline for up to one year for States to delineate other sensitive ground water areas if the State is making reasonable progress in identifying the sensitive areas. States must apply for this extension by June 1, 2003. If a State has been granted an extension, existing motor vehicle waste disposal well owners and operators within the sensitive ground water areas have until January 1, 2008 to close the well or receive a permit, unless they are subject to a different compliance date pursuant to paragraph (b) of this section. If a State has been granted an extension and fails to delineate sensitive areas by the extended date, the rule requirements will apply to all motor vehicle waste disposal wells in the State and owners and operators have until January 1, 2008 to close the well or receive a permit, unless they are subject to a different compliance date pursuant to paragraph (b) of this section.

(d) *How to Find Out if Your Well is in a Ground Water Protection Area or Sensitive Ground Water Area.* States are required to make their local source water assessments widely available to the public through a variety of methods after the assessments are complete. You can find out if your Class V well is in a ground water protection area by contacting the State agency responsible for the State Drinking Water Source Assessment and Protection Program in your area. You may call the Safe Drinking Water Hotline at 1–800–426–4791 to find out who to call in your State for this information. The State office responsible for implementing the Drinking Water Source Assessment and Protection Program makes the final and official determination of boundaries for ground water protection areas. Because States that choose to delineate other sensitive ground water areas are also required to make the information on these areas accessible to the public, they may do so in a manner similar to the process used by the States in publicizing the EPA approved Drinking Water Source Assessment and Protection Program. You can find out if your Class V well is in an other sensitive ground water area by contacting the State or Federal agency responsible for the Underground Injection Control Program. You may call the Safe Drinking Water Hotline at 1–800–426–4791 to find out who to call for information.

(e) *Changes in the Status of the EPA Approved State Drinking Water Source Assessment and Protection Program.* After January 1, 2004 your State may assess a ground water protection area for ground water supplying a new community water system or a new non-transient non-community water system that includes your Class V injection well. Also, your State may officially re-delineate the boundaries of a previously delineated ground water protection area to include additional areas that includes your motor vehicle waste disposal well. This would make the additional regulations apply to you if your motor vehicle waste disposal well is in such an area. The additional regulations start applying to you one year after the State completes the local assessment for the ground water protection area for the new drinking water system or the new re-delineated area. The UIC Program Director responsible for your area may extend this deadline for up to one year if the most efficient compliance option for the well is connection to a sanitary sewer or installation of new treatment technology.

(f) *What Happens if My State Doesn't Designate Other Sensitive Ground Water Areas?* If your State or EPA Region elects not to delineate the additional sensitive ground water areas, the additional regulations apply to you regardless of the location of your well by January 1, 2007, or January 2008 if an extension has been granted as explained in paragraph (c) of this section, except for wells in ground water protection areas which are subject to different compliance deadlines explained in paragraph (b) of this section.

(h) *Application of Requirements Outside of Ground Water Protection Areas and Sensitive Ground Water Areas.* EPA expects and strongly encourages States to use existing authorities in the UIC program to take whatever measures are needed to ensure Class V wells are not endangering USDWs in any other areas outside of delineated ground water protection areas and sensitive ground water areas. Such measures could include, if believed to be necessary by a UIC Program Director, applying the additional requirements below to other areas and/or other types of Class V wells. Therefore, the Director may apply the additional requirements to you, even if you are not located in the areas listed in paragraph (a) of this section.

§ 144.88 What are the additional requirements?

The additional requirements are specified in the following tables:

(a) TABLE 1.—ADDITIONAL REQUIREMENTS FOR LARGE-CAPACITY CESSPOOLS STATEWIDE

[See § 144.85 to determine if these additional requirements apply to you]

Well Status	Requirement	Deadline
If your cesspool is. . .	Then you. . .	By. . .
(1) Existing (operational or under construction by April 5, 2000).	(i) Must close the well	April 5, 2000.
	(ii) Must notify the UIC Program Director (both Primacy States and Direct Implementation States) of your intent to close the well.. Note: This information is requested on national form ''Preclosure Notification for Closure of Injection Wells,''.	At least 30 days prior to closure.
(2) New or converted (construction not started before April 5, 2000).	Are prohibited	April 5, 2000.

(b) TABLE 2.—ADDITIONAL REQUIREMENTS FOR MOTOR VEHICLE WASTE DISPOSAL WELLS

[See § 144.85 to determine if these additional requirements apply to you]

Well status	Requirement	Deadline
If your motor vehicle waste disposal well is	Then. . .	By. . .
(1) Existing (operational or under construction by April 5, 2000).	(i) If your well is in a ground water protection area, you must close the well or obtain a permit.	Within 1 year of the completion of your local source water assessment; your UIC Program Director may extend the closure deadline, but not the permit application deadline, for up to one year if the most efficient compliance option is connection to a sanitary sewer or installation of new treatment technology.
	(ii) If your well is in an other sensitive ground water area, you must close the well or obtain a permit.	By January 1, 2007; your UIC Program Director may extend the closure deadline, but not the permit application deadline, for up to one year if the most efficient compliance option is connection to a sanitary sewer or installation of new treatment technology.
	(iii) If you plan to seek a waiver from the ban and apply for a permit, you must meet MCLs at the point of injection while your permit application is under review, if you choose to keep operating your well.	The date you submit your permit application.
	(iv) If you receive a permit, you must comply with all permit conditions, if you choose to keep operating your well, including requirements to meet MCLs and other health based standards at the point of injection, follow best management practices, and monitor your injectate and sludge quality.	The date(s) specified in your permit.
	(v) If your well is in a State which has not completed all their local assessments by January 1, 2004 or by the extended date if your State has obtained an extension as described in 144.87, and you are outside an area with a completed assessment you must close the well or obtain a permit.	January 1, 2005 unless your State obtains an extension as described in 144.87 (b) in which case your deadline is January 1, 2006; your UIC Program Director may extend the closure deadline, but not the permit application deadline, for up to one year if the most efficient compliance option is connection to a sanitary sewer or installation of new treatment technology.
	(vi) If your well is in a State that has not delineated other sensitive ground water areas by January 1, 2004 and you are outside of an area with a completed assessment you must close the well or obtain a permit regardless of your location.	January 1, 2007 unless your State obtains an extension as described in 144.87(c) in which case your deadline is January 2008.

(B) TABLE 2.—ADDITIONAL REQUIREMENTS FOR MOTOR VEHICLE WASTE DISPOSAL WELLS—Continued

[See § 144.85 to determine if these additional requirements apply to you]

Well status	Requirement	Deadline
If your motor vehicle waste disposal well is	Then. . .	By. . .
	(vii) If you plan to close your well, you must notify the UIC Program Director of your intent to close the well (this includes closing your well prior to conversion). Note: This information is requested on national form ''Preclosure Notification for Closure of Injection Wells''.	At least 30 days prior to closure.
(2) New or converted (construction not started before April 5, 2000).	Are prohibited	April 5, 2000.

§ 144.89 How do I close my Class V injection well?

The following describes the requirements for closing your Class V injection well.

(a) *Closure.* Prior to closing a Class V large-capacity cesspool or motor vehicle waste disposal well, you must plug or otherwise close the well in a manner that complies with the prohibition of fluid movement standard in § 144.12 and summarized in § 144.82(a). If the UIC Program Director in your State or EPA Region has any additional or more specific closure standards, you have to meet those standards too. You also must dispose or otherwise manage any soil, gravel, sludge, liquids, or other materials removed from or adjacent to your well in accordance with all applicable Federal, State, and local regulations and requirements, as in § 144.82(b).

(2) Closure does not mean that you need to cease operations at your facility, only that you need to close your well. A number of alternatives are available for disposing of waste fluids. Examples of alternatives that may be available to motor vehicle stations include: recycling and reusing wastewater as much as possible; collecting and recycling petroleum-based fluids, coolants, and battery acids drained from vehicles; washing parts in a self-contained, recirculating solvent sink, with spent solvents being recovered and replaced by the supplier; using absorbents to clean up minor leaks and spills, and placing the used materials in approved waste containers and disposing of them properly; using a wet vacuum or mop to pick up accumulated rain or snow melt, and if allowed, connecting floor drains to a municipal sewer system or holding tank, and if allowed, disposing of the holding tank contents through a publicly owned treatment works. You should check with the publicly owned treatment works you might use to see if they would accept your wastes. Alternatives that may be available to owners and operators of a large-capacity cesspool include: conversion to a septic system; connection to sewer; and installation of an on-site treatment unit.

(b) *Conversions.* In limited cases, the UIC Director may authorize the conversion (reclassification) of a motor vehicle waste disposal well to another type of Class V well. Motor vehicle wells may only be converted if: all motor vehicle fluids are segregated by physical barriers and are not allowed to enter the well; and, injection of motor vehicle waste is unlikely based on a facility's compliance history and records showing proper waste disposal. The use of a semi-permanent plug as the means to segregate waste is not sufficient to convert a motor vehicle waste disposal well to another type of Class V well.

PART 145—STATE UIC PROGRAM REQUIREMENTS

11. The authority citation for part 145 continues to read as follows:

Authority: Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*

Subpart B—[Amended]

12. Section 145.11 is amended by adding paragraph (a)(32) and by revising the first sentence of paragraph (b)(1) to read as follows:

§ 145.11 Requirements for permitting.

(a) * * *

(32) Section 144.88—(What are the additional requirements?);

* * * * *

(b)(1) States need not implement provisions identical to the provisions listed in paragraphs (a)(1) through (a)(32) of this section. * * *

* * * * *

Subpart C—[Amended]

13. Section 145.23, is revised by adding paragraph (f)(12) to read as follows:

§ 145.23 Program description.

* * * * *

(f) * * *

(12) *For Class V programs only.* A description of and a schedule for the State's plan to identify and delineate other sensitive ground water areas. States should consider geologic and hydrogeologic settings, ground water flow and occurrence, topographic and geographic features, depth to ground water, significance as a drinking water source, prevailing land use practices and any other existing information relating to the susceptibility of ground water to contamination from Class V injection wells when developing their plan. Within the schedule for the plan, States must commit to: completing all delineations of other sensitive ground water areas by no later than Jan. 1, 2004; making these delineation available to the public; implementing the Class V regulations, effective April 5, 2000, in these delineated areas by no later than January 1, 2007. Alternately, if a State chooses not to identify other sensitive ground water areas, the requirements for motor vehicle waste disposal wells would apply statewide by January 1, 2007.

PART 146—UNDERGROUND INJECTION CONTROL PROGRAM: CRITERIA AND STANDARDS

14. The authority citation for part 146 continues to read as follows:

Authority: Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*; Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq.*

15. Section 146.3 is amended by adding the following new definitions in alphabetical order: ''Cesspool,'' ''Drywell,'' ''Improved sinkhole,'' ''Point

of injection,'' ''Sanitary waste,'' ''Septic system,'' and ''Subsurface fluid distribution system,'' and by revising the definitions of ''Well'' and ''Well injection'' to read as follows:

§ 146.3 Definitions.

* * * * *

Cesspool means a ''drywell'' that receives untreated sanitary waste containing human excreta, and which sometimes has an open bottom and/or perforated sides.

* * * * *

Drywell means a well, other than an improved sinkhole or subsurface fluid distribution system, completed above the water table so that its bottom and sides are typically dry except when receiving fluids.

* * * * *

Improved sinkhole means a naturally occurring karst depression or other natural crevice found in volcanic terrain and other geologic settings which have been modified by man for the purpose of directing and emplacing fluids into the subsurface.

* * * * *

Point of injection for Class V wells means the last accessible sampling point prior to waste fluids being released into the subsurface environment through a Class V injection well. For example, the point of injection of a Class V septic system might be the distribution box—the last accessible sampling point before the waste fluids drain into the underlying soils. For a dry well, it is likely to be the well bore itself.

* * * * *

Sanitary waste means liquid or solid wastes originating solely from humans and human activities, such as wastes collected from toilets, showers, wash basins, sinks used for cleaning domestic areas, sinks used for food preparation, clothes washing operations, and sinks or washing machines where food and beverage serving dishes, glasses, and utensils are cleaned. Sources of these wastes may include single or multiple residences, hotels and motels, restaurants, bunkhouses, schools, ranger stations, crew quarters, guard stations, campgrounds, picnic grounds, day-use recreation areas, other commercial facilities, and industrial facilities provided the waste is not mixed with industrial waste.

* * * * *

Septic system means a ''well'' that is used to emplace sanitary waste below the surface and is typically comprised of a septic tank and subsurface fluid distribution system or disposal system.

* * * * *

Subsurface fluid distribution system means an assemblage of perforated pipes, drain tiles, or other similar mechanisms intended to distribute fluids below the surface of the ground.

* * * * *

Well means: A bored, drilled, or driven shaft whose depth is greater than the largest surface dimension; or, a dug hole whose depth is greater than the largest surface dimension; or, an improved sinkhole; or, a subsurface fluid distribution system.

Well injection means the subsurface emplacement of fluids through a well.

* * * * *

16. Section 146.5 is amended by adding a new paragraph (a)(3) and revising the first sentence of paragraph (e) introductory text to read as follows:

§ 146.5 Classification of injection wells.

* * * * *

(a) * * *

(3) Radioactive waste disposal wells which inject fluids below the lowermost formation containing an underground source of drinking water within one quarter mile of the well bore.

* * * * *

(e) *Class V.* Injection wells not included in Class I, II, III, or IV. Specific types of Class V injection wells are also described in 40 CFR 144.81. * * *

* * * * *

17. Section 146.10 is revised to read as follows:

§ 146.10 Plugging and abandoning Class I, II, III, IV, and V wells.

(a) Requirements for Class I, II and III wells. (1) Prior to abandoning Class I, II and III wells, the well shall be plugged with cement in a manner which will not allow the movement of fluids either into or between underground sources of drinking water. The Director may allow Class III wells to use other plugging materials if the Director is satisfied that such materials will prevent movement of fluids into or between underground sources of drinking water.

(2) Placement of the cement plugs shall be accomplished by one of the following:

(i) The Balance method;

(ii) The Dump Bailer method;

(iii) The Two-Plug method; or

(iv) An alternative method approved by the Director, which will reliably provide a comparable level of protection to underground sources of drinking water.

(3) The well to be abandoned shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director, prior to the placement of the cement plug(s).

(4) The plugging and abandonment plan required in 40 CFR 144.51(o) and 144.52(a)(6) shall, in the case of a Class III project which underlies or is in an aquifer which has been exempted under § 146.04, also demonstrate adequate protection of USDWs. The Director shall prescribe aquifer cleanup and monitoring where he deems it necessary and feasible to insure adequate protection of USDWs.

(b) Requirements for Class IV wells. Prior to abandoning a Class IV well, the owner or operator shall close the well in accordance with 40 CFR 144.23(b).

(c) Requirements for Class V wells. (1) Prior to abandoning a Class V well, the owner or operator shall close the well in a manner that prevents the movement of fluid containing any contaminant into an underground source of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 141 or may otherwise adversely affect the health of persons. Closure requirements for motor vehicle waste disposal wells and large-capacity cesspools are reiterated at § 144.89.

(2) The owner or operator shall dispose of or otherwise manage any soil, gravel, sludge, liquids, or other materials removed from or adjacent to the well in accordance with all applicable Federal, State, and local regulations and requirements.

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POLICY ON CIVIL PENALTIES

EPA GENERAL ENFORCEMENT POLICY #GM - 21

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY

EFFECTIVE DATE: FEB 16 1984

Introduction

This document, Policy on Civil Penalties, establishes a single set of goals for penalty assessment in EPA administrative and judicial enforcement actions. These goals - deterrence, fair and equitable treatment of the regulated community, and swift resolution of environmental problems - are presented here in general terms. An outline of the general process for the assessment of penalties is contained in Attachment A.

A companion document, A Framework for Statute-Specific Approaches to Penalty Assessments, will also be issued today. This document provides guidance to the user of the policy on how to write penalty assessment guidance specific to the user's particular program. The first part of the Framework provides general guidance on developing program-specific guidance; the second part contains a detailed appendix which explains the basis for that guidance. Thus, the user need only refer to the appendix when he wants an explanation of the guidance in the first part of the Framework.

In order to achieve the above Agency policy goals, all administratively imposed penalties and settlements of civil penalty actions should, where possible, be consistent with the guidance contained in the Framework document. Deviations from the Framework's methodology, where merited, are authorized as long as the reasons for the deviations are documented. Documentation for deviations from the Framework in program-specific guidance should be located in that guidance. Documentation for deviations from the program-specific guidance in calculating individual penalties should be contained in both the case files and in any memoranda that accompany the settlements.

The Agency will make every effort to urge administrative law judges to impose penalties consistent with this policy and any medium-specific implementing guidance. For cases that go to court, the Agency will request the statutory maximum penalty in the filed complaint. And, as proceedings warrant, EPA will continue to pursue a penalty no less than that supported by the applicable program policy. Of course, all penalties must be consistent with applicable statutory provisions, based upon the number and duration of the violations at issue.

Applicability

This policy statement does not attempt to address the specific mechanisms for achieving the goals set out for penalty assessment. Nor does it prescribe a negotiation strategy to achieve the penalty target figures. Similarly, it does not address differences between statutes or between priorities of different programs. Accordingly, it cannot be used, by itself, as a basis for determining an appropriate penalty in a specific

action. Each EPA program office, in a joint effort with the Office of Enforcement and Compliance Monitoring, will revise existing policies, or write new policies as needed. These policies will guide the assessment of penalties under each statute in a manner consistent with this document and, to the extent reasonable, the accompanying Framework.

Until new program-specific policies are issued, the current penalty policies will remain in effect. Once new program-specific policies are issued, the Agency should calculate penalties as follows:

- For cases that are substantially settled, apply the old policy.

- For cases that will require further substantial negotiation, apply the new policy if that will not be too disruptive.

Because of the unique issues associated with civil penalties in certain types of cases, this policy does not apply to the following areas:

- CERCLA §107. This is an area in which Congress has directed a particular kind of response explicitly oriented toward recovering the cost of Government cleanup activity and natural resource damage.

- Clean Water Act §311(f) and (g). This also is cost recovery in nature. As in CERCLA §107 actions, the penalty assessment approach is inappropriate.

- Clean Air Act §120. Congress has set out in considerable detail the level of recovery under this section. It has been implemented with regulations which, as required by law, prescribe a non-exclusive remedy which focuses on recovery of the economic benefit of noncompliance. It should be noted, however, that this general penalty policy builds upon, and is consistent with the approach Congress took in that section.

Much of the rationale supporting this policy generally applies to non-profit institutions, including government entities. In applying this policy to such entities, EPA must exercise judgment case-by-case in deciding, for example, how to apply the economic benefit and ability to pay sanctions, if at all. Further guidance on the issue of seeking penalties against non-profit entities will be forthcoming.

Deterrence

The first goal of penalty assessment is to deter people from violating the law. Specifically, the penalty should persuade the violator to take precautions against falling into noncompliance again (specific deterrence) and dissuade others from violating the law (general deterrence). Successful deterrence is important because it provides the best protection for the environment. In addition, it reduces the resources necessary to administer the laws by addressing noncompliance before it occurs.

If a penalty is to achieve deterrence, both the violator and the general public must be convinced that the penalty places the violator in a worse position than those who have complied in a timely fashion. Neither the violator nor the general public is likely to believe this if the violator is able to retain an overall advantage from noncompliance. Moreover, allowing a violator to benefit from noncompliance punishes those who have complied by placing them at a competitive disadvantage. This creates a disincentive for compliance. For these reasons, it is Agency policy that penalties generally should, at a minimum, remove any significant economic benefits resulting from failure to comply with the law. This amount will be referred to as the "benefit component" of the penalty.

Where the penalty fails to remove the significant economic benefit, as defined by the program-specific guidance, the case development team must explain in the case file why it fails to do so. The case development team must then include this explanation in the memorandum accompanying each settlement for the signature of the Assistant Administrator of Enforcement and Compliance Monitoring, or the appropriate Regional official.

The removal of the economic benefit of noncompliance only places the violator in the same position as he would have been if compliance had been achieved on time. Both deterrence and fundamental fairness require that the penalty include an additional amount to ensure that the violator is economically worse off than if it had obeyed the law. This additional amount should reflect the seriousness of the violation. In doing so, the penalty will be perceived as fair. In addition the penalty's size will tend to deter other potential violators.

In some classes of cases, the normal gravity calculation may be insufficient to effect general deterrence. This could happen if, for example, there was extensive noncompliance with certain regulatory programs in specific areas of the United States. This would demonstrate that the normal penalty assessments had not been achieving general deterrence. In such cases, the case development team should consider increasing the gravity component sufficient to

achieve general deterrence. These extra assessments should balance the other goals of this policy, particularly equitable treatment of the regulated community.

This approach is consistent with the civil penalty provisions in the environmental laws. Almost all of them require consideration of the seriousness of the violation. This additional amount which reflects the seriousness of the violation is referred to as the "gravity component". The combination of the benefit and gravity components yields the "preliminary deterrence figure."

As explained later in this policy, the case development team will adjust this figure as appropriate. Nevertheless, EPA typically should seek to recover, at a minimum, a penalty which includes the benefit component plus some non-trivial gravity component. This is important because otherwise, regulated parties would have a general economic incentive to delay compliance until the Agency commenced an enforcement action. Once the Agency brought the action, the violator could then settle for a penalty less than their economic benefit of noncompliance. This incentive would directly undermine the goal of deterrence.

Fair and Equitable Treatment of the Regulated Community

The second goal of penalty assessment is the fair and equitable treatment of the regulated community. Fair and equitable treatment requires that the Agency's penalties must display both consistency and flexibility. The consistent application of a penalty policy is important because otherwise the resulting penalties might be seen as being arbitrarily assessed. Thus violators would be more inclined to litigate over those penalties. This would consume Agency resources and make swift resolution of environmental problems less likely.

But any system for calculating penalties must have enough flexibility to make adjustments to reflect legitimate differences between similar violations. Otherwise the policy might be viewed as unfair. Again, the result would be to undermine the goals of the Agency to achieve swift and equitable resolutions of environmental problems.

Methods for quantifying the benefit and gravity components are explained in the Framework guidance. These methods significantly further the goal of equitable treatment of violators. To begin with, the benefit component promotes equity by removing the unfair economic advantage which a violator may have gained over complying parties. Furthermore, because the benefit and gravity components are generated systematically, they

will exhibit relative consistency from case to case. Because the methodologies account for a wide range of relevant factors, the penalties generated will be responsive to legitimate differences between cases.

However, not all the possibly relevant differences between cases are accounted for in generating the preliminary deterrence amount. Accordingly, all preliminary deterrence amounts should be increased or mitigated for the following factors to account for differences between cases:

- Degree of willfulness and/or negligence
- History of noncompliance.
- Ability to pay.
- Degree of cooperation/noncooperation.
- Other unique factors specific to the violator or the case.

Mitigation based on these factors is appropriate to the extent the violator clearly demonstrates that it is entitled to mitigation.

The preliminary deterrence amount adjusted prior to the start of settlement negotiations yields the "initial penalty target figure". In administrative actions, this figure generally is the penalty assessed in the complaint. In judicial actions, EPA will use this figure as the first settlement goal. This settlement goal is an internal target and should not be revealed to the violator unless the case development team feels that it is appropriate. The initial penalty target may be further adjusted as negotiations proceed and additional information becomes available or as the original information is reassessed.

Swift Resolution of Environmental Problems

The third goal of penalty assessment is swift resolution of environmental problems. The Agency's primary mission is to protect the environment. As long as an environmental violation continues, precious natural resources, and possibly public health, are at risk. For this reason, swift correction of identified environmental problems must be an important goal of any enforcement action. In addition, swift compliance conserves Agency personnel and resources.

The Agency will pursue two basic approaches to promoting quick settlements which include swift resolution of environmental problems without undermining deterrence. Those two approaches are as follows:

1. Provide incentives to settle and institute prompt remedial action.

EPA policy will be to provide specific incentives to settle, including the following:

- The Agency will consider reducing the gravity component of the penalty for settlements in which the violator already has instituted expeditious remedies to the identified violations prior to the commencement of litigation.[1]/ This would be considered in the adjustment factor called degree of cooperation/noncooperation discussed above.

- The Agency will consider accepting additional environmental cleanup, and mitigating the penalty figures accordingly. But normally, the Agency will only accept this arrangement if agreed to in pre-litigation settlement.

Other incentives can be used, as long as they do not result in allowing the violator to retain a significant economic benefit.

2. Provide disincentives to delaying compliance.

The preliminary deterrence amount is based in part upon the expected duration of the violation. If that projected period of time is extended during the course of settlement negotiations due to the defendant's actions, the case development team should adjust that figure upward. The case development team should consider making this fact known to the violator early in the negotiation process. This will provide a strong disincentive to delay compliance.

1/ For the purposes of this document, litigation is deemed to begin:

- for administrative actions - when the respondent files a response to an administrative complaint or when the time to file expires or

- for judicial actions - when an Assistant United States Attorney files a complaint in court.

Intent of Policy and Information Requests for Penalty Calculations

The policies and procedures set out in this document and in the Framework for Statute-Specific Approaches to Penalty Assessment are intended solely for the guidance of government personnel. They are not intended and cannot be relied upon to create any rights, substantive or procedural, enforceable by any party in litigation with the United States. The Agency reserves the right to act at variance with these policies and procedures and to change them at any time without public notice. In addition, any penalty calculations under this policy made in anticipation of litigation are exempt from disclosure under the Freedom of Information Act. Nevertheless as a matter of public interest, the Agency may elect to release this information in some cases.

Courtney M. Price
Assistant Administrator for
Enforcement and Compliance Monitoring

Attachment

ATTACHMENT A

Outline of Civil Penalty Assessment

I. Calculate Preliminary Deterrence Amount

A. Economic benefit component and

B. Gravity component

(This yields the preliminary deterrence amount.)

II. Apply Adjustment Factors

A. Degree of cooperation/noncooperation (indicated through pre-settlement action.)

B. Degree of willfulness and/or negligence.

C. History of noncompliance.

D. Ability to pay (optional at this stage.)

E. Other unique factors (including strength of case, competing public policy concerns.)

(This yields the initial penalty target figure.)

III. Adjustments to Initial Penalty Target Figure After Negotiations Have Begun

A. Ability to pay (to the extent not considered in calculating initial penalty target.)

B. Reassess adjustments used in calculating initial penalty target. (Agency may want to reexamine evidence used as a basis for the penalty in the light of new information.)

C. Reassess preliminary deterrence amount to reflect continued periods of noncompliance not reflected in the original calculation.

D. Alternative payments agreed upon prior to the commencement of litigation.

(This yields the adjusted penalty target figure.)

A FRAMEWORK FOR STATUTE-SPECIFIC APPROACHES TO PENALTY ASSESSMENTS: IMPLEMENTING EPA'S POLICY ON CIVIL PENALTIES

EPA GENERAL ENFORCEMENT POLICY #GM - 22

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY

EFFECTIVE DATE: FEB 16 1984

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Introduction

This document, A Framework for Statute-Specific Approaches to Penalty Assessment, provides guidance to the user of the Policy on Civil Penalties on how to develop a medium-specific penalty policy. Such policies will apply to administratively imposed penalties and settlements of both administrative and judicial penalty actions.

In the Policy on Civil Penalties, the Environmental Protection Agency establishes a single set of goals for penalty assessment. Those goals - deterrence, fair and equitable treatment of the regulated community, and swift resolution of environmental problems - will be substantially impaired unless they are pursued in a consistent fashion. Even different terminology could cause confusion that would detract from the achievement of these goals. At the same time, too much rigidity will stifle negotiation and make settlement impossible.

The purpose of this document is to promote the goals of the Policy on Civil Penalties by providing a framework for medium-specific penalty policies. The Framework is detailed enough to allow individual programs to develop policies that will consistently further the Agency's goals and be easy to administer. In addition, it is general enough to allow each program to tailor the policy to the relevant statutory provisions and the particular priorities of each program.

While this document contains detailed guidance, it is not cast in absolute terms. Nevertheless, the policy does not encourage deviation from this guidance in either the development of medium-specific policies or in developing actual penalty figures. Where there are deviations in developing medium-specific policies, the reasons for those changes must be recorded in the actual policy. Where there are deviations from medium-specific policies in calculating a penalty figure, the case development team must detail the reasons for those changes in the case file. In addition, the rationale behind the deviations must be incorporated in the memorandum accompanying the settlement package to Headquarters or the appropriate Regional official.

This document is divided into two sections. The first one gives brief instructions to the user on how to write a medium-specific policy. The second section is an appendix that gives detailed guidance on implementing each section of the instructions and explains how the instructions are intended to further the goals of the policy.

Writing a Program Specific Policy

Summarized below are those elements that should be present in a program-specific penalty policy. For a detailed discussion of each of these ideas, the corresponding portions of the appendix should be consulted.

I. Developing a Penalty Figure

The development of a penalty figure is a two step process. First the case development team must calculate a preliminary deterrence figure. This figure is composed of the economic benefit component (where applicable) and the gravity component. The second step is to adjust the preliminary deterrence figure through a number of factors. The resulting penalty figure is the initial penalty target figure. In judicial actions, the initial penalty target figure is the penalty amount which the government normally sets as a goal at the outset of settlement negotiations. It is essentially an internal settlement goal and should not be revealed to the violator unless the case development team feels it is appropriate. In administrative actions, this figure generally is the penalty assessed in the complaint. While in judicial actions, the government's complaint will request the maximum penalty authorized by law.

This initial penalty target figure may be further adjusted in the course of negotiations. Each policy should ensure that the penalty assessed or requested is within any applicable statutory constraints, based upon the number and duration of violations at issue.

II. Calculating a Preliminary Deterrence Amount

Each program-specific policy must contain a section on calculating the preliminary deterrence figure. That section should contain materials on each of the following areas:

- Benefit Component. This section should explain:
  - a. the relevent measure of economic benefit for various types of violations,
  - b. the information needed,
  - c. where to get assistance in computing this figure and
  - d. how to use available computer systems to compare a case with similar previous violations.

- Gravity Component. This section should first rank different types of violations according to the seriousness of the act. In creating that ranking, the following factors should be considered:

  a. actual or possible harm,
  b. importance to the regulatory scheme and
  c. availability of data from other sources.

In evaluating actual or possible harm, your scheme should consider the following facts:

- amount of pollutant,
- toxicity of pollutant,
- sensitivity of the environment,
- length of time of a violation and
- size of the violator.

The policy then should assign appropriate dollar amounts or ranges of amounts to the different ranked violations to constitute the "gravity component". This amount, added to the amount reflecting economic benefit, constitutes the preliminary deterrence figure.

III. Adjusting the Preliminary Deterrence Amount to Derive the Initial Penalty Target Figure (Prenegotiation Adjustment)

Each program-specific penalty policy should give detailed guidance on applying the appropriate adjustments to the preliminary deterrence figure. This is to ensure that penalties also further Agency goals besides deterrence (i.e. equity and swift correction of environmental problems). Those guidelines should be consistent with the approach described in the appendix. The factors may be separated according to whether they can be considered before or after negotiation has begun or both.

Adjustments (increases or decreases, as appropriate) that can be made to the preliminary deterrence penalty to develop an initial penaly target to use at the outset of negotiation include:

- Degree of willfulness and/or negligence
- Cooperation/noncooperation through pre-settlement action.
- History of noncompliance.

- Ability to pay.
- Other unique factors (including strength of case, competing public policy considerations).

The policy may permit consideration of the violator's ability to pay as an adjustment factor before negotiations begin. It may also postpone consideration of that factor until after negotiations have begun. This would allow the violator to produce evidence substantiating its inability to pay.

The policy should prescribe appropriate amounts, or ranges of amounts, by which the preliminary deterrence penalty should be adjusted. Adjustments will depend on the extent to which certain factors are pertinent. In order to preserve the penalty's deterrent effect, the policy should also ensure that, except for the specific exceptions described in this document, the adjusted penalty will: 1) always remove any significant economic benefit of noncompliance and 2) contain some non-trivial amount as a gravity component.

IV. Adjusting the Initial Penalty Target During Negotiations

Each program-specific policy should call for periodic reassessment of these adjustments during the course of negotiations. This would occur as additional relevant information becomes available and the old evidence is re-evaluated in the light of new evidence. Once negotiations have begun, the policy also should permit adjustment of the penalty target to reflect "alternative payments" the violator agrees to make in settlement of the case. Adjustments for alternative payments and pre-settlement corrective action are generally permissible only before litigation has begun.

Again, the policy should be structured to ensure that any settlement made after negotiations have begun reflects the economic benefit of noncompliance up to the date of compliance plus some non-trivial gravity component. This means that if lengthy settlement negotiations cause the violation to continue longer than initially anticipated, the penalty target figure should be increased. The increase would be based upon the extent that the violations continue to produce ongoing environmental risk and increasing economic benefit.

Use of the Policy In Litigation

Each program-specific policy should contain a section on the use of the policy in litigation. Requests for penalties

should account for all the factors identified in the relevant statute and still allow for compromises in settlement without exceeding the parameters outlined in this document. (For each program, all the statutory factors are contained in the Framework either explicitly or as part of broader factors.) For administrative proceedings, the policy should explain how to formulate a penalty figure, consistent with the policy. The case development team will put this figure in the administrative complaint.

In judicial actions, the EPA will use the initial penalty target figure as its first settlement goal. This settlement goal is an internal target and should not be revealed to the violator unless the case development team feels it is appropriate. In judicial litigation, the government should request the maximum penalty authorized by law in its complaint. The policy should also explain how it and any applicable precedents should be used in responding to any explicit requests from a court for a minimum assesment which the Agency would deem appropriate.

Use of the Policy as a Feedback Device

Each program-specific policy should first explain in detail what information needs to be put into the case file and into the relevant computer tracking system. Furthermore, each policy should cover how to use that system to examine penalty assessments in other cases. This would thereby assist the Agency in making judgments about the size of adjustments to the penalty for the case at hand. Each policy should also explain how to present penalty calculations in litigation reports.



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Attachment

APPENDIX

Introduction

This appendix contains three sections. The first two sections set out guidelines for achieving the goals of the Policy on Civil Penalties. The first section focuses on achieving deterrence by assuring that the penalty first removes any economic benefit from noncompliance. Then it adds an amount to the penalty which reflects the seriousness of the violation. The second section provides adjustment factors so that both a fair and equitable penalty will result and that there will be a swift resolution of the environmental problem. The third section of the framework presents some practical advice on the use of the penalty figures generated by the policy.

The Preliminary Deterrence Amount

The Policy on Civil Penalties establishes deterrence as an important goal of penalty assessment. More specifically, it specifies that any penalty should, at a minimum, remove any significant benefits resulting from noncompliance. In addition, it should include an amount beyond removal of economic benefit to reflect the seriousness of the violation. That portion of the penalty which removes the economic benefit of noncompliance is referred to as the "benefit component;" that part of the penalty which reflects the seriousness of the violation is referred to as the "gravity component." When combined, these two components yield the "preliminary deterrence amount."

This section of the document provides guidelines for calculating the benefit component and the gravity component. It will also present and discuss a simplified version of the economic benefit calculation for use in developing quick penalty determinations. This section will also discuss the limited circumstances which justify settling for less than the benefit component. The uses of the preliminary deterrence amount will be explained in subsequent portions of this document.

I. The Benefit Component

In order to ensure that penalties remove any significant economic benefit of noncompliance, it is necessary to have reliable methods to calculate that benefit. The existence of reliable methods also strengthens the Agency's position in both litigation and negotiation. This section sets out guidelines for computing the benefit component. It first addresses costs which are delayed by noncompliance. Then it addresses costs which are avoided completely by noncompliance. It also identifies issues

to be considered when computing the benefit component for those violations where the benefit of noncompliance results from factors other than cost savings. This section concludes with a discussion of the proper use of the benefit component in developing penalty figures and in settlement negotiations.

A. Benefit from delayed costs

In many instances, the economic advantage to be derived from noncompliance is the ability to delay making the expenditures necessary to achieve compliance. For example, a facility which fails to construct required settling ponds will eventually have to spend the money needed to build those ponds in order to achieve compliance. But, by deferring these one-time nonrecurring costs until EPA or a State takes an enforcement action, that facility has achieved an economic benefit. Among the types of violations which result in savings from deferred cost are the following:

- Failure to install equipment needed to meet discharge or emission control standards.
- Failure to effect process changes needed to eliminate pollutants from products or waste streams.
- Testing violations, where the testing still must be done to demonstrate achieved compliance.
- Improper disposal, where proper disposal is still required to achieve compliance.
- Improper storage where proper storage is still required to achieve compliance.
- Failure to obtain necessary permits for discharge, where such permits would probably be granted. (While the avoided cost for many programs would be negligible, there are programs where the the permit process can be expensive).

The Agency has a substantial amount of experience under the air and water programs in calculating the economic benefit that results from delaying costs necessary to achieve compliance. This experience indicates that it is possible to estimate the benefit of delayed compliance through the use of a simple formula. Specifically, the economic benefit of delayed compliance may be estimated at: 5% per year of the delayed one-time capital cost for the period from the date the violation began until the date

compliance was or is expected to be achieved. This will be referred to as the "rule of thumb for delayed compliance" method. Each program may adopt its own "rule of thumb" if appropriate. The applicable medium-specific guidance should state what that method is.

The rule of thumb method can usually be used in making decisions on whether to develop a case or in setting a penalty target for settlement negotiations. In using this rule of thumb method in settlement negotiations, the Agency may want to make the violator fully aware that it is using an estimate and not a more precise penalty determination procedure. The decision whether to reveal this information is up to the negotiators.

The "rule of thumb" method only provides a first-cut estimate of the benefit of delayed compliance. For this reason, its use is probably inappropriate in situations where a detailed analysis of the economic effect of noncompliance is needed to support or defend the Agency's position. Accordingly, this "rule of thumb" method generally should not be used in any of the following circumstances:

- A hearing is likely on the amount of the penalty.
- The defendant wishes to negotiate over the amount of the economic benefit on the basis of factors unique to the financial condition of the company.
- The case development team has reason to believe it will produce a substantially inaccurate estimate; for example, where the defendant is in a highly unusual financial position, or where noncompliance has or will continue for an unusually long period.

There usually are avoided costs associated with this type of situation. Therefore, the "rule of thumb for avoided costs" should also be applied. (See pages 9-10). For most cases, both figures are needed to yield the major portion of the economic benefit component.

When the rule of thumb method is not applicable, the economic benefit of delayed compliance should be computed using the Methodology for Computing the Economic Benefit of Noncompliance. This document, which is under development, provides a method for computing the economic benefit of noncompliance based on a detailed economic analysis. The method will largely be a refined version of the method used in the previous Civil Penalty Policy issued July 8, 1980, for the Clean Water Act and Title I of the Clean Air Act. It will also be consistent with the regulations

implementing Section 120 of the Clean Air Act. A computer program will be available to the Regions to perform the analysis, together with instructions for its use. Until the Methodology is issued, the economic model contained in the July 8, 1980, Civil Penalty Policy should be used. It should be noted that the Agency recently modified this guidance to reflect changes in the tax law.

B. Benefit from avoided costs

Many kinds of violations enable a violator to permanently avoid certain costs associated with compliance.

- Cost savings for operation and maintenance of equipment that the violator failed to install.
- Failure to properly operate and maintain existing control equipment.
- Failure to employ sufficient number of adequately trained staff.
- Failure to establish or follow precautionary methods required by regulations or permits.
- Improper storage, where commercial storage is reasonably available.
- Improper disposal, where redisposal or cleanup is not possible.
- Process, operational, or maintenance savings from removing pollution equipment.
- Failure to conduct necessary testing.

As with the benefit from delayed costs, the benefit component for avoided costs may be estimated by another "rule of thumb" method. Since these costs will never be incurred, the estimate is the expenses avoided until the date compliance is achieved less any tax savings. The use of this "rule of thumb" method is subject to the same limitations as those discussed in the preceding section.

Where the "rule of thumb for avoided costs" method cannot be used, the benefit from avoided costs must be computed using the Methodology for Computing the Economic Benefit of Noncompliance. Again, until the Metholology is issued, the method contained in the July 8, 1980, Civil Penalty Policy should be used as modified to reflect recent changes in the tax law.

C. Benefit from competitive advantage

For most violations, removing the savings which accrue from noncompliance will usually be sufficient to remove the competitive advantage the violator clearly has gained from noncompliance. But there are some situations in which noncompliance allows the violator to provide goods or services which are not available elsewhere or are more attractive to the consumer. Examples of such violations include:

- Selling banned products.
- Selling products for banned uses.
- Selling products without required labelling or warnings.
- Removing or altering pollution control equipment for a fee, (e.g., tampering with automobile emission controls.)
- Selling products without required regulatory clearance, (e.g., pesticide registration or premanufacture notice under TSCA.)

To adequately remove the economic incentive for such violations, it is helpful to estimate the net profits made from the improper transactions (i.e. those transactions which would not have occurred if the party had complied). The case development team is responsible for identifying violations in which this element of economic benefit clearly is present and significant. This calculation may be substantially different depending on the type of violation. Consequently the program-specific policies should contain guidance on identifying these types of violations and estimating these profits. In formulating that guidance, the following principles should be followed:

- The amount of the profit should be based on the best information available concerning the number of transactions resulting from noncompliance.
- Where available, information about the average profit per transaction may be used. In some cases, this may be available from the rulemaking record of the provision violated.
- The benefit derived should be adjusted to reflect the present value of net profits derived in the past.

It is recognized that the methods developed for estimating the profit from those transactions will sometimes rely substantially on expertise rather than verifiable data. Nevertheless, the programs should make all reasonable efforts to ensure that the estimates developed are defensible. The programs are encouraged to work with the Office of Policy, Planning and Evaluation to ensure that the methods developed are consistent with the forthcoming Methodology for Computing the Economic Benefit of Noncompliance and with methods developed by other programs. The programs should also ensure that sufficient contract funds are available to obtain expert advice in this area as needed to support penalty development, negotiation and trial of these kinds of cases.

D. Settling cases for an amount less than the economic benefit

As noted above, settling for an amount which does not remove the economic benefit of noncompliance can encourage people to wait until EPA or the State begins an enforcement action before complying. For this reason, it is general Agency policy not to settle for less than this amount. There are three general areas where settling for less than economic benefit may be appropriate. But in any individual case where the Agency decides to settle for less than enconomic benefit, the case development team must detail those reasons in the case file and in any memoranda accompanying the settlement.

1. Benefit component involves insignificant amount

It is clear that assessing the benefit component and negotiating over it will often represent a substantial commitment of resources. Such a commitment of resources may not be warranted in cases where the magnitude of the benefit component is not likely to be significant, (e.g. not likely to have a substantial impact on the violator's competitive positions). For this reason, the case development team has the discretion not to seek the benefit component where it appears that the amount of that component is likely to be less than $10,000. (A program may determine that other cut-off points are more reasonable based on the likelihood that retaining the benefit could encourage noncomplying behavior.) In exercising that discretion, the case development team should consider the following factors:

- Impact on violator: The likelihood that assessing the benefit component as part of the penalty will have a noticeable effect on the violator's competitive position or overall profits. If no such effect appears likely, the benefit component should probably not be pursued.

- The size of the gravity component: If the gravity component is relatively small, it may not provide a sufficient deterrent, by

itself, to achieve the goals of this policy.

- The certainty of the size of the benefit component: If the economic benefit is quite well defined, it is not likely to require as much effort to seek to include it in the penalty assessment. Such circumstances also increase the likelihood that the economic benefit was a substantial motivation for the noncompliance. This would make the inclusion of the benefit component more necessary to achieve specific deterrence.

It may be appropriate not to seek the benefit component in an entire class of violation. In that situation, the rationale behind that approach should be clearly stated in the appropriate medium-specific policy. For example, the most appropriate way to handle a small non-recurring operation and maintenance violation may be a small penalty. Obviously it makes little sense to assess in detail the economic benefit for each individual violation because the benefit is likely to be so small. The medium-specific policy would state this as the rationale.

2. Compelling public concerns

The Agency recognizes that there may be some instances where there are compelling public concerns that would not be served by taking a case to trial. In such instances, it may become necessary to consider settling a case for less than the benefit component. This may be done only if it is absolutely necessary to preserve the countervailing public interests. Such settlements might be appropriate where the following circumstances occur:

- There is a very substantial risk of creating precedent which will have a significant adverse effect upon the Agency's ability to enforce the law or clean up pollution if the case is taken to trial.

- Settlement will avoid or terminate an imminent risk to human health or the environment. This is an adequate justification only if injunctive relief is unavailable for some reason, and if settlement on remedial responsibilities could not be reached independent of any settlement of civil penalty liability.

- Removal of the economic benefit would result in plant closings, bankruptcy, or other extreme financial burden, and there is an important public interest in allowing the firm to continue in business.

Alternative payment plans should be fully explored before resorting to this option. Otherwise, the Agency will give the perception that shirking one's environmental responsibilities is a way to keep a failing enterprise afloat. This exemption does not apply to situations where the plant was likely to close anyway, or where there is a likelihood of continued harmful noncompliance.

3. Litigation practicalities

The Agency realizes that in certain cases, it is highly unlikely the EPA will be able to recover the economic benefit in litigation. This may be due to applicable precedent, competing public interest considerations, or the specific facts, equities, or evidentiary issues pertaining to a particular case. In such a situation it is unrealistic to expect EPA to obtain a penalty in litigation which would remove the economic benefit. The case development team then may pursue a lower penalty amount.

II. The Gravity Component

As noted above, the Policy on Civil Penalties specifies that a penalty, to achieve deterrence, should not only remove any economic benefit of noncompliance, but also include an amount reflecting the seriousness of the violation. This latter amount is referred to as the "gravity component." The purpose of this section of the document is to establish an approach to quantifying the gravity component. This approach can encompass the differences between programs and still provide the basis for a sound consistent treatment of this issue.

A. Quantifying the gravity of a violation

Assigning a dollar figure to represent the gravity of a violation is an essentially subjective process. Nevertheless, the relative seriousness of different violations can be fairly accurately determined in most cases. This can be accomplished by reference to the goals of the specific regulatory scheme and the facts of each particular violation. Thus, linking the dollar amount of the gravity component to these objective factors is a useful way of insuring that violations of approximately equal seriousness are treated the same way.

Such a linkage promotes consistency. This consistency strengthens the Agency's position both in negotiation and before a trier of fact. This approach consequently also encourages swift resolution of environmental problems.

Each program must develop a system for quantifying the gravity of violations of the laws and regulations it administers.

This development must occur within the context of the penalty amounts authorized by law for that program. That system must be based, whenever possible, on objective indicators of the seriousness of the violation. Examples of such indicators are given below. The seriousness of the violation should be based primarily on: 1) the risk of harm inherent in the violation at the time it was committed and 2) the actual harm that resulted from the violation. In some cases, the seriousness of the risk of harm will exceed that of the actual harm. Thus, each system should provide enough flexibility to allow EPA to consider both factors in assessing penalties.

Each system must also be designed to minimize the possibility that two persons applying the system to the same set of facts would come up with substantially different numbers. Thus, to the extent the system depends on categorizing events, those categories must be clearly defined. That way there is little possibility for argument over the category in which a violation belongs. In addition, the categorization of the events relevant to the penalty decision should be noted in the penalty development portion of the case file.

B. Gravity Factors

In quantifying the gravity of a violation, a program-specific policy should rank different types of violations according to the seriousness of the act. The following is a suggested approach to ranking the seriousness of violations. In this approach to ranking, the following factors should be considered:

- Actual or possible harm: This factor focuses on whether (and to what extent) the activity of the defendant actually resulted or was likely to result in an unpermitted discharge or exposure.

- Importance to the regulatory scheme: This factor focuses on the importance of the requirement to achieving the goal of the statute or regulation. For example, if labelling is the only method used to prevent dangerous exposure to a chemical, then failure to label should result in a relatively high penalty. By contrast, a warning sign that was visibly posted but was smaller than the required size would not normally be considered as serious.

- Availability of data from other sources: The violation of any recordkeeping or reporting requirement is a very serious

matter. But if the involved requirement is the only source of information, the violation is far more serious. By contrast, if the Agency has another readily available and cheap source for the necessary information, a smaller penalty may be appropriate. (E.g. a customer of the violator purchased all the violator's illegally produced substance. Even though the violator does not have the required records, the customer does.)

- Size of violator: In some cases, the gravity component should be increased where it is clear that the resultant penalty will otherwise have little impact on the violator in light of the risk of harm posed by the violation. This factor is only relevant to the extent it is not taken into account by other factors.

The assessment of the first gravity factor listed above, risk or harm arising from a violation, is a complex matter. For purposes of ranking violations according to seriousness, it is possible to distinguish violations within a category on the basis of certain considerations, including the following:

- Amount of pollutant: Adjustments for the concentration of the pollutant may be appropriate, depending on the regulatory scheme and the characteristics of the pollutant. Such adjustments need not be linear, especially if the pollutant can be harmful at low concentrations.

- Toxicity of the pollutant: Violations involving highly toxic pollutants are more serious and should result in relatively larger penalties.

- Sensitivity of the environment: This factor focuses on the location where the violation was committed. For example, improper discharge into waters near a drinking water intake or a recreational beach is usually more serious than discharge into waters not near any such use.

- The length of time a violation continues: In most circumstances, the longer a violation continues uncorrected, the greater is the risk of harm.

Although each program-specific policy should address each of the factors listed above, or determine why it is not relevant, the factors listed above are not meant to be exhaustive. The programs should make every effort to identify all factors relevant to assessing the seriousness of any violation. The programs should then systematically prescribe a dollar amount to yield a gravity component for the penalty. The program-specific policies may prescribe a dollar range for a certain category of violation rather than a precise dollar amount within that range based on the specific facts of an individual case.

The process by which the gravity component was computed must be memorialized in the case file. Combining the benefit component with the gravity component yields the preliminary deterrence amount.

In some classes of cases, the normal gravity calculation may be insufficient to effect general deterrence. This could happen if there was extensive noncompliance with certain regulatory programs in specific areas of the United States. This would demonstrate that the normal penalty assessments had not been achieving general deterrence. The medium specific policies should address this issue. One possible approach would be to direct the case development team to consider increasing the gravity component within a certain range to achieve general deterrence. These extra assessments should be consistent with the other goals of this policy.

Initial and Adjusted Penalty Target Figure

The second goal of the Policy on Civil Penalties is the equitable treatment of the regulated community. One important mechanism for promoting equitable treatment is to include the benefit component discussed above in a civil penalty assessment. This approach would prevent violators from benefitting economically from their noncompliance relative to parties which have complied with environmental requirements.

In addition, in order to promote equity, the system for penalty assessment must have enough flexibility to account for the unique facts of each case. Yet it still must produce enough consistent results to treat similarly-situated violators similarly. This is accomplished by identifying many of the legitimate differences between cases and providing guidelines for how to adjust the preliminary deterrence amount when those facts occur. The application of these adjustments to the preliminary deterrence amount prior to the commencement of negotiation yields the initial penalty target figure. During the course of negotiation, the case development team may further adjust this figure to yield the adjusted penalty target figure.

Nevertheless, it should be noted that equitable treatment is a two-edged sword. While it means that a particular violator will receive no higher penalty than a similarly situated violator, it also means that the penalty will be no lower.

I. Flexibility-Adjustment Factors

The purpose of this section of the document is to establish additional adjustment factors to promote flexibility and to identify management techniques that will promote consistency. This section sets out guidelines for adjusting penalties to account for some factors that frequently distinguish different cases. Those factors are: degree of willfulness and/or negligence, degree of cooperation/noncooperation, history of noncompliance, ability to pay, and other unique factors. Unless otherwise specified, these adjustment factors will apply only to the gravity component and not to the economic benefit component. Violators bear the burden of justifying mitigation adjustments they propose based on these factors.

Within each factor there are three suggested ranges of adjustment. The actual ranges for each medium-specific policy will be determined by those developing the policy. The actual ranges may differ from these suggested ranges based upon program specific needs. The first, typically a 0-20% adjustment of the gravity component, is within the absolute discretion of the case development team. 1/ The second, typically a 21-30% adjustment, is only appropriate in unusual circumstances. The third range, typically beyond 30% adjustment, is only appropriate in extraordinary circumstances. Adjustments in the latter two ranges, unusual and extraordinary circumstances, will be subject to scrutiny in any performance audit. The case development team may wish to reevaluate these adjustment factors as the negotiations progress. This allows the team to reconsider evidence used as a basis for the penalty in light of new information.

Where the Region develops the penalty figure, the application of adjustment factors will be part of the planned Regional audits. Headquarters will be responsible for proper application of these factors in nationally-managed cases. A detailed discussion of these factors follows.

A. Degree of Willfulness and/or Negligence

Although most of the statutes which EPA administers are strict liability statutes, this does not render the violator's

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1/ Absolute discretion means that the case development team may make penalty development decisions independent of EPA Headquarters. Nevertheless it is understood that in all judicial matters, the Department of Justice can still review these determinations if they so desire. Of course the authority to exercise the Agency's concurrence in final settlements is covered by the applicable delegations.

willfulness and/or negligence irrelevant. Knowing or willful violations can give rise to criminal liability, and the lack of any culpability may, depending upon the particular program, indicate that no penalty action is appropriate. Between these two extremes, the willfulness and/or negligence of the violator should be reflected in the amount of the penalty.

In assessing the degree of willfulness and/or negligence, all of the following points should be considered in most cases:

- How much control the violator had over the events constituting the violation.
- The forseeability of the events constituting the violation.
- Whether the violator took reasonable precautions against the events constituting the violation.
- Whether the violator knew or should have known of the hazards associated with the conduct.
- The level of sophistication within the industry in dealing with compliance issues and/or the accessibility of appropriate control technology (if this information is readily available). This should be balanced against the technology forcing nature of the statute, where applicable.
- Whether the violator in fact knew of the legal requirement which was violated.

It should be noted that this last point, lack of knowledge of the legal requirement, should never be used as a basis to reduce the penalty. To do so would encourage ignorance of the law. Rather, knowledge of the law should serve only to enhance the penalty.

The amount of control which the violator had over how quickly the violation was remedied is also relevent in certain circumstances. Specifically, if correction of the environmental problem was delayed by factors which the violator can clearly show were not reasonably foreseeable and out of its control, the penalty may be reduced.

The suggested approach for this factor is for the case development team to have absolute discretion to adjust the penalty up or down by 20% of the gravity component. Adjustments in the $\pm$ 21-30% range should only be made in unusual circumstances.

Adjustments for this factor beyond ± 30% should be made only in extraordinary circumstances. Adjustments in the unusual or extraordinary circumstance range will be subject to scrutiny in any audit of performance.

B. Degree of Cooperation/Noncooperation

The degree of cooperation or noncooperation of the violator in remedying the violation is an appropriate factor to consider in adjusting the penalty. Such adjustments are mandated by both the goals of equitable treatment and swift resolution of environmental problems. There are three areas where this factor is relevant.

1. Prompt reporting of noncompliance

Cooperation can be manifested by the violator promptly reporting its noncompliance. Assuming such self-reporting is not required by law, such behavior should result in the mitigation of any penalty.

The suggested ranges of adjustment are as follows. The case development team has absolute discretion on any adjustments up to ± 10% of the gravity component for cooperation/noncooperation. Adjustments can be made up to ± 20% of the gravity component, but only in unusual circumstances. In extraordinary circumstances, such as self reporting of a TSCA premanufacture notice violation, the case development team may adjust the penalty beyond the ± 20% factor. Adjustments in the unusual or extraordinary circumstances ranges will be subject to scrutiny in any performance audit.

2. Prompt correction of environmental problems

The Agency should provide incentives for the violator to commit to correcting the problem promptly. This correction must take place before litigation is begun, except in extraordinary circumstances.[2/] But since these incentives must be consistent with deterrence, they must be used judiciously.

2/ For the purposes of this document, litigation is deemed to begin:

- for administrative actions - when the respondent files a response to an administrative complaint or when the time to file expires or
- for judicial actions - when an Assistant United States Attorney files a complaint in court.

The circumstances under which the penalty is reduced depend on the type of violation involved and the source's response to the problem. A straightforward reduction in the amount of the gravity component of the penalty is most appropriate in those cases where either: 1) the environmental problem is actually corrected prior to initiating litigation, or 2) ideally, immediately upon discovery of the violation. Under this approach, the reduction typically should be a substantial portion of the unadjusted gravity component.

In general, the earlier the violator instituted corrective action after discovery of the violation and the more complete the corrective action instituted, the larger the penalty reduction EPA will consider. At the discretion of the case development team, the unadjusted gravity component may be reduced up to 50%. This would depend on how long the environmental problem continued before correction and the amount of any environmental damage. Adjustments greater than 50% are permitted, but will be the subject of close scrutiny in auditing performance.

It should be noted that in some instances, the violator will take all necessary steps toward correcting the problem but may refuse to reach any agreement on penalties. Similarly, a violator may take some steps to ameliorate the problem, but choose to litigate over what constitutes compliance. In such cases, the gravity component of the penalty may be reduced up to 25% at the discretion of the case development team. This smaller adjustment still recognizes the efforts made to correct the environmental problem, but the benefit to the source is not as great as if a complete settlement is reached. Adjustments greater than 25% are permitted, but will be the subject of close scrutiny in auditing performance.

In all instances, the facts and rationale justifying the penalty reduction must be recorded in the case file and included in any memoranda accompanying settlement.

3. Delaying compliance

Swift resolution of environmental problems will be encouraged if the violator clearly sees that it will be financially disadvantageous for the violator to litigate without remedying noncompliance. The settlement terms described in the preceding section are only available to parties who take steps to correct a problem prior to initiation of litigation. To some extent, this is an incentive to comply as soon as possible. Nevertheless, once litigation has commenced, it should be clear that the defendant litigates at its own risk.

In addition, the methods for computing the benefit component and the gravity component are both structured so that the penalty target increases the longer the violation remains uncorrected. The larger penalty for longer noncompliance is systematically linked to the benefits accruing to the violator and to the continuing risk to human health and the environment. This occurs even after litigation has commenced. This linkage will put the Agency in a strong position to convince the trier of fact to impose such larger penalties. For these reasons, the Policy on Civil Penalties provides substantial disincentives to litigating without complying.

C. History of noncompliance

Where a party has violated a similar environmental requirement before, this is usually clear evidence that the party was not deterred by the Agency's previous enforcement response. Unless the previous violation was caused by factors entirely out of the control of the violator, this is an indication that the penalty should be adjusted upwards.

In deciding how large these adjustments should be, the case development team should consider the following points:

- How similar the previous violation was.
- How recent the previous violation was.
- The number of previous violations.
- Violator's response to previous violation(s) in regard to correction of the previous problem.

Detailed criteria for what constitutes a "similar violation" should be contained in each program-specific policy. Nevertheless a violation should generally be considered "similar" if the Agency's previous enforcement response should have alerted the party to a particular type of compliance problem. Some facts that indicate a "similar violation" was committed are as follows:

- The same permit was violated.
- The same substance was involved.
- The same process points were the source of the violation.
- The same statutory or regulatory provision was violated.

- A similar act or omission (e.g. the failure to properly store chemicals) was the basis of the violation.

For purposes of this section, a "prior violation" includes any act or omission for which a formal enforcement response has occurred (e.g. notice of violation, warning letter, complaint, consent decree, consent agreement, or final order). It also includes any act or omission for which the violator has previously been given written notification, however informal, that the Agency believes a violation exists.

In the case of large corporations with many divisions or wholly-owned subsidiaries, it is sometimes difficult to determine whether a previous instance of noncompliance should trigger the adjustments described in this section. New ownership often raises similar problems. In making this determination, the case development team should ascertain who in the organization had control and oversight responsibility for the conduct resulting in the violation. In some situations the same persons or the same organizational unit had or reasonably should have had control or oversight responsibility for violative conduct. In those cases, the violation will be considered part of the compliance history of that regulated party.

In general, the case development team should begin with the assumption that if the same corporation was involved, the adjustments for history of noncompliance should apply. In addition, the case development team should be wary of a party changing operators or shifting responsibility for compliance to different groups as a way of avoiding increased penalties. The Agency may find a consistent pattern of noncompliance by many divisions or subsidiaries of a corporation even though the facilities are at different geographic locations. This often reflects, at best, a corporate-wide indifference to environmental protection. Consequently, the adjustment for history of noncompliance should probably apply unless the violator can demonstrate that the other violating corporate facilities are independent.

The following are the Framework's suggested adjustment ranges. If the pattern is one of "dissimilar" violations, relatively few in number, the case development team has absolute discretion to raise the penalty amount by 35%. For a relatively large number of dissimilar violations, the gravity component can be increased up to 70%. If the pattern is one of "similar" violations, the case development team has absolute discretion to raise the penalty amount up to 35% for the first repeat violation, and up to 70% for further repeated similar violations. The case development team may make higher adjustments in extraordinary circumstances, but such adjustments will be subject to scrutiny in any performance audit.

D. Ability to pay

The Agency will generally not request penalties that are clearly beyond the means of the violator. Therefore EPA should consider the ability to pay a penalty in arriving at a specific final penalty assessment. At the same time, it is important that the regulated community not see the violation of environmental requirements as a way of aiding a financially troubled business. EPA reserves the option, in appropriate circumstances, of seeking a penalty that might put a company out of business.

For example, it is unlikely that EPA would reduce a penalty where a facility refuses to correct a serious violation. The same could be said for a violator with a long history of previous violations. That long history would demonstrate that less severe measures are ineffective.

The financial ability adjustment will normally require a significant amount of financial information specific to the violator. If this information is available prior to commencement of negotiations, it should be assessed as part of the initial penalty target figure. If it is not available, the case development team should assess this factor after commencement of negotiation with the source.

The burden to demonstrate inability to pay, as with the burden of demonstrating the presence of any mitigating circumstances, rests on the defendant. If the violator fails to provide sufficient information, then the case development team should disregard this factor in adjusting the penalty. The National Enforcement Investigations Center (NEIC) has developed the capability to assist the Regions in determining a firm's ability to pay. Further information on this system will be made available shortly under separate cover.

When it is determined that a violator cannot afford the penalty prescribed by this policy, the following options should be considered:

- Consider a delayed payment schedule: Such a schedule might even be contingent upon an increase in sales or some other indicator of improved business. This approach is a real burden on the Agency and should only be considered on rare occasions.

- Consider non-monetary alternatives, such as public service activities: For example, in the mobile source program, fleet operators who tampered with pollution control devices

on their vehicles agreed to display anti-tampering ads on their vehicles. Similar solutions may be possible in other industries.

- Consider straight penalty reductions as a last recourse: If this approach is necessary, the reasons for the case development team's conclusion as to the size of the necessary reduction should be made a part of the formal enforcement file and the memorandum accompanying the settlement. 3/

- Consider joinder of the violator's individual owners: This is appropriate if joinder is legally possible and justified under the circumstances.

Regardless of the Agency's determination of an appropriate penalty amount to pursue based on ability to pay considerations, the violator is still expected to comply with the law.

E. Other unique factors

Individual programs may be able to predict other factors that can be expected to affect the appropriate penalty amount. Those factors should be identified and guidelines for their use set out in the program-specific policies. Nevertheless, each policy should allow for adjustment for unanticipated factors which might affect the penalty in each case.

It is suggested that there be absolute discretion to adjust penalties up or down by 10% of the gravity component for such reasons. Adjustments beyond the absolute discretion range will be subject to scrutiny during audits. In addition, they will primarily be allowed for compelling public policy concerns or the strengths and equities of the case. The rationale for the reduction must be expressed in writing in the case file and in any memoranda accompanying the settlement. See the discussion on pages 12 and 13 for further specifics on adjustments appropriate on the basis of either compelling public policy concerns or the strengths and equities of the case.

II. Alternative Payments

In the past, the Agency has accepted various environmentally beneficial expenditures in settlement of a case and chosen not to

3/ If a firm fails to pay the agreed-to penalty in an administrative or judicial final order, then the Agency must follow the Federal Claims Collection Act procedures for obtaining the penalty amount.

pursue more severe penalties. In general, the regulated community has been very receptive to this practice. In many cases, violators have found "alternative payments" to be more attractive than a traditional penalty. Many useful projects have been accomplished with such funds. But in some instances, EPA has accepted for credit certain expenditures whose actual environmental benefit has been somewhat speculative.

The Agency believes that these alternative payment projects should be reserved as an incentive to settlement before litigation. For this reason, such arrangements will be allowed only in prelitigation agreements except in extraordinary circumstances.

In addition, the acceptance of alternative payments for environmentally beneficial expenditures is subject to certain conditions. The Agency has designed these conditions to prevent the abuse of this procedure. Most of the conditions below applied in the past, but some are new. All of these conditions must be met before alternative payments may be accepted:4/

- No credits can be given for activities that currently are or will be required under current law or are likely to be required under existing statutory authority in the forseeable future (e.g., through upcoming rulemaking).

- The majority of the project's environmental benefit should accrue to the general public rather than to the source or any particular governmental unit.

- The project cannot be something which the violator could reasonably be expected to do as part of sound business practices.

4/ In extraordinary circumstances, the Agency may choose not to pursue higher penalties for "alternative" work done prior to commencement of negotiations. For example, a firm may recall a product found to be in violation despite the fact that such recall is not required. In order for EPA to forgo seeking higher penalties, the violator must prove that it has met the other conditions herein stated. If the violator fails to prove this in a satisfactory manner, the case development team has the discretion to completely disallow the credit project. As with all alternative projects, the case development team has the discretion to still pursue some penalties in settlement.

- EPA must not lower the amount it decides to accept in penalties by more than the after-tax amount the violator spends on the project.5/

In all cases where alternative payments are allowed, the case file should contain documentation showing that each of the conditions listed above have been met in that particular case. In addition when considering penalty credits, Agency negotiators should take into account the following points:

- The project should not require a large amount of EPA oversight for its completion. In general the less oversight the proposed credit project would require from EPA to ensure proper completion, the more receptive EPA can be toward accepting the project in settlement.

- The project should receive stronger consideration if it will result in the abatement of existing pollution, ameliorate the pollution problem that is the basis of the government's claim and involve an activity that could be ordered by a judge as equitable relief.

- The project should receive stronger consideration if undertaken at the facility where the violation took place.

- The company should agree that any publicity it disseminates regarding its funding of the project must include a statement that such funding is in settlement of a lawsuit brought by EPA or the State.

5/ This limitation does not apply to public awareness activities such as those employed for fuel switching and tampering violations under the Clean Air Act. The purpose of the limitation is to preserve the deterrent value of the settlement. But these violations are often the result of public misconceptions about the economic value of these violations. Consequently, the public awareness activities can be effective in preventing others from violating the law. Thus, the high general deterrent value of public awareness activities in these circumstances obviates the need for the one-to-one requirement on penalty credits.

Each alternative payment plan must entail an identified project to be completely performed by the defendant. Under the plan, EPA must not hold any funds which are to be spent at EPA's discretion unless the relevant statute specifically provides that authority. The final order, decree or judgment should state what financial penalty the violator is actually paying and describe as precisely as possible the credit project the violator is expected to perform.

III. Promoting Consistency

Treating similar situations in a similar fashion is central to the credibility of EPA's enforcement effort and to the success of achieving the goal of equitable treatment. This document has established several mechanisms to promote such consistency. Yet it still leaves enough flexibility for settlement and for tailoring the penalty to particular circumstances. Perhaps the most important mechanisms for achieving consistency are the systematic methods for calculating the benefit component and gravity component of the penalty. Together, they add up to the preliminary deterrence amount. The document also sets out guidance on uniform approaches for applying adjustment factors to arrive at an initial penalty target prior to beginning settlement negotiations or an adjusted penalty target after negotiations have begun.

Nevertheless, if the Agency is to promote consistency, it is essential that each case file contain a complete description of how each penalty was developed. This description should cover how the preliminary deterrence amount was calculated and any adjustments made to the preliminary deterrence amount. It should also describe the facts and reasons which support such adjustments. Only through such complete documentation can enforcement attorneys, program staff and their managers learn from each others' experience and promote the fairness required by the Policy on Civil Penalties.

To facilitate the use of this information, Office of Legal and Enforcement Policy will pursue integration of penalty information from judicial enforcement actions into a computer system. Both Headquarters and all Regional offices will have access to the system through terminals. This would make it possible for the Regions to compare the handling of their cases with those of other Regions. It could potentially allow the Regions, as well as Headquarters, to learn from each others' experience and to identify problem areas where policy change or further guidance is needed.

Use of Penalty Figure in Settlement Discussions

The Policy and Framework do not seek to constrain negotiations. Their goal is to set settlement target figures for the internal use of Agency negotiators. Consequently, the penalty figures under negotiation do not necessarily have to be as low as the internal target figures. Nevertheless, the final settlement figures should go no lower than the internal target figures unless either: 1) the medium-specific penalty policy so provides or 2) the reasons for the deviation are properly documented.

2022 Hawai‘i Cesspool Hazard Assessment & Prioritization Tool

2022 Updated Report & Technical Appendices



October 2022
SPECIAL REPORT WRRC-SR-2022-02 (Revised)
UNIHI-SEAGRANT-TT-21-03 (Revised)

Prepared For:
State of Hawai‘i Department of Health Wastewater Branch
State of Hawai‘i Cesspool Conversion Working Group

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Executive Summary

Background

In 2017, the Hawai‘i State Legislature passed Act 125 mandating that all of Hawai‘i’s estimated 80,000+ cesspools be replaced by 2050. Cesspools are a substandard sewage disposal method and are widely recognized to harm human health and the environment. An essential step in meeting this critical goal is defining a replacement prioritization method for different geographic areas and social categories. This project and its deliverables will help the State use its limited resources which are spread over a large and diverse landmass, to determine the most vulnerable areas of contamination more efficiently. The data and information presented in this report will assist the Cesspool Conversion Working Group (CCWG) and the Hawai‘i State Department of Health (DOH) reevaluate and replace older statewide cesspool prioritization methods developed between 2009 and 2017. Though this report and the former prioritization efforts share some overlap in their approaches to evaluate the hazards cesspools pose, including using some of the same inputs and assumptions involved in individual calculations, there are significant differences concerning the methodology and results. This project will provide the CCWG and its Data and Prioritization Subgroup with updated information and data to make informed planning and preparation decisions through the geographic information system (GIS) tool titled: the Hawai‘i Cesspool Prioritization Tool (HCPT) and this report and technical appendices.

Objectives

The HCPT and the associated report and recommendations will assist the CCWG in creating a long-term cesspool upgrade plan for delivery to the Hawai‘i State Legislature in 2022. The HCPT’s top three objectives are to:

1. Identify a comprehensive list of risk factors and develop a new cesspool prioritization and hazard assessment for the four main Hawaiian Islands;
2. Examine and categorize previously uncategorized (Priority Level 4) cesspools;
3. Reevaluate the 2017 DOH Cesspool Prioritization Report and provide recommendations based on new findings where appropriate.

Methodology

A simplified geospatial hazard-based model (data with a geographical or map-based component) was developed to integrate multiple types of risk factors to visualize, assign,

and rank each factor at the individual cesspool level and collectively. The data used for the tool includes physical drivers and impacts on social and ecological assets. Physical drivers were defined as elements that control the movement of pollution, reduce capacity, or otherwise affect the overall level of impact a cesspool has on the land and also the water quality nearby. Social and ecological drivers represent quantifiable human and environmental values within the areas affected by the discharge of cesspool effluent. The tool applies high-confidence groundwater models (currently used by DOH) to determine effluent (human waste) flow paths and to link each cesspool unit to the estimated location along the coastline most affected by its discharge. Due to the model framework and request from the DOH, the current HCPT does not evaluate other sources of groundwater pollution, including agriculture or injected wastewater, or integrate observed coastal or groundwater quality observations as did the previous report. A total of fifteen risk factors were included in the model:

1. Distance to municipal or domestic drinking water wells;
2. Well capture zones;
3. Distance to streams and wetlands;
4. Distance to the coastline;
5. Sea level rise zones;
6. Precipitation;
7. Depth to groundwater;
8. Groundwater flow paths;
9. Soil characteristics;
10. Cesspool density;
11. Coral cover;
12. Fish biomass/recovery potential;
13. Beach user-days;
14. Proximity to a lifeguarded beach; and
15. Coastal ocean circulation proxy

Although the method chosen assigns a cumulative hazard score to each cesspool in the inventory, combination effects from nearby cesspools and the practicalities of management approaches make it more beneficial to group scores by pre-defined geographic areas from the United States Census. The HCPT categorizes priority areas based on existing census-designated boundaries, including census tracts, block-groups, and blocks where the number of cesspools exceeds a minimum threshold. The HCPT was designed to be as objective as possible with prioritization based solely on the relationships between datasets, thereby reducing human bias as much as possible. All data used in the HCPT is at the

statewide scale, normalized, and based on regulatory rules or modeling outputs.

Results

The HCPT prioritization method (Figure ES1) places each geographic area into three Prioritization Categories that include:

1. **Priority Level 1:** Greatest contamination hazard (map color of red).
2. **Priority Level 2:** Significant contamination hazard (map color of orange).
3. **Priority Level 3:** Pronounced contamination hazard (map color of yellow).

The total number of cesspools in the state categorized as Priority Level 1 was 13,821, with 12,367 and 55,237 as Priority Level 2 and Priority Level 3, respectively. Approximately 35%, 7%, 21%, and 37% of cesspools in the Priority Level 1 group are located on Oʻahu, Maui, Kauaʻi, and Hawaiʻi Island, respectively. All results are updated as of 2022, See Appendix C for details.

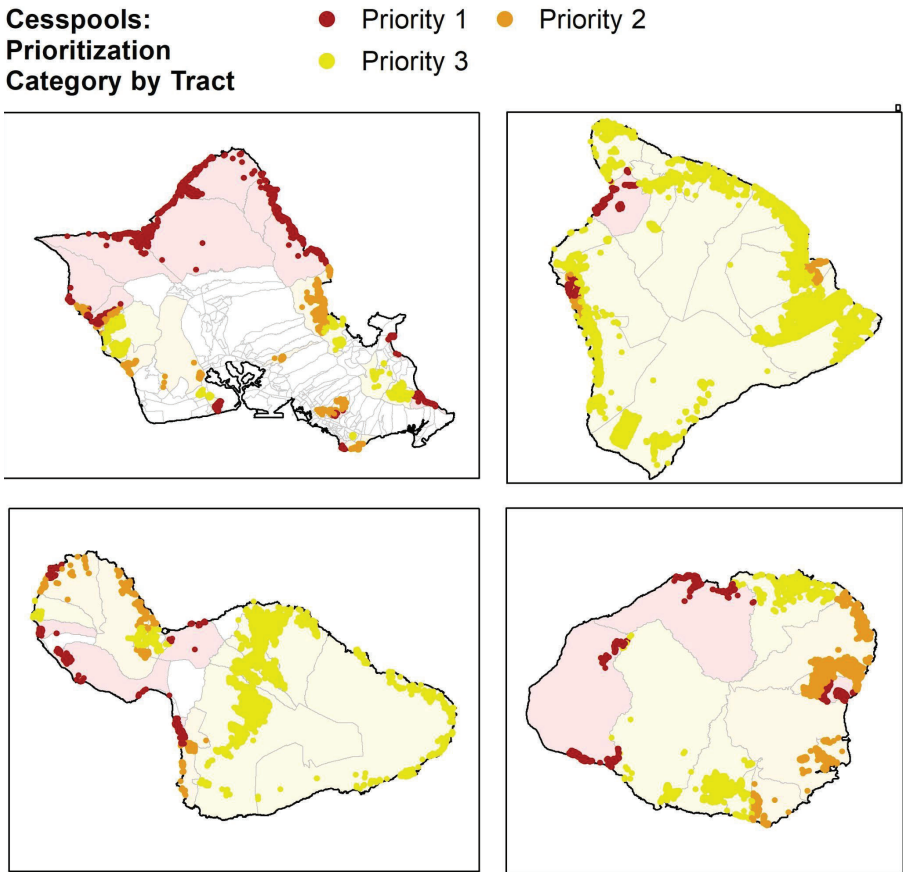


Figure ES1. *Statewide map highlighting the simplistic design of the three-tiered categories, census tracts, and their respective colors to signify a priority score.* (Updated 2022)

Key Takeaways:

1. A shift in priority ranking is to be expected due to the amount of available data and the use of census tract areas to frame the overall scores. The few areas with previous scientific data supporting the presence of wastewater pollution should be treated accordingly and factored in separately when developing conversion schemes.

2. Results and information from the 2017 prioritization effort are not part of the HCPT and are included in this report for reference and comparative purposes only, including using the 2017 priority category titles, i.e., Priority Level 1, 2, and 3.

3. Observation-based tracer (water quality) datasets were intentionally excluded from the HCPT algorithm used to calculate prioritization scores.

4. The authors recommend that all statewide cesspool inventory continue to be refined and, if possible, ground-truthed to ensure the most accurate results of the tool and for future statewide OSDS management and cesspool conversion.

5. All cesspools are substandard sewage disposal systems and pose some threat to their surroundings. Therefore, each cesspool in the inventory was assigned a priority ranking, and this analysis considers none to be exempt from conversion.

6. The tool is merely a starting point for assessing the areas with the most significant hazards and is meant to support the development of a thorough and thoughtful cesspool conversion plan. The tool cannot make decisions regarding cesspool conversion prioritization timelines.

Abstract

Cesspools are a substandard sewage disposal method and widely recognized to harm human health and the environment. The state of Hawai‘i has an estimated 82,000 cesspools. To address pollution concerns, the Hawai‘i State Legislature mandated replacement of all cesspools by 2050. A major step in achieving this goal is to categorize cesspools based on potential or realized harm to humans and the environment. This report details a comprehensive tool designed for this purpose. After researching similar efforts, methods and datasets were chosen that met the needs of state government, cultural values, and environmental sensitivities. The Hawai‘i Cesspool Prioritization Tool (HCPT) was developed by integrating fifteen risk-factors that either control or relate to how cesspool impacts are distributed across communities and the environment. These factors were processed with a geospatial model to calculate a single prioritization score for every cesspool in Hawai‘i. Because sewage pollution impacts are cumulative, individual scores were consolidated by census boundary areas. Results from the HCPT prioritization were validated through comparison with a statewide assessment of nearshore wastewater impacts funded by Hawai‘i Act 132. Future data, organized within census area frameworks, can be layered onto the results to address equity and outreach challenges.

The HCPT was designed to be as objective as possible with prioritization based solely on the relationships between datasets, thereby reducing human bias as much as possible. All data used in the HCPT is at the statewide scale, normalized, and based on regulatory rules or modeling outputs. The total number of cesspools in the state categorized as Priority Level 1 was 13,821, with 12,367 and 55,237 as Priority Level 2 and Priority Level 3, respectively. Approximately 35%, 7%, 21%, and 37% of cesspools in the Priority Level 1 group are located on O‘ahu, Maui, Kaua‘i, and Hawai‘i Island respectively. (*Updated* 2022)

Background and Motivation

In 2017, the Hawai‘i State Legislature passed Act 125 mandating that all cesspools be replaced by 2050. A report produced by the Hawai‘i Department of Health Environmental Management Division in 2017 titled: Report To The Twenty-Ninth Legislature State of Hawai‘i 2018 Regular Session: Relating To Cesspools and Prioritization for Replacement (DOH Cesspool Prioritization Report) detailed a prioritization method to identify high-priority cesspools across the state (Hawai‘i State Department of Health: Environmental Management Division, 2017). However, new data and recent directives by the

Cesspool Conversion Working Group (CCWG) and Hawai'i State Department of Health (DOH) have provided the necessary information and catalyst to reevaluate the original prioritization methods and framework. Prioritization of cesspool areas helps the State use its limited resources spread over a large diverse archipelago more efficiently, reducing any uncertainties to determine vulnerable areas of contamination. This project aims to provide the CCWG and its Data and Prioritization Subgroup with updated information and data through the creation of a geographic information system (GIS) tool titled: the Hawai'i Cesspool Prioritization Tool (HCPT).

Objectives

The HCPT will assist the CCWG in creating a long-term cesspool upgrade plan for delivery to the Hawai'i State Legislature in 2022. This project's main objectives are to:

1. Identify a comprehensive list of factors that will assist in the creation of a new cesspool prioritization and hazard assessment for the four main Hawaiian Islands;
2. Examine and categorize previously uncategorized (Priority Level 4) cesspools;
3. Reevaluate the 2017 DOH Cesspool Prioritization Report. Provide recommendations based on new findings where appropriate;
4. Identify possible exemption criteria for cesspools in areas not in need of time-sensitive cesspool upgrades;
5. Develop a web-based tool to prioritize and view specific cesspools based on identified attributes and data.

Comparison to 2017 Prioritization

The DOH requested that the results of previous efforts to categorize cesspools not be included in the new priority ranking methodology. Nonetheless, 2017 priority areas are overlaid onto the HCPT maps for comparison purposes and transparency.

The two prioritization efforts share some overlap in their methods to evaluate the hazards cesspools pose, including using some of the same inputs and assumptions involved in individual calculations. However, there are also significant differences concerning the methodology and results. For example, the previous prioritization effort evaluated the risk ranking of onsite sewage disposal systems (OSDS) at the resolution of broad geographic regions, e.g. Upcountry Maui. The HCPT treats all cesspools as nonpoint pollution sources, lumping them into finer scale frameworks of United States Census Bureau tracts, blocks and block-groups. Additionally, the HCPT algorithm does not require inputs in the form of documented impacts from cesspools, as previous assessments have. Doing so would limit where the tool can be applied, and would inherently result in bias towards places that have

previously been selected for scientific studies or routine monitoring. The method in the HCPT decreases subjectivity in defining prioritization areas and simplifies public interactions with the tool, while still maintaining in-depth analysis of individual cesspools for DOH personnel. Additionally, the HCPT did not evaluate existing infrastructure elements such as nearby sewer mains, injection wells, or future sewer plans. However, these are essential elements that should be included in an overall conversion scheme.

There is some usefulness in understanding the process used for previous efforts to prioritize cesspools as a mechanism to evaluate the new results. **The information provided below is not part of the HCPT and included for reference and comparative purposes only.** The 2017 DOH Cesspool Prioritization Report identified fourteen critical locations that should receive priority when implementing a replacement plan. The previous report's prioritization method relied upon the following five factors:

1. The density of cesspools in an area;
2. Soil characteristics;
3. Proximity to drinking water sources, streams, and shorelines;
4. Groundwater inputs (agriculture and injected wastewater); and
5. Physical characteristics of coastal waters that may compound the impacts of wastewater.

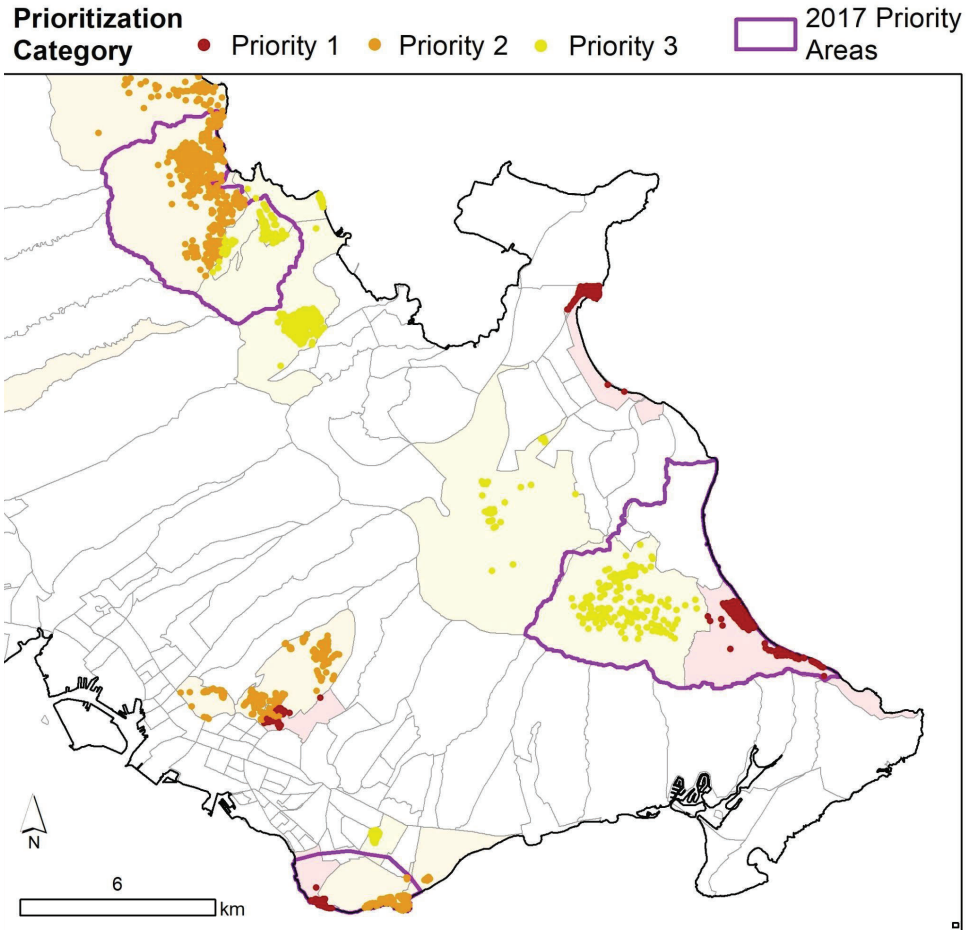


Figure 1. *Example map of Oʻahu highlighting the locations of previous 2017 priority areas paired with the newly developed priority scheme, synthesized by census tracts. (Updated 2022)*

In order to demonstrate how the newly designated priority areas overlap with the 2017 priority areas from DOH, the authors also performed a comparative analysis, detailed in Appendix A. There readers can view how the HCPT results fit into previous efforts. Further discussion of why and how the schemes differ follows in subsequent sections. **Finally, with direction from DOH and the CCWG, the HCPT continued use of the 2017 priority category titles, i.e. Priority Level 1, 2 and 3. However, the definitions that accompany the old 2017 priority categories are not continued and do not apply to the HCPT.**

Conceptual Model

Before continuing, it is important to clarify the language used in this report. The terms risk and hazard are often used interchangeably. However, for this exercise, the term hazard will be used to denote potential for harm. The Canadian Centre for Occupational Health and

Safety (2021) defines a hazard as "any source of potential damage, harm or adverse health effects on something or someone." Risk is defined as "the chance or probability that a person will be harmed or experience an adverse health effect if exposed to a hazard, see Equation 1 (Canadian Centre for Occupational Health and Safety, 2021). Identifying specific risks, such as the number of people who will contract an illness from cesspool pollution is beyond the capability of this assessment. We can, however, estimate the risk of a hazard that may cause harm to people or the environment and offer a priority ranking to achieve this goal. In our prioritization, this was done through evaluation of the cesspool distance to a hazard or potential for exposure to wastewater contaminants through mechanisms such as swimming or drinking water. A complete evaluation and integration of exposure science is beyond the scope of this project.

$$\text{Risk} = \text{hazard} \times \text{exposure}$$

Equation 1. *Risk equals hazard times exposure.*

Tool Structure

The current report and HCPT expand on the previous efforts to provide a quantitative, up-to-date hazard assessment of geographic areas that may be adversely impacted by cesspool pollution. The HCPT uses the most up-to-date data available and its methods are reproducible and transparent. Relevant information, including source code, is publicly accessible through published notes books located on GitHub (click here to view). It was developed in consultation with local experts, engineers, and government associates to prioritize cesspools in the allotted time frame of the contract and CCWG needs. Though the prioritization process is inherently contextual, every effort has been made to create a non-biased objective evaluation of cesspool hazards in an equitable and fact-based methodology. There will be shifts in ranking between the old prioritization method and the new method. **The shift in ranking is to be expected due to the amount of available data and the use of census tract areas to frame the overall scores. For the few areas that have previous scientific data supporting the presence of wastewater pollution, they should be treated accordingly and factored in separately when developing conversion schemes.** The current HCPT does not evaluate other sources of groundwater pollution (agriculture or injected wastewater) or integrate observed coastal or groundwater quality observations as did the previous report. It was determined that other sources of groundwater pollution can significantly complicate the behavior of wastewater tracers, and the geographic extent of water quality data availability is very limited for statewide application.

Therefore, observation-based tracer datasets were intentionally excluded from the algorithm used to calculate prioritization scores. Instead, the HCPT's results are validated against the most robust statewide assessment of coastal wastewater impact available using observed and modeled nitrogen impacts from the Hawai'i Act 132 statewide study of sewage contamination.

The HCPT uses the following criteria (risk factors) to calculate a geographic prioritization score:

1. Distance to municipal or domestic drinking water wells;
2. Well capture zones;
3. Distance to streams and wetlands;
4. Distance to coastline;
5. Sea level rise zones;
6. Precipitation;
7. Depth to groundwater;
8. Groundwater flow paths;
9. Soil characteristics;
10. Cesspool density;
11. Coral cover;
12. Fish biomass/recovery potential;
13. Beach user-days;
14. Proximity to lifeguarded beach; and
15. Coastal ocean circulation proxy

As mentioned previously, adverse impacts from cesspools are cumulative. Therefore, it was important to identify a proper scale to evaluate the updated priority ranks. The HCPT frames cumulative cesspool pollution within United States Census Bureau tract boundaries to achieve this goal. The United States Census Bureau (n.d.) identifies census tracts as "small, relatively permanent geographic entities within counties (or the statistical equivalents of counties) delineated by a committee of local data users. Generally, census tracts have between 2,500 and 8,000 residents, and boundaries that follow visible features." Using census tract boundaries allows for more detailed resolution and increases objectivity from previous efforts. There are approximately 320 census tracts within the state of Hawai'i, and of these, just over 100 have a sufficient number of cesspools (greater than 25) to be ranked by the HCPT. Two additional census layers are available for analysis and include census block groups with 837 total and 236 ranked (greater than 20 cesspools) and census blocks with 22,780 total and 1,107 ranked (greater than 10 cesspools).

The new prioritization method utilized in the HCPT tool places each geographic area into three priority categories (Figure 1):

1. **Priority Level 1:** Greatest contamination hazard (map color of red).
2. **Priority Level 2:** Significant contamination hazard (map color of orange).
3. **Priority Level 3:** Pronounced contamination hazard (map color of yellow).

When homeowners use the HCPT web-based map tool they will enter a property TMK or address into a search bar. The HCPT will display the cesspool location(s) on a map with a color-coded dot of the corresponding priority. In addition, the surrounding census tract will be highlighted in the hazard category color to further help display the data. The public portion of the HCPT was designed to help homeowners obtain the most pertinent information in the fastest method possible. The DOH will have access to individual layers and ranking of cesspools in a similar online map tool for planning and management purposes.

While updating the prioritization method, the authors were asked to make recommendations to identify potential exemption criteria for groups of cesspools that are unlikely to severely impact the environment and human health. **In reality, all cesspools are substandard sewage disposal systems and pose some threat to their surroundings. Therefore, each cesspool in the inventory was assigned a priority ranking, and none are considered by this analysis to be exempt from conversion.** However, from a policy perspective, it is untenable to review every single system on an individual level. Therefore, the tool results are consolidated into prioritization areas using census boundaries at multiple different resolutions. In order to not skew the census area priority ranks by including areas with a small number of cesspools, a minimum number of cesspools within each census area was established, and those census areas with less than the minimum number were not ranked. Specifically, the cesspools in census tracts with less than 25 units were not ranked on the tract level, cesspools in census block-groups with less than 20 units were were not ranked on the block-group level, and cesspools in census blocks with less than 10 units were were not ranked on the block level. **Despite the fact that these more isolated cesspool units are likely to be less prone to contributing to cumulative effects, they nonetheless do receive a priority score, but only at the individual cesspool level.**

Tool Development

After researching related legal, academic, and gray literature via internet searches and academic databases including Google Scholar, Web of Science, and Pubmed, a simplified

geospatial hazard-based model was developed to visualize, assign, and rank multiple factors to point locations on a map. This method assigns a cumulative hazard score to each cesspool in the inventory. Similar tools for OSDS prioritization described in the literature were considered when developing this methodology for Hawai‘i, and include Hawai‘i Department of Health (2017); Flanagan et al. (2019); Kinsley et al. (2004); and Oosting & Joy (2013). Although the HCPT provides a hazard score for every individual cesspool in the inventory, combination effects of nearby units, as well as the practicalities of management approaches mean it is more beneficial to aggregate these scores by pre-defined geographic areas, similar to Kinsley et al. (2004) and Oosting & Joy (2013). However, Hawai‘i has a unique political structure and both highly urbanized and rural populations, making traditional ecological/political aggregate frameworks, such as watershed boundaries, incompatible. Instead, the HCPT uses existing census-designated boundaries as described in the Background and Motivation section. The prioritization scores of all cesspools within each census area are averaged, and this average score is then assigned to the census-boundary area to represent the cumulative hazards from all cesspools in that unit. **Although the variables used likely have various interrelationships, each input in the tool is distinct in its representation of hazards and treated as independent of one another for simplicity.**

By using an aggregated risk and hazard assessment methodology, the tool estimates the likelihood of adverse impacts or pressures to a given area resulting from human activities (cesspool effluent discharge). Additionally, the HCPT differs from other models by incorporating societal and environmental values such as beach visitor use, fishery health, coral cover, and the potential for cesspool remediation to improve coastal ecosystems. The tool cannot evaluate all social and environmental information relevant to cesspool pollution or decision-making associated with cesspool conversion, nor is the tool intended to replace robust planning, policy, and management processes. **The tool is merely a starting point for assessing the areas with the most significant hazards and is meant to support development of a thorough and thoughtful cesspool conversion plan. The tool cannot make decisions regarding cesspool conversion prioritization timelines.**

Developing a tool that is unique to Hawai‘i means there are several differences from the method(s) used previously to prioritize cesspool hazards in Hawai‘i, and methods that exist across the continental United States. These differences include:

- Incorporating high-confidence groundwater models to determine effluent flow paths and to link each cesspool unit to the location along the coastline most affected by its discharge. These models have previously been validated through the

sampling of coastal wastewater indicators, and are considered to be relevant for this purpose.

- Considering impacts to social and ecological assets located downgradient from each cesspool as a part of the overall ranking. These include lifeguarded beaches, coral reef habitat, fish biomass, and a proxy for coastline usage.
- Calculating cumulative hazard scores (based on nonpoint source pollution dispersion) using non-arbitrary census-designated areas at multiple resolutions to develop a more realistic nonpoint source pollution framework.
- Excluding parameters such as lot size or system age. Hawai‘i is an outlier when comparing continental models to evaluate OSDS priority zones because of limited real estate space and the high density of OSDS per acre. Age was excluded because cesspools have similar impacts irrespective of maintenance or system age.
- Assumes all properties are occupied year-round versus actual property use (i.e., seasonal, vacation rental)
- Excludes commercial and industrial properties.
- Incorporates sea level rise projections from the Hawai‘i Sea Level Rise Viewer.

The HCPT moves beyond qualitative methods and assessments using water quality impact research, which is subject to sampling bias and limited for statewide analysis. The focus is instead on measurable environmental factors, regulations, and values (with statewide data) tied to water quality to create a quantitative assessment that can add future data to refine scores if needed. However, not all areas have data for measurable impacts. Therefore, some assumptions were made when data gaps existed or simplifications were required, which will be discussed further in elements of the Methodology section.

The HCPT development team aims to use an iterative user design process for its web-based map/public viewer. Our goal is to understand human dimensions and needs regarding cesspool prioritization information. Because the process is iterative, several updates of the tool may be created to serve different audiences. The audience for the public map tool is primarily homeowners, while the advanced map tool is developed for internal DOH scientists, and other state employees indirectly involved in the cesspool conversion issue and associated wastewater challenges.

Methodology/Dataset Categories

This section will describe the framework and systems used to create the HCPT as well as the challenges encountered. The results of the tool rely on the best publicly available data.

As the tool was being developed, several challenges were identified regarding data consistency and quality. These include:

- TMK number discrepancies with county tax data and DOH database.
- Accuracy of OSDS classification (cesspool, septic, aerobic treatment unit).
- Accuracy of the number of OSDS.
- Limited statewide data regarding water quality indicators/impacts.
- Limited data on sewer laterals (private/municipal).

Physical Drivers and Environmental Quality Hazards

Physical drivers, for this report, are elements that control the movement, reduce capacity, or otherwise affect the overall level of impact a cesspool has on the land and also the water quality nearby. Much of the data used in the HCPT is also used by agencies like DOH or county water supply departments for source water protection and public health. The impact an individual cesspool has on its surroundings depends on many factors. Even with readily available data, it is difficult to assess impact due to various environmental factors and complex interactions. No tool can fully predict or assess all environmental variables. Primary factors that contribute to the HCPT include physical factors such as soil suitability and surrounding geology, location, and proximity to environmentally sensitive areas like wetlands and coastlines. Additional factors include social and ecological assets affected through the coastal discharge point of effluent, and cumulative impacts of other nearby cesspools. **Importantly, the tool's concept is based on the hypothesis that the more cesspools in an area, the less effective natural soil and subsurface systems will be at degrading cesspool effluent.**

Because this project was designed to assess cesspools statewide, only data that was at the statewide scale were used. Though this may exclude other important datasets, DOH requested a statewide methodology. Where these datasets had missing values, gaps were filled using the best available proxies described below in their categories. **Generally, only datasets with a minimum of 90% geographic coverage of the state were used.** Often, the geographic coverage of many of these datasets only extended across the four main Hawaiian Islands. While it is recognized that there are cesspool impacts on the outer islands of Molokaʻi, Lanai, and Niʻihau, these islands were not included in a number of key datasets necessary to this analysis. The authors recommend that DOH establish a ranking system for these islands when time and funding allows. The relationship between the cesspool location and the geographic distribution of the hazard or risk-factor was either defined as a scalar value (1 to 100) or a categorical value (0 or 100) through individual

scaling factors based on regulatory or evidence-based thresholds. For example, any cesspool within 50 feet of the coastline was assigned a scalar score of 100 based on the state regulatory setback distance.

Value-Based Environmental/Human Hazards

While the physical factors can control the level of impact a cesspool typically has, other factors can help quantify human and environmental value within the areas affected by the discharge of cesspool effluent. In order to develop scores for these values, the HCPT uses groundwater models developed by DOH. The models assess where cesspool effluent will discharge along the coast and where impacts will be realized. Because DOH is tasked with protecting human and environmental health, the following ecological and social factors were included in the calculation of priority scores:

1. Lifeguard tower locations/swimming beaches
2. Coral cover/recovery potential
3. Resource fish biomass/recovery potential
4. Coastline usage and visitation (user-days)

More detailed information about each input is provided in the sections below.

Cesspool Locations/Grouping

The basis of the HCPT begins with cesspool locations. Cesspool location data was obtained from the State of Hawai'i Geospatial Data Portal. O'ahu cesspool location data was created in 2008 and the other island(s) cesspool data was developed in 2010. However, it was evident that updates would be needed to develop an accurate assessment of cesspool prioritization in 2021. Efforts were made to update known errors, incorporate data from 2020, add cesspools installed before the 2016 statewide ban of new cesspools, and remove cesspools that have been converted. **The authors recommend that all statewide cesspool data continue to be refined and, if possible, ground-truthed to ensure the most accurate results of the tool and for future statewide OSDS management and cesspool conversion.**

The prioritization framework and algorithms rely on having accurate information regarding the location and number of cesspools. Updates include the incorporation of recent (up to 2020) permitting data from the DOH Individual Wastewater System Database (IWD) including newly (before 2017) permitted cesspools and units that have been converted to septic tanks or other treatment systems. County tax records and dwelling database information was also used to exclude parcels that did not contain residential buildings with at least one bathroom and bedroom. Additionally, the cesspool inventory was originally

created at the TMK level, resulting in tens of thousands of TMK's with multiple cesspool units on some parcels. These units were extracted out and defined as individual geospatial points, thereby ensuring that each individual cesspool was represented as a discrete point on the landscape. While these updates provided greater confidence in the inventory used, significant work on the cesspool inventory is still required to remedy inconsistencies in the database. Future database research development is warranted. However, doing so is outside of this project's scope and is recommended for completion when sufficient time and funding can be made available.

In order to develop a cumulative hazard score, cesspools need to be grouped into appropriate and logical clusters. Several methods were explored, including using watershed or aquifer boundaries. For the final analysis, United States Census tract data was chosen. Census tracts are small, statistical subdivisions updated by local participants prior to each decennial census to provide a stable set of geographic units to present statistical data. (U.S. Census Bureau, 2021). According to the United States Census Bureau, census tracts cover areas with fairly standardized population sizes between 1,200 and 8,000 people. A census tract usually covers a contiguous area, however, the spatial size of census tracts varies widely depending on the density of settlement. Census tract boundaries are defined with the intention of long-term stability so statistical comparisons can be made through time, though census tracts are occasionally split due to population growth or merged following substantial population decline (U.S. Census Bureau, 2021). Additionally, census tract boundaries generally follow visible and identifiable features, though they can follow nonvisible legal boundaries, such as a minor civil division or incorporated place boundaries to allow for census-tract-to-governmental-unit relationships since these boundaries tend to remain unchanged between censuses (U.S. Census Bureau, 2021).

Synthesis: Prioritization and Ranking

To combine data from multiple risk factors, such as depth to groundwater or soil suitability at the individual cesspool level, the tool overlays the individual fifteen input data layers (risk factors) onto each cesspool point's attribute data table. Each layer's data values are then normalized to a 0-100 score specific to the risk factor at each cesspool point. Individual methods used to convert various input data values to 0-100 priority scores are described in the Input Data section below. For clarity, these individual scores will be referred to as **Risk-Factor Scores**.

Next, the fifteen **Risk-Factor Scores** are averaged to generate a single **Cesspool Prioritization Score** for each cesspool. Therefore, each of the 82,000+ cesspools in the inventory has an individual prioritization score, making it possible to resolve differences at

the individual cesspool level. However, because the impacts of wastewater effluent are cumulative, the tool then aggregates cesspools into census-based geographic areas, as described in the section above, and uses the arithmetic mean **Cesspool Prioritization Score** of all cesspools within each census unit to assign a **Census Unit Prioritization Score** to every census unit that contains more than a minimum number of twenty-five cesspools. **Census Unit Cesspool Prioritization Scores** are calculated at the census tract, census block group, and census block levels to provide flexibility in management applications. To further digest these scores for management purposes, it was decided to use the final **Census Unit Prioritization Scores** to categorize each census unit into one of three priority levels, which will be referred to as **Prioritization Categories.**

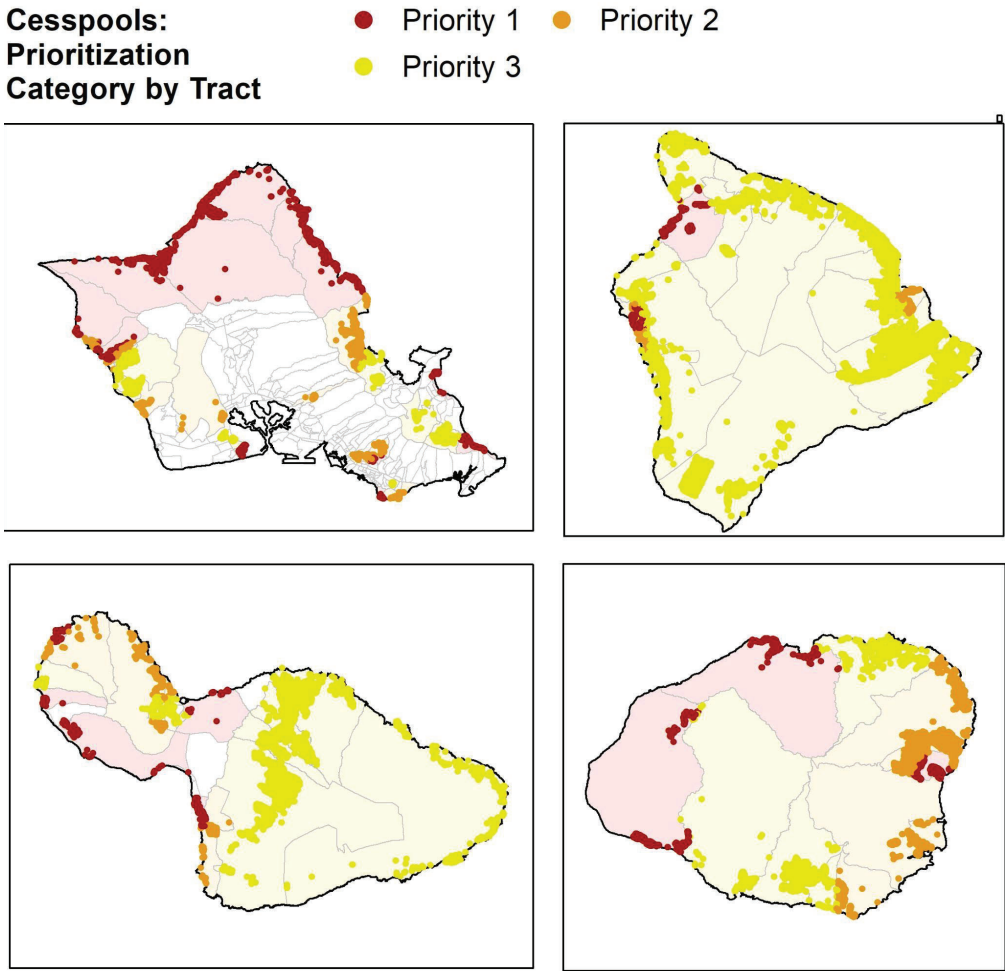


Figure 2. *Statewide map highlighting the simplistic design of the three-tiered categories, census tracts, and their respective colors to signify a priority score. (Updated 2022)*

The new prioritization method (Figure 2) places each geographic area into three Prioritization Categories that include:

4. **Priority Level 1:** Greatest contamination hazard (map color of red).
5. **Priority Level 2:** Significant contamination hazard (map color of orange).
6. **Priority Level 3:** Pronounced contamination hazard (map color of yellow).

After reviewing the prioritization score results, the findings revealed a fairly normally distributed pattern among the three groups. And, through review of Oosting & Joy's (2013) use of raster data preparation and risk contouring –which represent the mean risk and increments of the standard deviation above and below the mean– it was determined that quartiles were an appropriate way to categorize the HCPT results based on our methodology and data. The difference in how to categorize the results may be because of the available HCPT cesspool location data, versus Oosting & Joy's (2013) need to identify a geographic area of risk. HCPT categories are defined by the mathematical quartiles of 25% and 50% with the top 25% highest scoring areas designated with the Priority Level 1 ranking, the next lower 75% to 50% with Priority Level 2, and the bottom 50% as Priority Level 3. The breakpoint categories can be revised based on management strategies, policy needs, or updated research and data.

A cutoff was used to exclude census units with few to no cesspools. Tracts with less than twenty-five cesspools, block groups with less than twenty, and census blocks with less than ten were excluded from the analysis to reduce bias from small sample sizes. They are displayed with a white color. Individual cesspools in these locations were still ranked and results can be visualized in the DOH Input Data application. Additionally, a sensitivity analysis was performed to assess the effect of changing the importance (weights) of the different input data in the overall ranking, and the results are discussed in Appendix B.

Validation Methods

The accuracy of models is typically tested through comparing results to real-world observations. For example, an atmospheric climate model can be adjusted or validated based on rainfall amounts observed throughout the model area. However, the prioritization results produced by the HCPT lack a single observable indicator to compare. Cesspool discharge produces impacts across many sectors such as drinking water aquifers and coastal ecosystems. The impacts on people and the places that are valued manifest in multiple ways that often do not overlap. Therefore, there is no single criteria or tracer dataset that can be used to calibrate elements within the HCPT to determine how important, or not, the factors used actually are. While there is existing precedent from the

previous 2017 prioritization efforts to use documented impacts to drinking water or human health as a component in the former prioritization; **the HCPT authors determined that observations or study-based datasets (e.g. water quality data) are too geographically limited to be included in the prioritization algorithm without leading to significant sampling bias and skewing of the results.**

The HCPT team concluded that validation with the Hawai'i Act 132 sewage study, was the best method to compare results to a statewide physical indicator dataset. Hawai'i Act 132 sought to fill a statewide data gap by funding a study led by Smith et al. (2021) targeted at detecting OSDS wastewater in coastal waters. The study provides the most comprehensive and reliable nearshore nutrient availability and source tracking data of any effort completed to date in the state of Hawai'i. While the geographic extent of this study is vast, limitations relating to its sampling extent and the utility of the tracer datasets used (nearshore algal $\delta^{15}N$ and algal %N measurements), still preclude its application as a driving factor in the prioritization score calculation. However, it does provide the best opportunity to validate how reasonable the HCPT prioritization results are in terms of addressing areas with observed impacts from OSDS derived nitrogen. As of August 2021, the Act 132 study is under review by the CCWG, and provisional results were provided for use in validating this prioritization effort.

The authors would also like to acknowledge the existence of other statewide datasets that relate to possible nutrient or pathogen impacts from OSDS. These include nearshore Enterococcus data collected by the DOH Clean Water Branch Hawai'i Beach Monitoring Program, groundwater nitrate data collected by water system operators and reported to the DOH Safe Drinking Water Branch in compliance with the federal Clean Water Act, and repositories such as National Water Quality Monitoring Council database which includes data from studies conducted by the United States Geological Survey and the United States Environmental Protection Agency. Every effort was made to analyze available data to test relationships with possible impacts from cesspools. These efforts indicated that either the geographic extent of most study-based tracer datasets was too limited, or that the primary drivers of variability in statewide monitoring datasets were not sufficiently driven by OSDS impacts. Coastal Enterococcus data was found to be primarily driven by surface water runoff quality (Strauch et al. 2014; Byappanahalli, Roll & Fujioka, 2012; Byappanahalli et al. n.d.), and groundwater nitrate data on the statewide scale appears to be primarily driven by agricultural influences (Mair and El-Kadi, 2013; Moon, 2021). While OSDS prevalence may be a factor in these datasets, it was far beyond the scope of this work to deconstruct.

Input Data: Functions

This section will describe the data that was incorporated into the tool as well as provide summaries on why and how certain types of data or methods were used to evaluate and create a prioritization scheme. Formerly, the 2021 HCPT weighted each risk factor equally in the prioritization calculation, with each factor normalized to have a score of zero to one hundred; this process was created through collaborative meetings with DOH and CCWG input. An update was performed in mid-2022 to better represent the disparity in importance of each of the input risk-factors. An expert-informed process was used to identify new weights for each risk factor, see appendix C for details, and the tool was re-run with the new weights. All figures and tabular results in this report reflect this 2022 revision of the tool and present results generated with the new weighting methods.

Threshold-Decay Function

In order to convert scalar data values associated with each risk factor (e.g. the distance in meters to the coast or a stream) to a 0 to 100 prioritization score, customized algorithms were developed. In general, the vector distances or other scalar data geographically derived from cesspool locations was used as a variable in a combination approach that both applies existing regulatory thresholds as well as a more physically based decay function. The decay part of the function approximates the behavior of solute transport through underlying geology via a highly simplified version of the one-dimensional convective-dispersive solute transport equation (Van Genuchten, 1982). This equation describes contaminant concentrations with travel distance through an aquifer (Figure 3). The function is simplified here by excluding the scale-dependent parameters that control the movement and attenuation of individual solutes in aquifers. The simplified function only applies the median value of each risk-factor distribution as a control parameter on the rate of decay with distance from the feature of interest. This method ensures that cesspools just past the threshold values are still deemed to be at higher risk than units that are significantly farther away. For additional information on the threshold-decay function used for calculating priority scores for some risk factors, and for the Python code that executes it, please see the Code Notebook associated with this report.

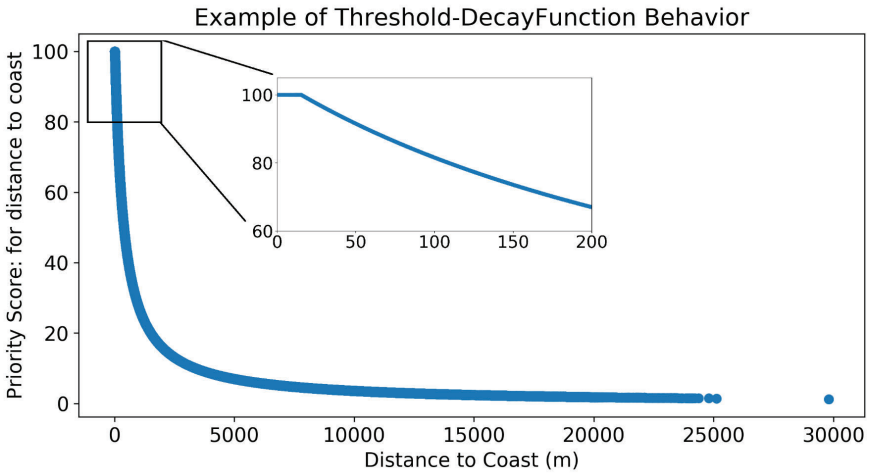


Figure 3: *Plot showing how the threshold decay function converts data from each risk factor (in this case Distance to Coastline in meters) to a 0-100 score. Note the inset showing how the priority score equals 100 for all units within 50 ft (15.24m) from the coast (the state's regulatory threshold), and how the score decays with greater distances from the coast.*

Groundwater Flow Paths

For the HCPT, groundwater flow paths were not considered as an independent risk factor. Instead, they are used to link each cesspool location to a corresponding location along the coastline where the cesspool's effluent is estimated to be discharged. The calculation of flow paths was done by application of island-wide, MODFLOW-based groundwater models provided by DOH and thoroughly documented in Whittier and El-Kadi (2009, 2014). While these groundwater models are the best available models for the entire state, the results are subject to their own assumptions and limitations presented in their respective documentation. Groundwater flow paths originating from model cells containing cesspools were calculated using the MODPATH code within the Groundwater Modeling System (GMS) graphical user interface (Pollock, 2012). Each flow path eventually discharges to the coastline. The flowpath vector traveled from the cesspool-containing cell center to the cell center of the end-cell that intersected the coastline. End cells were defined as square polygons with center points distributed evenly every 250 meters along the coastline of Oʻahu, Maui, and Kauaʻi, and every 500 meters on Hawaiʻi Island. **In theory, a cesspool located on the land surface can be linked directly to the coastline location to which its effluent will eventually discharge after traveling through the aquifer.**

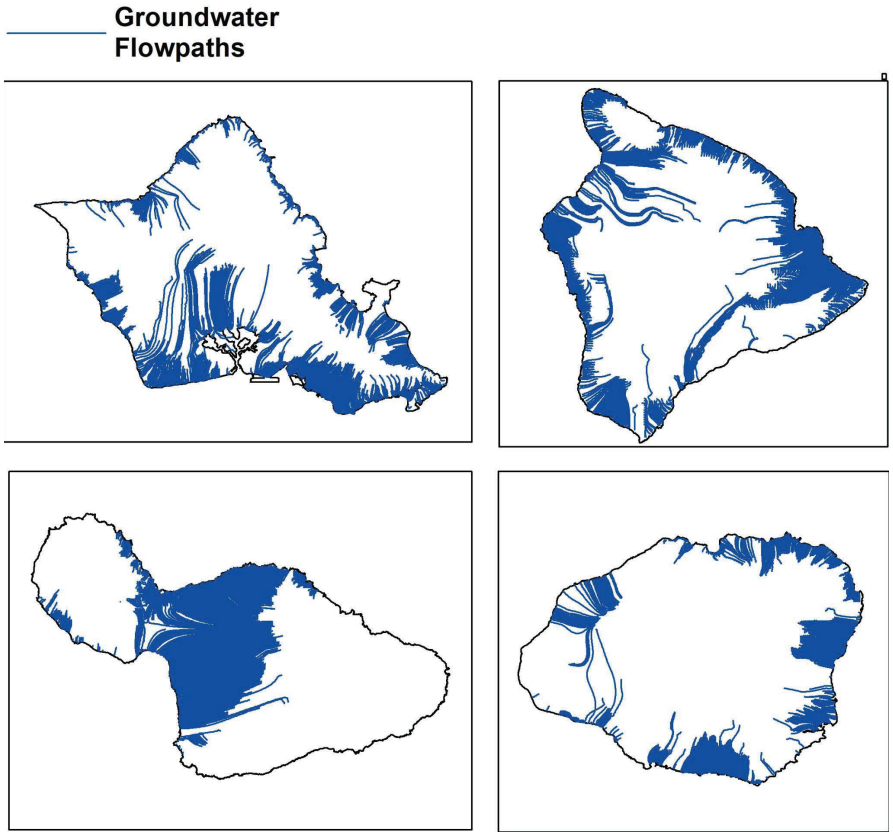


Figure 4. *Example map of four major Hawaiian Islands highlighting groundwater flow paths to the coast.*

Input Data: Risk Factors

Coastline/Distance to Coastline

Cesspools adjacent to the coastline face numerous challenges such as sea level rise, erosion, and shallow depth to groundwater. Studies such as Abaya et al. (2018) have demonstrated that distance to the coast and geology can have dramatic effects on the travel time of wastewater pollution entering the ocean. The HCPT uses a basic geographic distance calculation to the nearest point on a Hawai‘i coastline GIS shapefile to assign a distance to each cesspool in the inventory.

Coastline Prioritization Score Algorithm

For the conversion of distance to coastline to a prioritization score, the threshold-decay function was applied with the maximum risk score (score of 100) assigned to cesspools located closer to the coast than the regulatory threshold of 50 feet or 15.24 m (HAR 11-62).

For cesspool points farther than 50 feet, the score was exponentially reduced with additional distance.

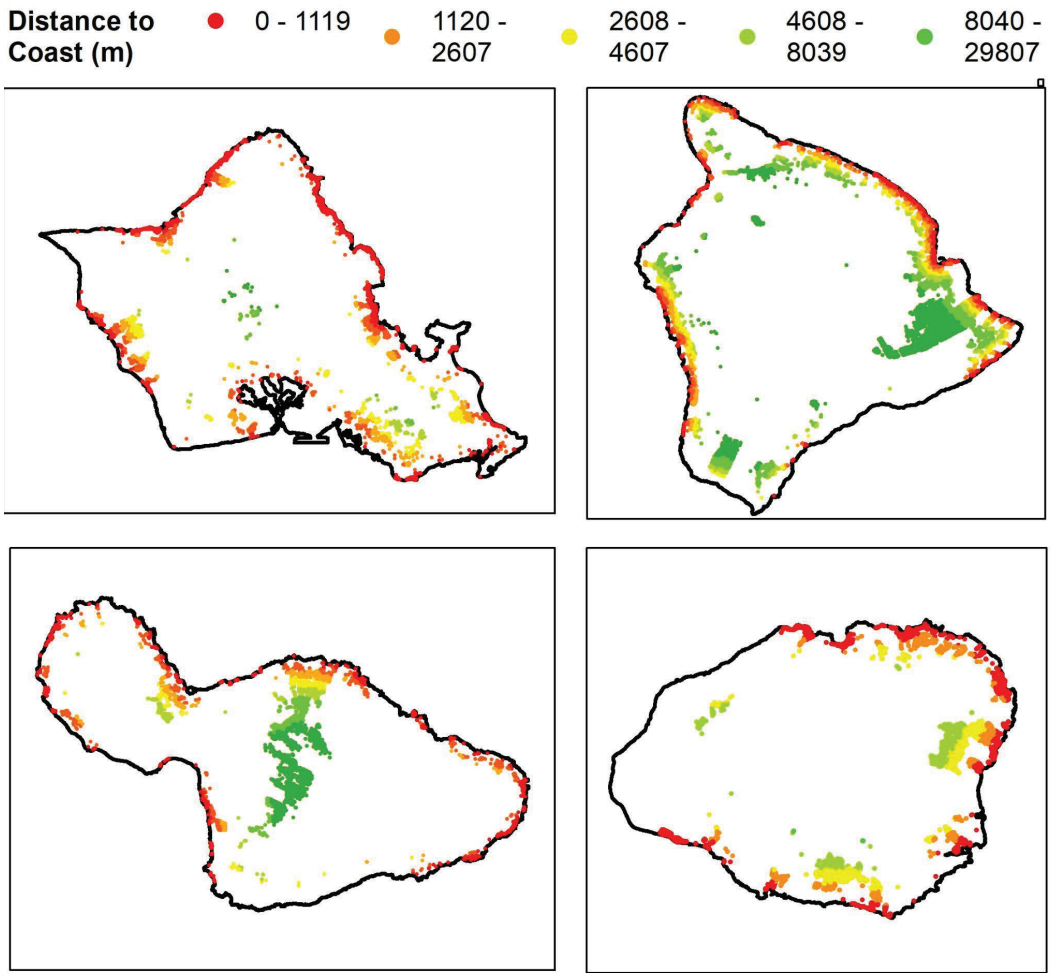


Figure 5. *Example map of four major Hawaiian Islands highlighting cesspool proximity (distance) to the coastline. Red indicates a cesspool is near the coastline, in decreasing order, orange, yellow, and green signify a further distance from the coast.*

Drinking Water Well Locations/Distance to Drinking Water Wells

According to the Environmental Protection Agency (2020), a failing onsite sewage disposal system or cesspool that is located too close to a drinking water well can contaminate the source. Protecting drinking water is especially important in Hawai'i, where much of the state's drinking water comes from underground aquifers, some of which are the sole source (Gingerich and Oki, 2000). Previous studies such as Mair and El-Kadi (2013); Verstraeten et al. (2004); Oluwasola et al. (2017); and Schaider et al. (2016) indicate that the OSDS distance

to a drinking water well is an important factor to ensure a clean and safe drinking water supply. Additionally, Hawai'i Administrative Rules Title 11, Chapter 62 (HAR 11-62) dictates that a potable water source serving public water systems must be a minimum horizontal distance of 1,000 feet (304 meters) from a cesspool. The Hawai'i Wellhead Protection Program (Whittier et al., 2010) uses U.S. EPA (2006) guidance to identify near-wellhead (Zone A) and source-water (Zones B and C) zones that require protection from contaminants. Zone A is delineated through a geographic distance from the wellhead and Zones B and C are delineated through modeled capture zones or aquifer boundaries. Finally, the DOH ranks protecting human health and drinking water as one of its most important duties (Pruder, personal communication July 2, 2021). Therefore, this factor is vital in the HCPT updated prioritization scheme.

To incorporate this type of hazard into the tool, locations of pumping wells were acquired from the state well inventory from the Commission on Water Resources Management (CWRM). Each well is associated with a use code (agricultural, domestic, industrial, irrigation, military, and observation) as well as an identifier for abandoned and unused wells. After analysis, 910 of the 5,286 wells within the CWRM dataset were designated as domestic use, and 534 were designated as municipal, for a total of 1,444 active wells that were considered in the HCPT.

Drinking Water Well Prioritization Score Algorithm

The distance to domestic drinking water wells was assessed separately from the distance to municipal wells, and each cesspool received separate scores for proximity to any well and for intersection with municipal well capture zones as described in the section below. This is because municipal wells serve proportionally larger numbers of people, and domestic wells are often within close proximity to homes using OSDS. Each cesspool unit was assigned the distance between its location and the distance to the nearest domestic well, and a separate value for its distance to the nearest municipal well. The threshold value of 56 feet (17 meters) was used for municipal wells based on guidance from the Hawai'i Wellhead Protection Program (EPA, 2006; Whittier et al., 2010), which uses this distance as the Zone-A radius for the near source zone that provides protection against direct introduction of contaminants through and around the well casing. This distance was cut in half to 28 feet (8.5 meters) for domestic wells because of their generally smaller size and proximity to residential units. These threshold distances were applied within the threshold-decay function to calculate separate priority scores at each cesspool point for municipal and for domestic wells.

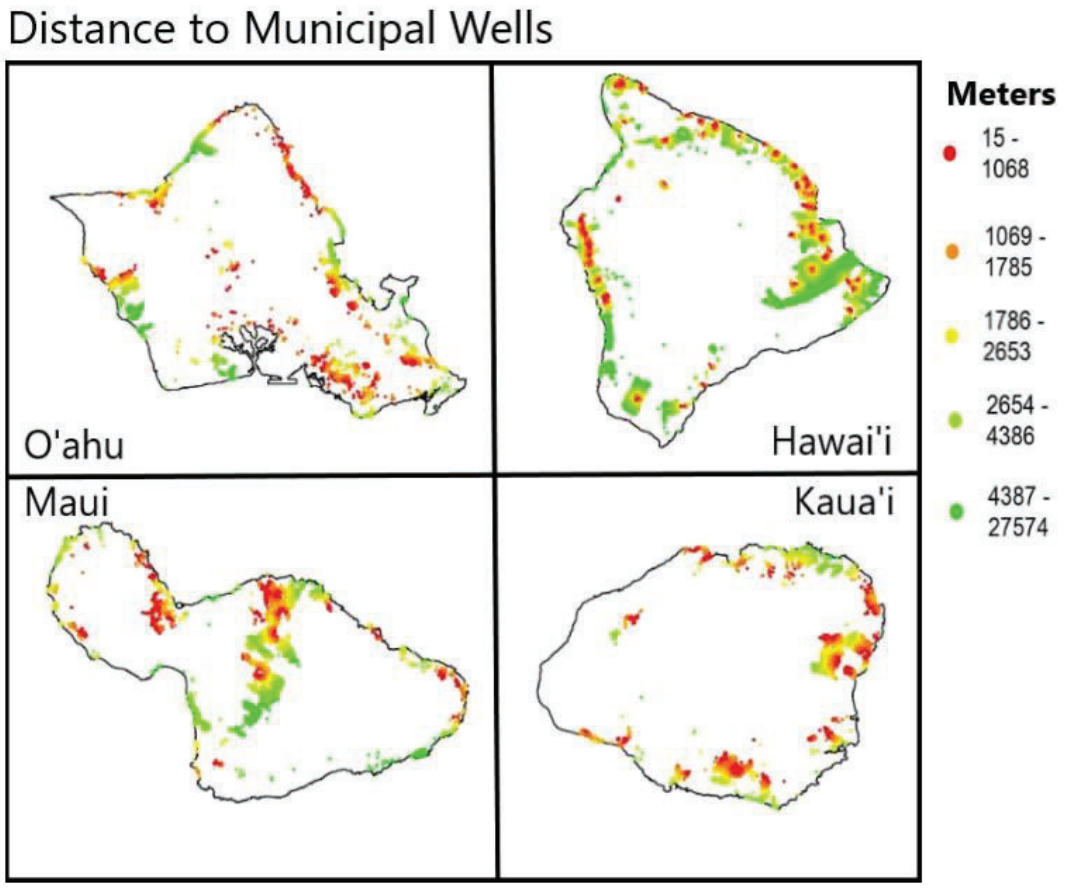


Figure 6. *Example map of four major Hawaiian Islands highlighting cesspool proximity (distance) to a municipal drinking water well. Red indicates a cesspool is near the associated wells, in decreasing order, orange, yellow, and green signify a further distance from a well.*

Well Capture Zones

Knowledge of the location and shape of a well capture zone is a fundamental element of groundwater management (Nagheli, Samani & Barry, 2020). To most accurately convey potential risks to drinking water supplies, the HCPT evaluated if a cesspool was located within a municipal well capture zone. This is largely because cesspool and OSDS effluent have the potential to contaminate drinking water supplies with enteric viruses and other pathogens that can withstand long travel times. Data on capture zone locations was provided by DOH and CWRM.

A capture zone defines the land area from which infiltrated recharge may ultimately contribute to the groundwater produced at a given well. These capture zones were

calculated through reverse particle tracking of flow in a groundwater model using MODPATH code. While the inclusion of a geographic distance factor and assessment of the modeled well capture zones has the potential to be duplicative, it was deemed reasonable considering:

1. The importance of drinking water and high risk of contamination cesspools pose to aquifers, and;
2. The inherent uncertainties of, and relatively low resolutions of available groundwater models in critical regions near pumping wells where groundwater gradients are extremely high.

Therefore, the chosen method considers both risks of contamination from nearby cesspools, even if they are not defined to be within a capture zone, as well as risk from geographically distant cesspools located directly upgradient from wells.

Well Capture Zone Prioritization Score Algorithm

Cesspools that fell within a 2-year travel time capture zone (Zone B) and the 10-year travel time capture zone (Zone C), were identified and scored accordingly. A 2-year travel time has the potential to have contamination reach the water supply more rapidly than a 10-year travel time. Units in the 2-year zone are assigned a numerical score of 100, those in the 10-year zone a numerical score of 50, and all other units received a score of 0.

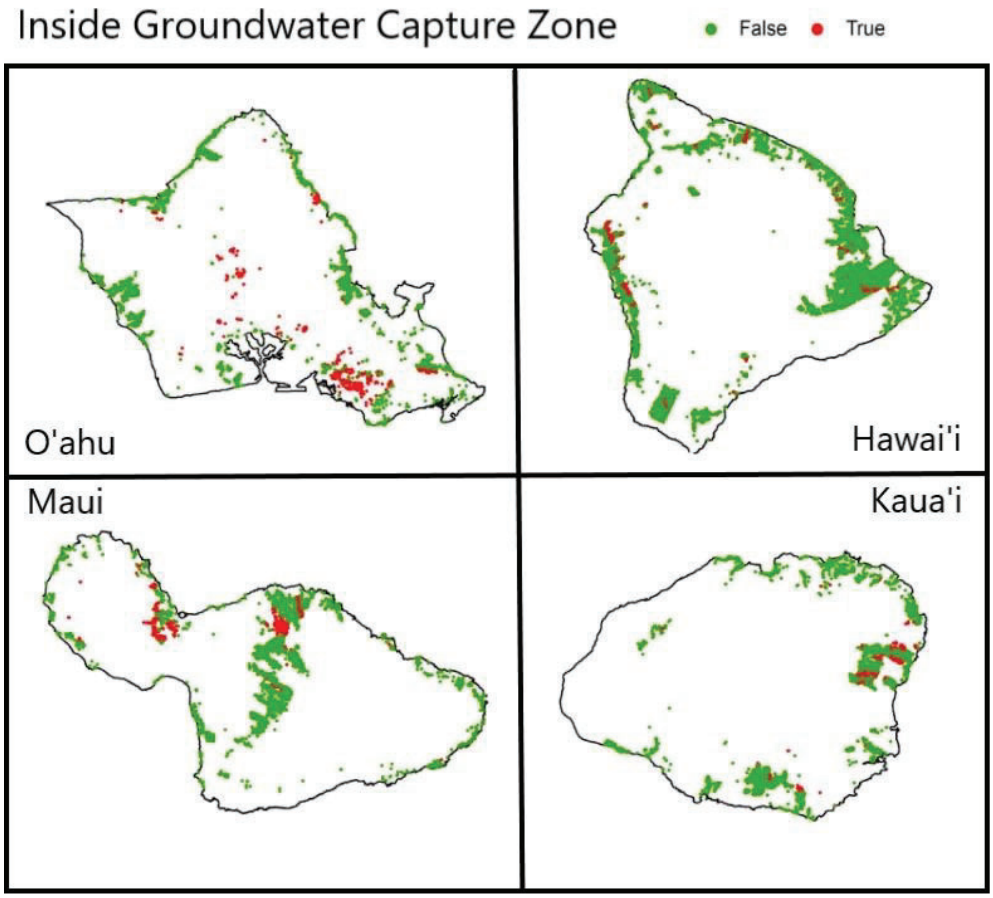


Figure 7. *Example map of four major Hawaiian Islands highlighting if a cesspool is located inside or outside the 10-year well capture zone. Red indicates the cesspool is in a capture zone, while green indicates the cesspool is not.*

Soil/Geological Data

Soil is essential for wastewater treatment systems to function properly and generally a hostile environment for bacteria in sewage (Hygnstrom et al. 2011). In typical onsite wastewater treatment fields, soil provides space for biological activity and filters pathogens and chemicals through its physical characteristics (Hygnstrom et al. 2011). Soil particles provide the necessary surface area for biological treatment to occur.

Soil suitability is an important factor around cesspools. Cesspools are substandard systems because they lack a primary treatment tank where non-oxygen demanding bacteria digest some of the waste and solids settle out. Additionally, cesspools do not have an engineered soil space (treatment field) to complete treatment, as an adequate wastewater treatment

system would. The soil surrounding cesspools may provide limited filtration and space for microbial activity, but this depends on the underlying geology and water holding capacity, along with the types of waste inputs from the home. In general, saturated soil or bedrock is a conduit that transmits pollutants to nearby water bodies. Many risk factors must be taken into account when evaluating how soils and geology influence pollution risk. Regulatory horizontal and vertical setback distances away from OSDS, though important, provide limited protection (Borchardt et al. 2010).

Statewide soil data was extracted from the Natural Resources Conservation Service (NRCS) database as part of the HCPT efforts. The NRCS has developed a methodology for assessing the suitability of soil for siting an OSDS unit based on properties recorded in nationwide soil surveys (NRCS, 2020). The NRCS suitability is based on the eight factors that control the treatment and infiltration of OSDS leachate, as well as the ease of treatment field installation. This method was previously used in Hawai'i's 2017 cesspool prioritization process (Hawai'i State Department of Health: Environmental Management Division, 2017), and its specific use for Hawai'i has been documented in Whittier and El-Kadi (2014). The HCPT modifies the methods used by Whittier and El-Kadi (2014) to assign a single soil-suitability score to each cesspool based on the factors and thresholds defined by NRCS, specifically, these parameters include:

1. **Depth to bedrock**: A measurement from the ground surface to the contact with continuous bedrock or cement pan;
2. **Flood frequency**: The degree to which the soil is subject to flooding or ponding;
3. **Filtering characteristics**: How well the soil filters out particulates and bacteria;
4. **Water infiltration rate**: How well water moves through the soil;
5. **Bottom seepage rate**: How quickly water will move from the lowest soil layer to the bedrock;
6. **Slope:** Measurement of the direction and the steepness of the ground surface. A slope of more than 15% is considered problematic for OSDS installation;
7. **Rock fragmentation:** Measurement of the fraction of rock fragments in the soil. A percentage of 3-inch rock fragments of more than 50% is problematic for OSDS pollution.

Consolidated Soil Prioritization Score Algorithm

To incorporate the seven soil parameters into the HCPT framework, a similar approach used by Whittier and El-Kadi (2014) was followed. The specific approach used thresholds based on the NRCS soil suitability assessment with an independent calculation based on the categorical values provided in Table 1. Specifically, a value for each parameter (except

subsidence) was extracted from the soil-survey GIS polygon features. Then a categorical value (1 to 4) based on the limitation classes below were assigned to each. The parameter values were averaged with Depth to Bedrock, Flooding, Filtering Capacity, and Slow Water Movement each having a weight of 1. Seepage From Bottom Layer, Slope, and Percent Rock Fragments (> 3 inches) each were given a weight of 0.33 in order to score these less important parameters together with a lower weight each. The averaged soil suitability score for each cesspool unit was then scaled through a minimum to maximum scaler to obtain relative values between 0-100.

Described below are the methods used to fill the flood-frequency parameter, which is important in terms of surface transport of contamination from OSDS and cesspools. The flood frequency of many locations is already defined by the NRCS soils database, though about fifty percent of the cesspool points were missing the data from the NRCS database. Therefore, rainfall amounts (from data described in the Rainfall section below) and saturated hydraulic conductivity (known as ksat in the tool) values from the NRCS soil parameters were used to fill in the likelihood of flooding only in those areas where it was not defined by the NRCS database. The following logic was established through consultation with DOH and engineering professionals to fill in the flood frequency values where they were missing.

- If rainfall is above 135 inches AND ksat is less than 1.1 = Frequent Flooding
- If rainfall is below 15 inches AND ksat is less than 1.1 = Frequent Flooding
- If rainfall is above 135 inches OR ksat is less than 1.1 = Occasional Flooding

Table 1. *Limitation class thresholds for soil characteristics as they relate to the appropriateness of siting OSDS in soils with different properties. Where soil parameters are favorable for OSDS development, the limitation classification is slight or none. Where soil parameters are unfavorable for OSDS placement, functioning limitation classifications are moderate to severe. Total subsidence, the amount the soil sinks after treatment field installation, was not considered to be relevant in Hawai'i's young volcanic soils. Table taken directly from Whittier and El-Kadi (2014).*

Soil Property	**Limitation Class**			
	None	***Slight***	***Moderate***	***Severe***
Depth to Bedrock or Cemented Pan (ft)	>6	----	3.3-6	<3.3
Flooding or Ponding	None	Rare	Occasional	Frequent
Filtering Capacity (soil hydraulic conductivity (ft/d)	----	----	----	>12
Slow Water Movement (ft/d)	>12	4-12	1.2-4	<1.2
Soil Suitability Factors – Scored Together				
Seepage From Bottom Layer (ft/d)	>2.8	----	1.1-2.8	<1.1
Total Subsidence (ft)	<=2	----	----	>2
Slope (percent)	<8	----	8-15	>15
Percent Rock Fragments > 3"	<25	----	25-50	>50

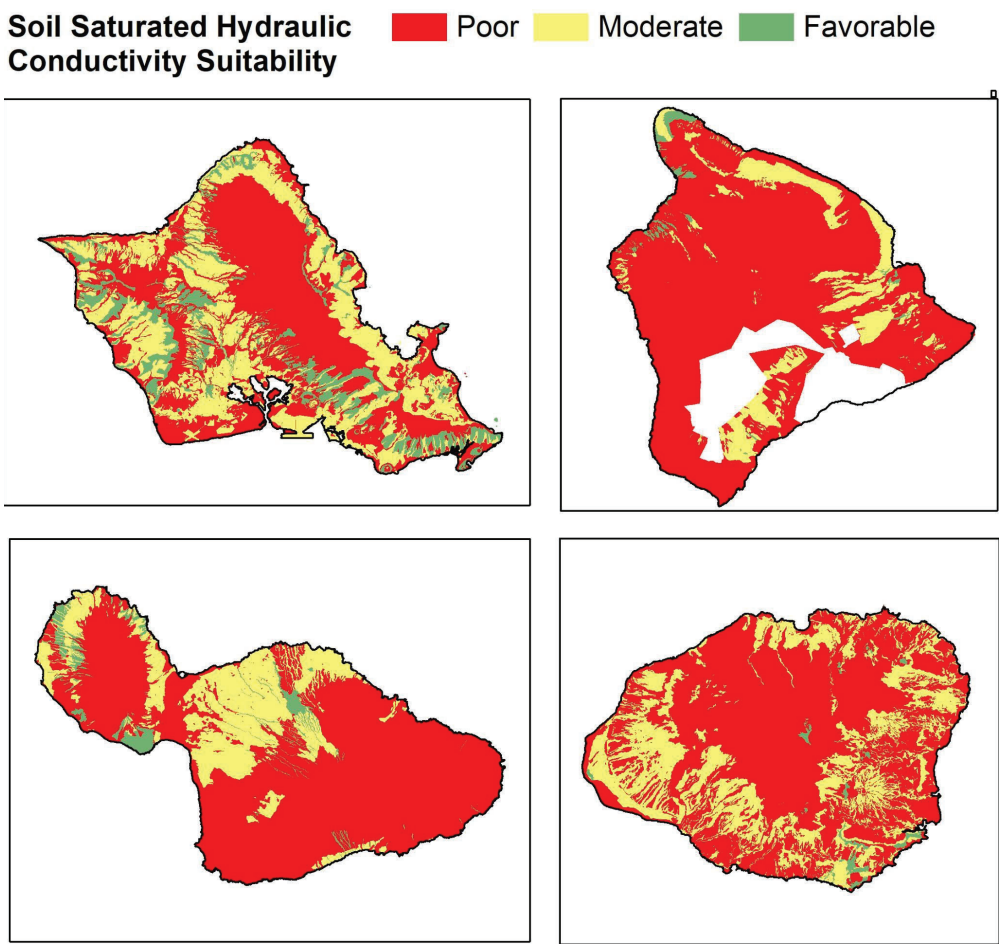


Figure 8. *Example map of the geographic distribution of one of the most important soil properties (hydraulic conductivity) in the soil suitability analysis. The values on this map show where saturated hydraulic conductivity values are favorable in consideration of the parameter values from numbers 3, 4, and 5 in Table 1 above. Red is least favorable, yellow is moderately favorable, and green is most favorable.*

Precipitation (Rainfall)

It was determined through research and consultation with engineers that local rainfall by itself does not directly affect the suitability of OSDS placement. However, once wastewater effluent is in the subsurface aquifer, the amount of effluent compared to the quantity of groundwater recharge controls how diluted the pollution will be and how concentrated and impactful contaminants from each system are upon discharge. The best proxy to estimate groundwater recharge in the Hawaiian Islands is rainfall. The HCPT assumes that areas with high rainfall were considered to be more favorable, or less impacted, by each cesspool. Average annual rainfall datasets were collected from the Hawai'i Climate Atlas (Giambelluca et al. 2013) as statewide grids of annual rainfall totals and rainfall rates were extracted at

each cesspool location.

Rainfall Prioritization Score Algorithm

Because there is no established relationship between the acceptable amount of groundwater recharge (and thus rainfall) to sufficiently dilute effluent from an OSDS unit, the threshold-decay function was applied to determine a relative score for each cesspool, with the threshold value set at 8 inches (0.2m)/year, the lowest value in the rainfall dataset.

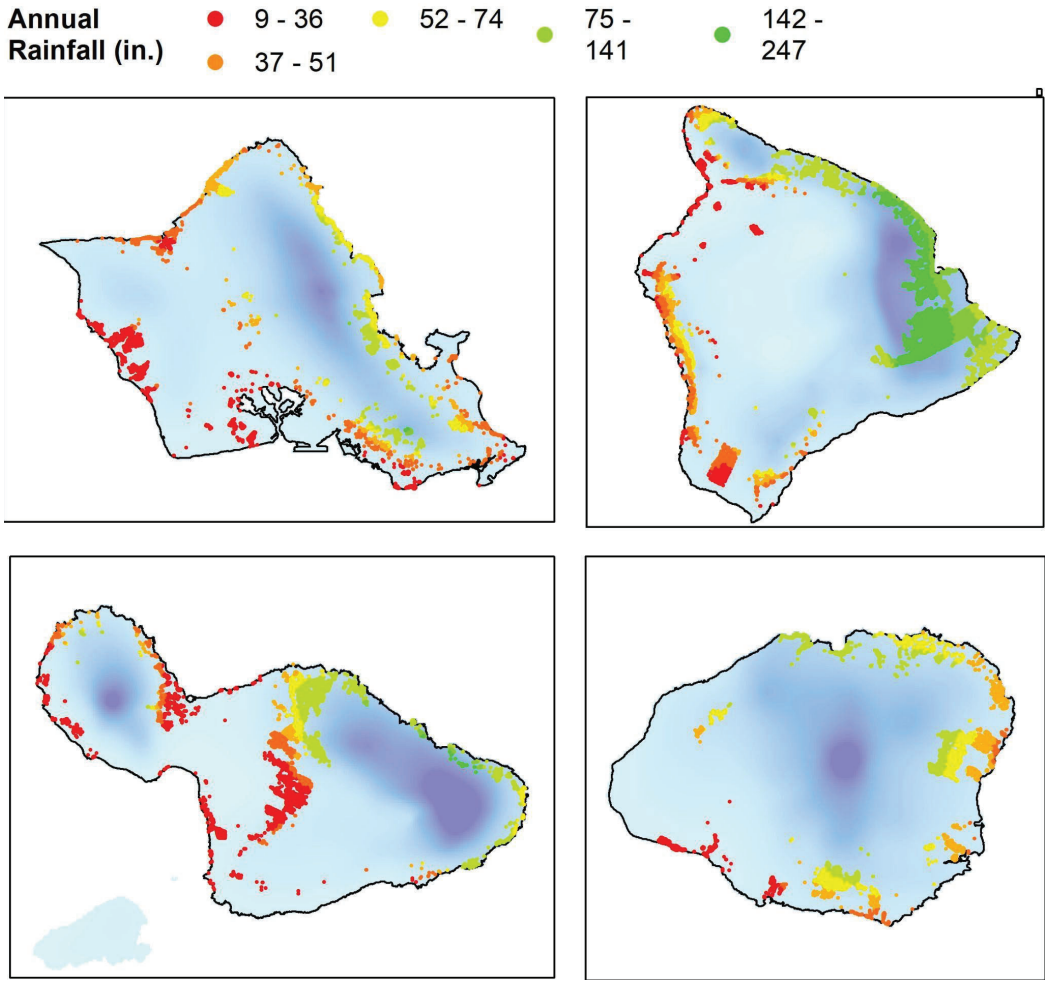


Figure 9. *Example map of the geographic distribution of rainfall amounts as it relates to cesspool impact. Rainfall is used as a proxy for groundwater recharge, and higher recharge rates will dilute the effluent from OSDS, potentially reducing the impact of pollution in areas of higher rainfall. Red locations indicate unfavorable rainfall conditions, with orange, yellow, and green indicating increased favorability, in that order.*

Stream/Wetland Locations & Distance to Streams or Wetlands

The benefits of streams and wetlands are numerous and include trapping floodwaters, recharging groundwater supplies, filtering pollution, and providing habitat for fish and wildlife (EPA, 2017). Studies show that streams and wetlands are vitally important to the health of larger downstream waterways like lakes and oceans (EPA, 2017; McKenzie et al. 2019). The DOH recognizes that wastewater can increase the biologic productivity in streams and nearshore waters, causing problems like eutrophication (Whittier & El-Kadi, 2009). Because of the complexity of environmental processes, it is difficult to quantify specific risk to these systems from wastewater pollution. Instead, we identify hazards through distance to understand the potential risks to these systems. The HCPT uses a basic geographic distance calculation to the nearest stream or wetland by using data from the statewide Hawai'i GIS Portal. The stream's layer is generally representative of perennial flowing waters in the state. Streams were ultimately joined with wetland features, including emergent ponds, to simplify the score. The HCPT assumes that streams and wetlands are equally important even though certain streams or wetlands may be of greater importance based upon location, cultural significance, development, and ecosystem services provided.

Streams and Wetlands Prioritization Score Algorithm

The threshold-decay function was used to calculate priority scores at each cesspool point according to the distance from either a stream or a wetland. The distance of 50 feet (15.24 meters) was used as the threshold based on the regulatory limit in HAR 11-62.

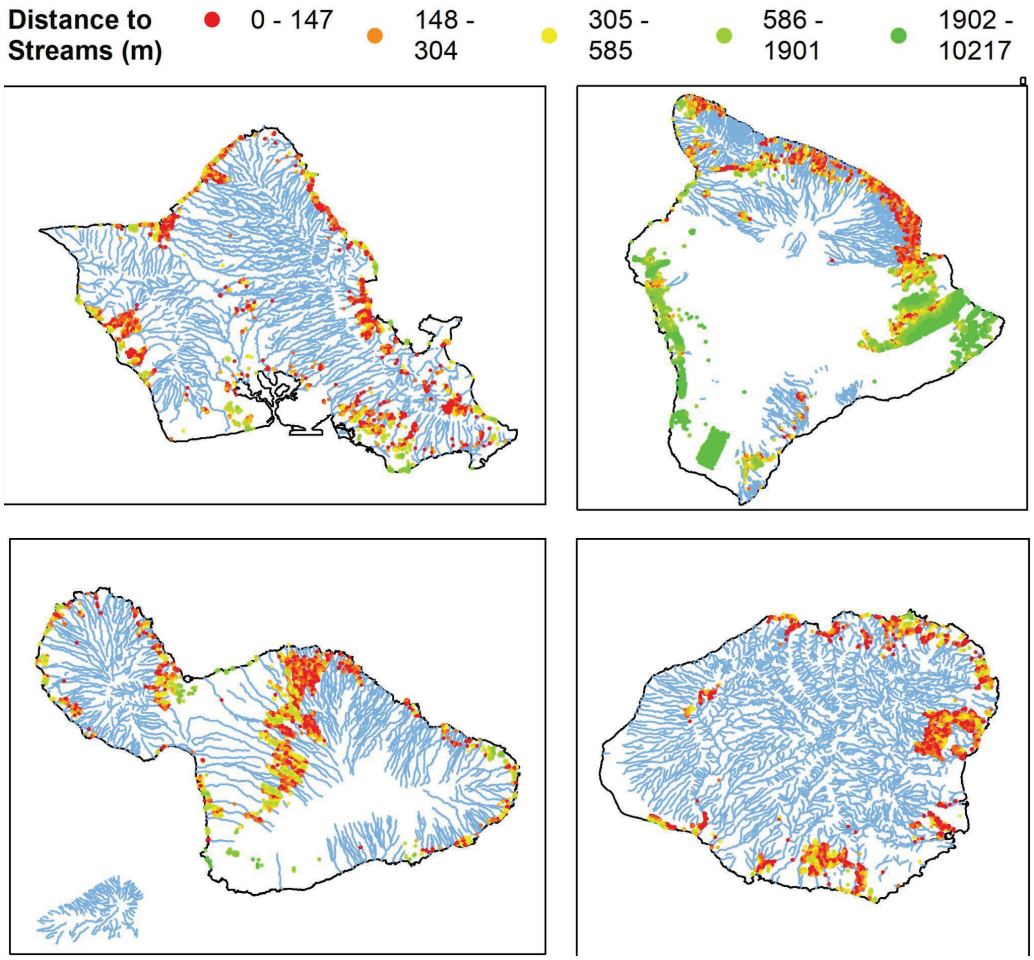


Figure 10. *Example map of the distance from each cesspool point to a nearby stream or wetland. Red locations indicate cesspools near a stream or wetland, with orange, yellow, and green indicating increasing distance to a stream or wetland, in that order.*

Cesspool Density

Density calculation/analysis is subject to bias based on the available landmass and the thresholds set in a calculation. Density is defined as the number of cesspools per unit of land area. Many of the calculations to establish density-dependent risk factors are based upon studies outside of Hawai'i. However, the density of OSDS is a critical variable and has been subject to debate for decades. A 1977 report from the U.S. EPA identified density of OSDS greater than 15.4/km^2 (40/mi^2) could result in groundwater contamination (Flanagan et al. 2019). Density is often a question of both wastewater science and policy decisions.

Though the minimum lot size to install an OSDS in Hawai'i is 10,000sqft, that does not mean that all systems will perform equally, nor that environmental damage will not occur at

the minimum standards. Wastewater systems are inherently site-dependent (geographic, climatic, etc.). Hawai‘i has limited land and requiring minimum lot sizes of one acre (as done in places like Suffolk County, NY) is not feasible for future or current development. Calculating the recommended OSDS density for Hawai‘i is beyond the scope of this project. However, there are examples of successful development of local density per acre recommendations. Hansen Allen and Luce Engineers Incorporated (2016) identified recommended densities for an area in Utah using local risk analysis, mass balance calculation, and local regulatory management/development review. **The authors recommend the state of Hawai‘i conduct such analysis for a more accurate prioritization output and future planning.** However, for this statewide tool, a single density cutoff was used to estimate the impacts across the landscape from cesspools.

To develop the density calculation for the HCPT, the authors investigated current and past literature. Bicki and Brown (1991) conclude that groundwater monitoring and modeling demonstrate a correlation between contamination and septic system density, suggesting a minimum lot size of one-half (0.5) to one (1) acre is needed to prevent groundwater contamination. These recommendations may be true if an area has lower hazards (drinking water aquifer is not a factor/not adjacent to ecologically sensitive areas). Advanced technology may allow smaller lot sizes to meet water quality standards. However, because cesspools have no primary treatment mechanism and have limited/no soil treatment field, the recommended density for OSDS does not neatly apply when evaluating cesspool hazards for priority areas. Previous density calculations in Whittier and El-Kadi (2009) identified an estimated OSDS density that should not exceed 40 units/mi^2 (1 system per 16 acres) based upon EPA reports. The HCPT uses a density calculation of the number of cesspools per acre.

Cesspool Density Prioritization Score Algorithm

To calculate a density hazard score, the threshold-decay function was applied to calculate priority scores at each cesspool point based on the number of cesspools per acre. The threshold value was set at one cesspool per acre, meaning that cesspools in areas with a greater density were assigned a score of 100.

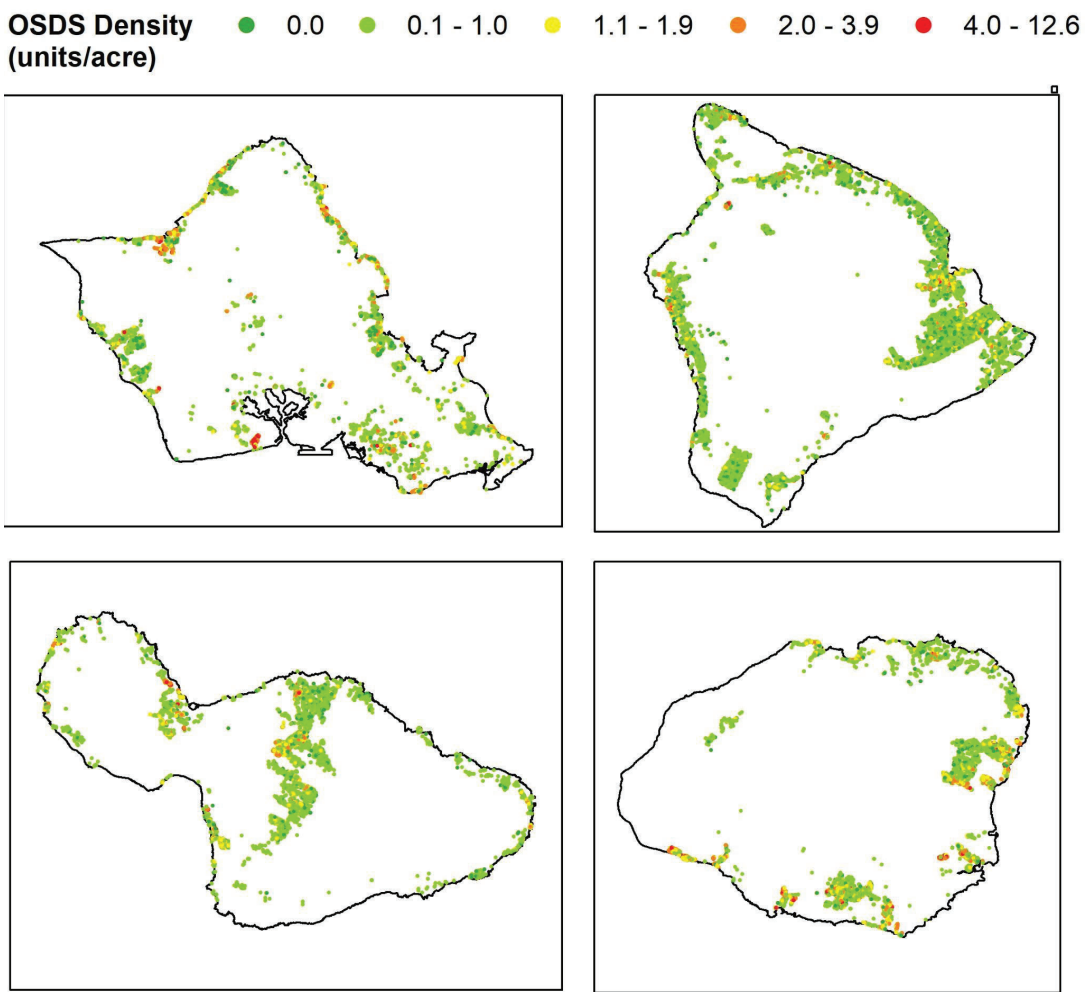


Figure 11. *Example map of cesspool density. Red locations indicate the highest density areas, with orange, yellow, and green indicating lower density per acre, in that order.*

Water Table Elevation (Depth to Groundwater)

Unsaturated soil space is essential for proper wastewater treatment. The unsaturated soil zone (dry area) underlying a cesspool or treatment field is the primary site of subsurface treatment and contaminant reduction. The thickness of the unsaturated zone below a wastewater treatment technology is a limiting factor in the ability of a given system to treat wastewater and limit the transport of contaminants. Recent rises in the groundwater table are already impacting subsurface infrastructure, such as cesspools and sewer lines, in Hawai'i (Habel et al. 2020). Sea level rise considerations are discussed in its respective section.

To obtain an estimate of the depth to groundwater below all cesspools in the state, island-wide groundwater models developed by DOH and documented in Whittier and

El-Kadi (2009; 2014) were evaluated for the HCPT. These models were developed to calculate statewide nutrient transport to the coast. The models have a large spatial scale which imparts low resolutions on their outputs. Regardless, the water table elevation is a key output provided by these models and useful for this exercise. To assess the depth to groundwater, or thickness of the unsaturated zone below each cesspool, the water table elevation at each point was subtracted from the land surface elevation at the cesspool location. Land surface elevations were calculated along the coastline using a statewide high-resolution (<1 meter) LiDAR Digital Elevation Model (DEM) obtained from Hawai'i GIS Online Portal. Where the LiDAR DEM was missing elevation data, it was filled with lower resolution (10 meter) data. Statewide-coverage 10 meter-DEMs are readily available from the UH Coastal Geology Group. The calculated depth to groundwater through the use of the high-confidence land surface elevation data with modeled water table elevations should be considered an estimate, subject to the assumptions and limitations of the groundwater models. Currently, this method contains the best available data for a parameter that is difficult to accurately measure.

Depth to Water Table Prioritization Score Algorithm

To calculate the depth to water table hazard score the threshold-decay function was applied to calculate priority scores based on the calculated thickness of the unsaturated zone beneath each cesspool point. The threshold value was set at 14.4 feet (4.4 meters), which is a regulatory threshold set forth by HAR 11-62. Priority scores exponentially decayed with greater unsaturated zone thickness.

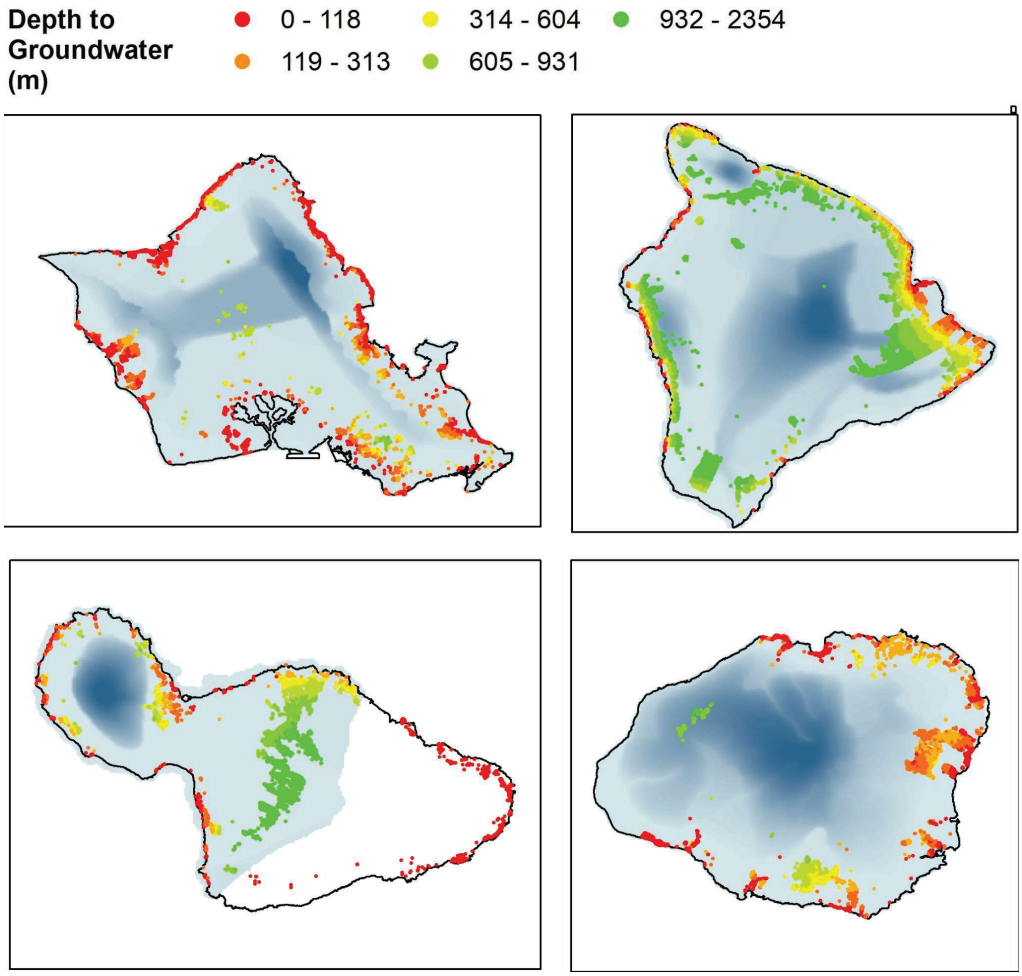


Figure 12. *Example map of the depth to the groundwater table for each cesspool. Red locations indicate the narrowest depth to the groundwater table, with orange, yellow, and green indicating increasing depth, in that order. Dark blue areas indicate an overall deeper depth to groundwater, lighter colors indicate a shallower depth.*

Sea Level-Rise Projections

Sea level rise (SLR) has the potential to impact surface and subsurface infrastructure like cesspools and other types of OSDS through mechanisms such as groundwater inundation and flooding (Cooper et al. 2016; Habel et al. 2020). Habel et al. (2020) provide a framework to understand the hazards cesspools and OSDS pose from SLR-induced flooding in Hawai'i. An OSDS that is flooded cannot function properly and poses a hazard to public safety and human health (National Agricultural Safety Database, N.D.) Because OSDS have life spans between 30-60 years, it is important to plan for future scenarios to ensure proper operation, cost efficiency for the homeowner, and environmental protection (Schneider,

personal communication, July 2, 2021). Thus, SLR projections are an important data point in evaluating cesspool hazards and prioritization.

The available data was based on the methodology/modeling used in the Hawai'i Sea Level Rise Vulnerability and Adaptation Report and the Hawai'i Sea Level Rise Viewer. The products have undergone peer review and publication in the Scientific Reports Journal: Nature. The hazard and vulnerability data and maps provided were based on observational data and computer-based models. According to data layer authors, the data modeling did not account for: (1) existing seawalls or other coastal armoring in the backshore; (2) increasing wave energy across the fringing reef with sea level rise; (3) possible changes in reef accretion and nearshore sediment processes with sea level rise; and (4) possible changes to sediment supply from future shoreline development and engineering, such as construction or removal of coastal armoring or other coastal engineering. This project incorporates sea level rise projection data layers for the years 2030, 2050, and 2100. The 2030 layer depicts coastal flooding using the 0.5 feet (0.15-meters) sea level rise scenario. The 2050 layer depicts coastal flooding using the 1.1 feet (0.33-meters) scenario. The 2100 layer depicts coastal flooding using the 3.2 feet (0.9767-meters) scenario.

Additionally, since cesspools are located underground, the distribution of direct surface flooding does not completely capture the effects of subsurface groundwater inundation, which essentially reduces the unsaturated zone underneath a unit to either nothing or an unacceptable depth, defined as 14.4 feet (4.4 meters) below ground surface based on regulatory standards outlined in HAR 11-62. Therefore, to assess whether a cesspool will be affected by SLR at the dates of calculated projections, both the horizontal extent of surface flooding and the vertical extent of subsurface inundation were considered. Specifically, a cesspool was deemed to be impacted by SLR either if it is located in a surface flooding zone defined by data from the Hawai'i Sea Level Rise Viewer, or if the unsaturated zone below the cesspool as calculated in the Depth to Water Table section is reduced to less than 14.4 feet (4.4 meters) with a given increase in sea level (assuming purely linear hydrodynamic buoyancy of the freshwater lens under an increase in present-day base sea level).

Sea Level-Rise Projection Prioritization Score Algorithm

Cesspool units are assigned the highest priority score (100) if located within the 2030 sea level rise zone with descending ranks if located in the 2050 zone (score of 66) or 2100 zone (score of 33).

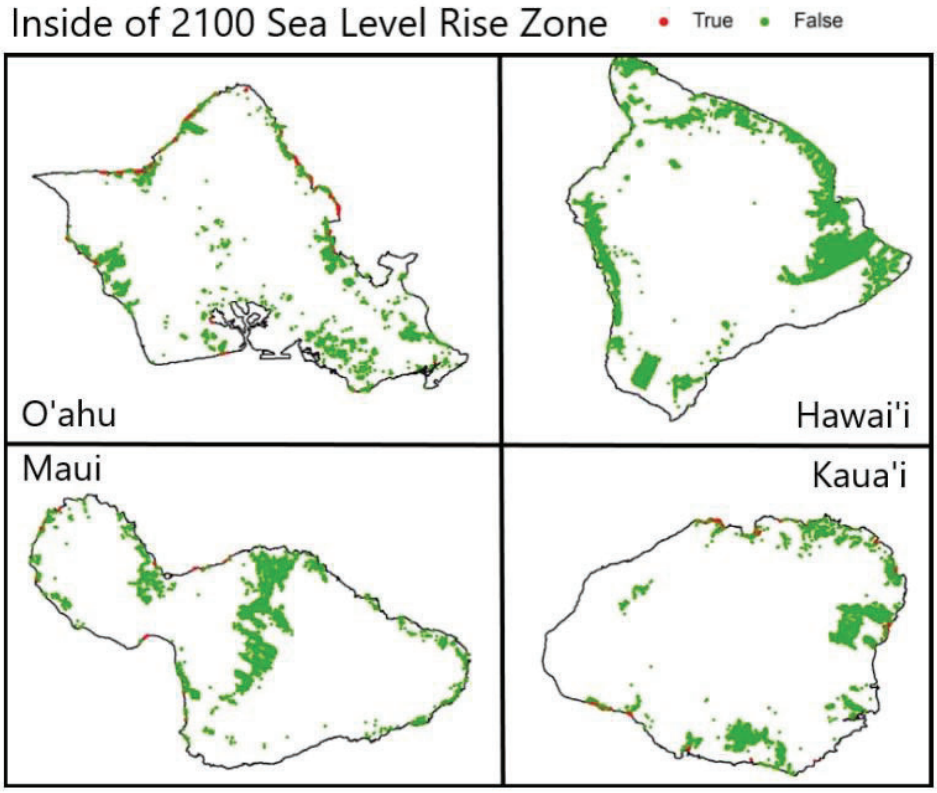


Figure 13. *Example map of four major Hawaiian Islands highlighting areas within the predicted zone of the 2100 SLR scenario, based on the methodology/modeling from the Hawai'i Sea Level Rise Vulnerability and Adaptation Report and the Hawai'i Sea Level Rise Viewer. Red indicates that the cesspool is within the SLR zone, green indicates the cesspool is not within a SLR zone.*

Coral Cover

Coral is essential to the habitat of most tropical reef ecosystems, supporting biological diversity throughout the ocean. However, corals are undergoing rapid change from ocean warming and nearshore human activities (Reef Advisory Group, personal communication, July 20, 2021). Corals provide a host of ecosystem services for societies including coastal erosion protection, fishing, and cultural practices. Recent work by Asner et al. (2020) and others have shown that wastewater pollution from OSDS (namely cesspools) negatively impacts live coral across the main Hawaiian Islands.

To ensure the importance of coral is included in the cesspool conversion prioritization process, the authors worked with the Hawai'i Monitoring and Reporting Collaborative (HIMARC) and the Reef Advisory Group (Jamison Gove, Ph.D., Joey Lecky, Greg Asner, Ph.D.,

Mary Donovan, Ph.D., Tom Oliver, Ph.D., Eric Conklin, Ph.D., and Kim Falinski Ph.D.) to develop a coral reef condition metric specifically for use in this study. The metric was developed by combining two spatially continuous live coral datasets for the four main islands. The first dataset represented intact habitat through current live coral cover, and the second represented baseline coral via historical coral cover data, taken before the 2015 coral bleaching event.

The current live coral information was provided by Arizona State University's Global Airborne Observatory (GAO). GAO used state-of-the-art high-resolution aerial mapping to provide near-continuous information on live coral cover across the main Hawaiian Islands in 2019 (Asner et al., 2020). Historical coral data are provided by HIMARC, which were derived from in-water observations from a broad network of monitoring programs and agencies, including the Division of Aquatic Resources (DAR), spanning the 2004 - 2014 date range (Donovan et al., 2020). The historical coral cover data is representative of reefs before the mass coral mortality event stemming from the 2015 marine heatwave and thereby represents baseline conditions from before the devastating 2015 event that caused widespread coral mortality in several locations.

Coral Prioritization Score Algorithm

The two coral datasets were summarized by median coral cover within zones spanning 0 - 15 meter depth corresponding to 1 km segments of shoreline. These values were then lumped into four categories according to the following percentile breaks:

Table 2. *Table describing the coral prioritization ranking methods through specific percentiles and associated values.*

Rank	Percentile	Value
1	95 - 100	**Highest priority**
2	80 - 95	↓
3	50 - 80	↓
4	0 - 50	**Lowest priority**

Then the two ranked datasets were combined into a single one-through-four ranking where shoreline segments with differing rank values between the two datasets were assigned the higher priority rank of the two, as illustrated below:

GAO Coral (Rank) \ HIMARC Coral (Rank)	1	2	3	4
1	1	1	1	1
2	1	2	2	2
3	1	2	3	3
4	1	2	3	4

Figure 14. *Visualization of how coral ranking datasets were combined to form a single 1-4 ranking scheme.*

To format the categorical ranks into a 0-100 prioritization score, all priority one shoreline segments were given a score of 100, all priority two shoreline segments were given a score of 66, all priority three shoreline segments were given a score of 33, and all priority four shoreline segments given a prioritization score of 0. This data was linked to individual cesspools by connecting individual cesspool points to their coastal discharge locations via the model calculated groundwater flow paths, as described in the Groundwater Flowpaths section above. This allowed a coral cover value to be assigned to each cesspool based on the corals offshore of the part of the coastline to which each cesspool's effluent drains.

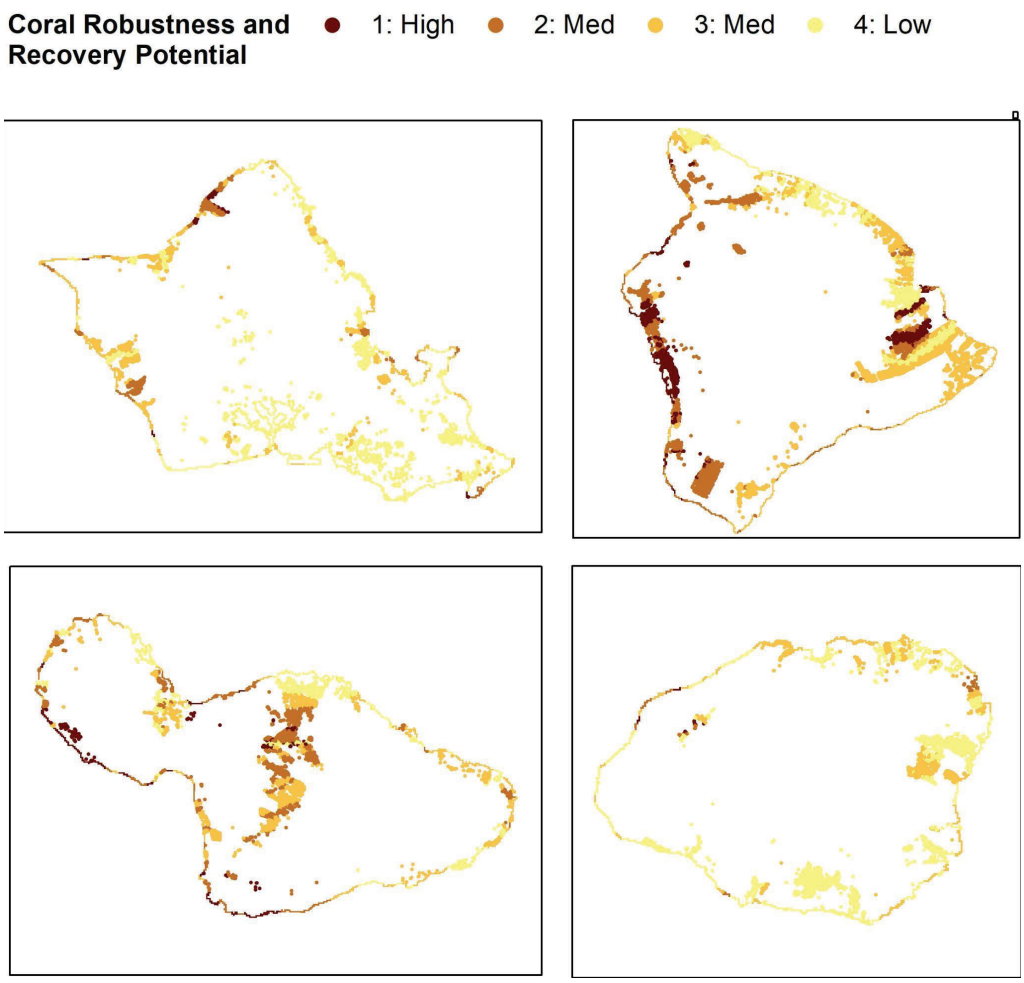


Figure 15. *Example map of four major Hawaiian Islands highlighting areas within the highest current and historical coral cover. Red areas indicate areas with the greatest baseline and current coral cover, while orange and yellow areas indicate areas with lower current or baseline cover.*

Resource Fish Biomass / Recovery Potential

The Resource Fish Biomass layer describes coral reef fish species that make up a substantial proportion of the non-commercial and commercial catch. Therefore, this does not represent total fish biomass on the reef, but the subset of fish biomass that directly supports fishing and feeds local communities. Reef fish biomass has been shown to negatively correlate with effluent from OSDS in the Hawaiian Islands (Donovan et al. 2020 & Foo et al., 2021).

The Reef Advisory Group produced predictive maps of standing resource fish biomass and the theoretical recovery potential of resource fish biomass if effluent from OSDS were

eliminated (Donovan et al., 2020). Recovery potential from reducing OSDS effluent therefore represents the areas with the greatest potential for restoration of fisheries most directly related to cesspool remediation.

Resource Fish Prioritization Score Algorithm

A combined ranking of these two resource fish biomass datasets was derived for the cesspool conversion prioritization. Each of these datasets was summarized by median biomass within zones spanning 0 - 15 meter depth corresponding to 1 km segments of shoreline. These values were then lumped into four categories according to the following percentile breaks:

Table 3. *Table describing the fish prioritization ranking methods through specific percentiles and associated value priority.*

Rank	Percentile	Value
1	95 - 100	Highest priority
2	80 - 95	↓
3	50 - 80	↓
4	0 - 50	Lowest priority

Then the two ranked datasets were combined into a single 1-4 ranking where shoreline segments with differing rank values between the two datasets were assigned the higher priority rank of the two, as illustrated below:

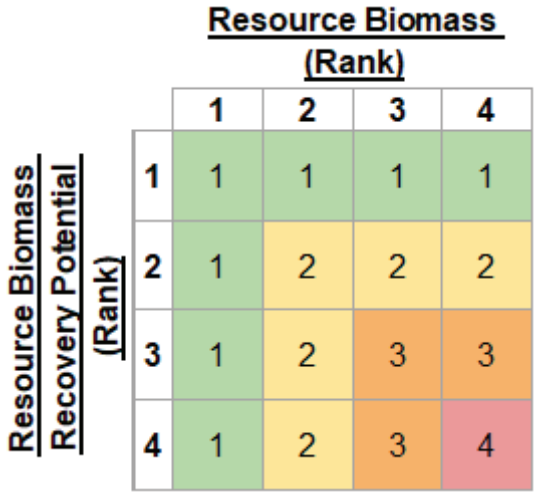


Figure 16. *Visualization of how resource biomass datasets were combined to form a single 1-4 ranking scheme.*

Assignment of priority scores based on categorical ranks was done in the same way as above for corals where all priority number one were given a score of 100, all number two were given a score of 66, all number three given a score of 33, and all number 4 given a prioritization score of 0. This data was linked to individual cesspools by connecting individual cesspool points to their coastal discharge locations via the model calculated groundwater flow paths as described in the Groundwater Flowpaths section above. This allowed a resource fish value to be assigned to each cesspool based on the fish data offshore of the part of the coastline to which each cesspool's effluent drains.

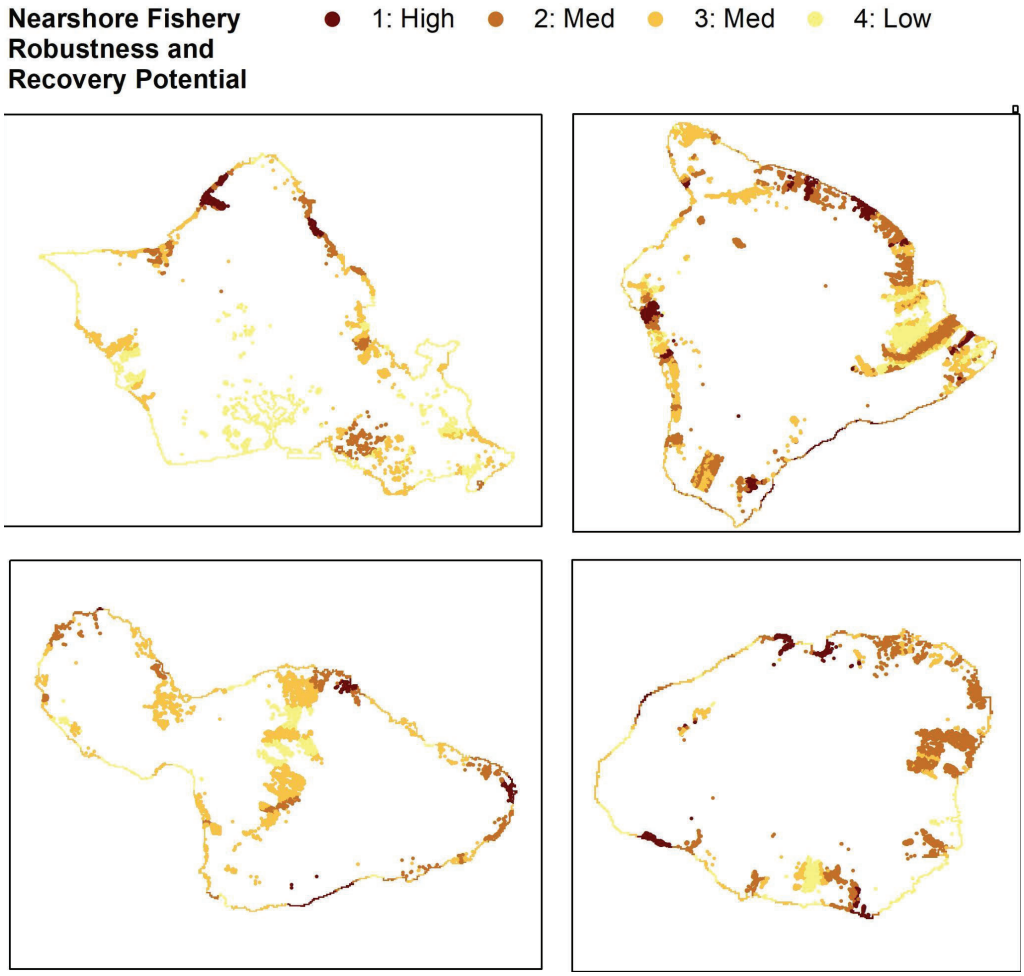


Figure 17. *Example map of four major Hawaiian Islands highlighting areas within the highest fish biomass robustness and recovery potential. Red areas indicate the greatest biomass of resource fishes and the greatest potential to improve biomass through cesspool remediation, while orange and yellow areas indicate a reduced robustness and recovery potential when OSDS effluent is eliminated.*

Coastline Visitation (User-days)

The DOH Wastewater Branches' mission is to protect public health and the environment (Hawai'i State Department of Health: Wastewater Branch, 2021). To best update the previous priority areas, it was essential to develop inputs that incorporate recreational, subsistence, and other human-associated values relating to the usage of the coastal zone into the prioritization scheme. These are a critical driver of prioritization as they are part of both public and environmental health. A widely used method to assess the usage of a geographic location is crowdsourcing information from either cell phone data or social media applications. For the HCPT, the peer-reviewed methodology of Wood et al. (2013) was chosen to calculate the relative visitation rate to areas along the coastline through a proxy of photo-sharing data scraped from the popular website Flickr. These methods are robust and have been widely applied as the core framework of the recreational module of the INVeST Model. The method essentially tracks human visitation along the coastline, and with this data, it is possible to apply the logic that the more visitation to an area, the more important it is, both in terms of public health and protection of ecological value.

The online photo-sharing website, Flickr, offers an application programming interface (API) which is a service that allows users to search photos based on their geotagged locations. The authors developed computer code to assign points every 250 meters along the coastline of O'ahu, Maui, and Kaua'i, and every 500 meters on Hawai'i Island. A search was run for all photos uploaded onto Flickr that fell within 250/500 meters of each point along the coast between the years 2010 and 2020. Photo metadata was then converted to a usable form by calculating the average number of user-days recorded at each location. A user-day is a count of the number of unique users visiting a given site on a given day so that the count would not be biased by users who took large amounts of photos at one location. For example, if a tourist takes any number of photos at any one location and uploads it to Flickr, this is considered one user-day for that location. The data was refined by evaluating the username of the photo owner and date to calculate the user-days for each point.

This data was linked to individual cesspools by connecting individual cesspool points to their coastal discharge locations via the model calculated groundwater flow paths as described in the Groundwater Flowpaths section above. This allowed a coastline user-days value to be assigned to each cesspool based on the visitation experienced by the part of the coastline to which each cesspool's effluent drains.

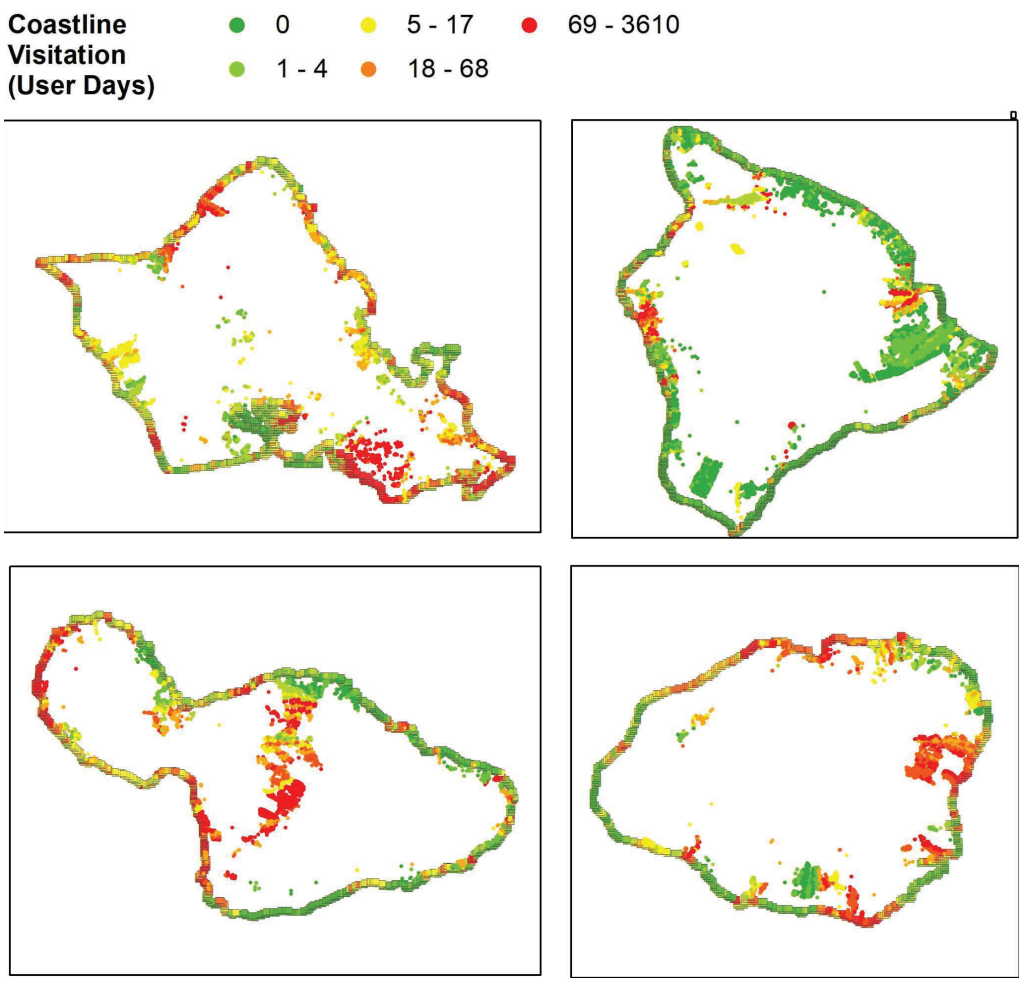


Figure 18. *Example map of four major Hawaiian Islands highlighting areas with the highest coastline usage (units of user-days). Cesspools are colored based on the coastline usage in the area to which their effluent drains, via groundwater flow paths. Red indicates the highest coastline usage, and orange, yellow, and green represent decreasing numbers of user-days.*

Coastline Visitation Prioritization Score Algorithm

Because of the highly skewed distribution of coastline usage (see associated Code Notebook for specifics) the threshold-decay function was applied to calculate priority scores and a carefully chosen threshold was then applied. Specifically, the authors used a trial and error approach to examine how different threshold values produced different numbers of 'hot-spot' areas or locations with high-value visitation characteristics.

The threshold value was chosen by assuming that if one percent of O'ahu's approximately 200,000-250,000 visitors/day are using Flickr (a total of 2,000-2,500 people per day), and that if each visitor only visits one 'location' per day, this should yield 20-25 'hotspot' areas

where those visits are concentrated. By taking the low end of this range, the Flickr data shows that a 'hotspot' or 'top-priority visitation area' should be defined as a location where 100 or more Flickr users visit the site every day. Thus the value of 100 user-days was chosen as the threshold value in the threshold-decay function. Results yielded about nine percent of the total number of cesspools in the state receiving a visitation priority score of 100, with other cesspools receiving scores that exponentially decay with a decrease in the number of user-days at the coastline locations to which their effluent drains.

Lifeguard Tower Location/Swim Beaches

Recreational water quality, both for residents and visitors, is vitally important to the state of Hawai'i. According to Conservation International (2021), about eighty percent of visitors to Hawai'i participate in some type of beach activity, and more than half snorkel or dive. Though access to all beaches is guaranteed by a constitutional right (HRS 115), it is assumed that lifeguarded beaches are favored and more frequented than others. However, each county determines which areas have staffed lifeguard towers, and only a handful of state parks have lifeguard towers. Placement of lifeguard towers may be determined due to the number of incidents responded to at sites, visitation levels, or requests by the state government. Because it is assumed that lifeguarded beaches have a higher in-water activity usage (swimming, surfing, diving, wading) than unguarded beaches, cesspools discharging to these beaches are ranked a higher priority in the assessment. This metric is assessed separately from coastline usage because the prevalence of in-water activities at these sites greatly increases the human-health risks from exposure to contamination from wastewater effluent.

Swimming Beaches Prioritization Score Algorithm

For this study, the authors examined county websites and databases to compile a statewide inventory of lifeguard towers. Any area of coastline within 500 meters on either side of a lifeguard tower was considered to be a swimming beach. A binary value (100 or 0) was assigned to each cesspool depending on if its groundwater flow path terminated at a swimming beach or not. Those cesspools draining to swim beaches received a priority score of 100, whereas those not draining to swim beaches received a score of 0.

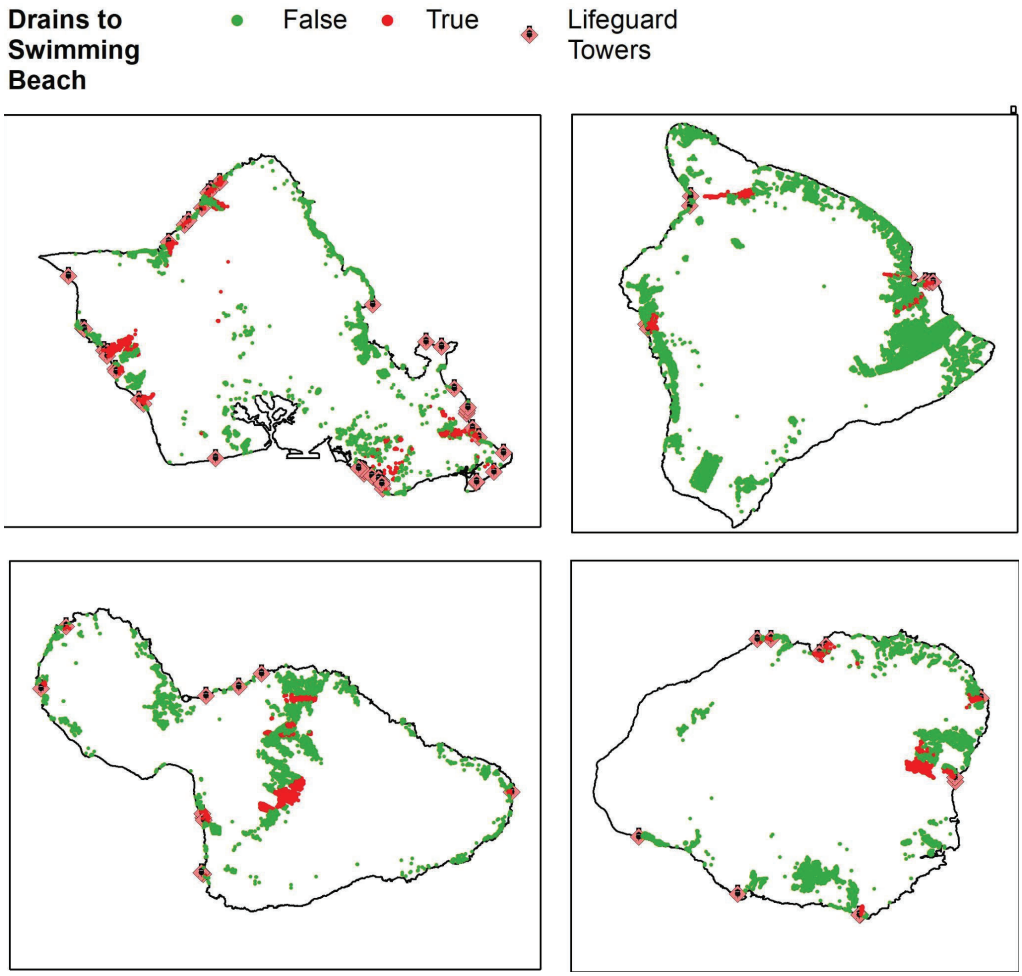


Figure 19. *Example map of four major Hawaiian Islands highlighting each cesspool point as it corresponds to the lifeguarded beach along the coast via groundwater flow path locations. Red dots indicate a cesspool effluent drains near a lifeguard tower, green indicates the cesspool effluent does not drain near a lifeguard tower.*

Coastal Ocean Circulation and Residence Time Proxy

Incorporating coastal geography and specifically the residence time of coastal features such as bays or inlets is an important element to include in the HCPT. However, after reviewing available data and consulting with oceanography experts, it was determined that accurate, statewide data regarding the residence time of coastal waters do not meet the standards and format needed for use in the HCPT. The most feasible way to incorporate an element of ocean circulation was to use wave power as a best-available proxy. This proxy will help determine whether coastal areas are either more exposed or sheltered to ocean currents. In general, this is based on the theory that wave power is correlated with

nearshore water movement, and thus will correspond with factors that control mixing and dispersion of pollution, including that of cesspools.

The authors acknowledge that wave power is highly seasonal in Hawai'i and may vary significantly throughout the year. Coastal residence time is not simply a function of the wave field, but is also controlled by tidal, wind-driven, and larger-scale currents. Furthermore, the latest science doesn't fully understand the time-dependent aspects of wastewater pollution on reefs and the potential impact on coral reef ecosystem function and thus, cannot be used in the HCPT. However, there is a strong policy-based need to include a factor regarding ocean circulation. Therefore, even a proxy dataset provides value to the overall prioritization process and was included at the request of CCWG members.

The HCPT uses a statewide wave power (in KW/m) long-term mean dataset from the years 2000-2013. Although coastal currents and transport are extremely complicated, scale-dependent, and vary widely depending on the timing of measurements, wave energy is generally correlated with the primary drivers of currents such as wind-swell, and rip currents driven by groundswell. Wedding et al., (2018) developed a statewide long-term mean wave power dataset, which was made publicly available through the Ocean Tipping Points Project. This dataset was determined by the authors to be the best available proxy for determining if a coastal area was geographically sheltered versus exposed at the scale examined in this report. Originally, wave power data were developed by the University of Hawai'i at Mānoa School of Ocean and Earth Science and Technology SWAN model (Simulating WAves Nearshore). Hourly 500 meter SWAN model runs of wave power were converted to maximum daily wave power from 1979-2013, and the long-term mean wave power was calculated by taking the average of the maximum daily time series of wave power data from 2000-2013 for each 500 meter grid cell.

Coastal Ocean Circulation / Wave Power Prioritization Score Algorithm

Raster-based (matrix of cells organized into rows and columns) wave power values (in KW/m) were mapped to gridded 250/500 meter cells along the coastline which are related to individual cesspools through groundwater flow paths. To calculate a priority score, the threshold-decay function was applied with the threshold set at the ten percent quartile of the wave power dataset (1.59 KW/m) with the idea that this would capture the top ten percent of most sheltered areas as the highest priority.

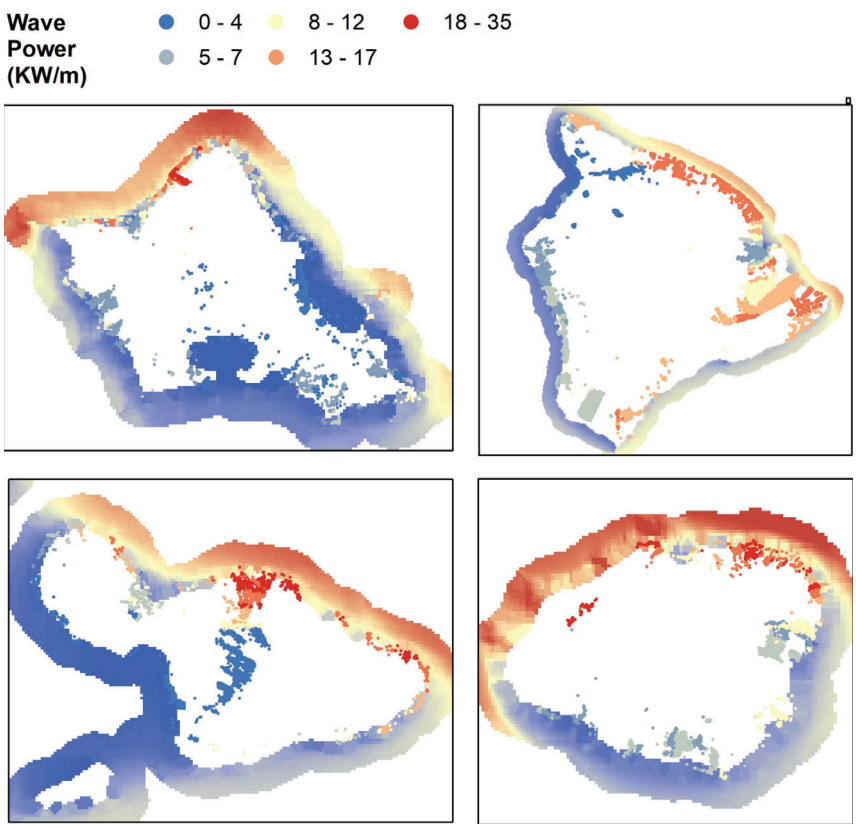


Figure 20. *Example map of four major Hawaiian Islands highlighting wave power mapped to each of the gridded 250/500 meter coastal cells, red indicates greater wave power, blue indicates lower wave power.*

Results and Validation

A major goal in the design of the HCPT was to be able to assess and prioritize every cesspool in the state. To accomplish this goal, the HCPT used a site-based process to evaluate relevant factors that help determine if a cesspool at any given location has a higher or lower potential to cause negative social and environmental impacts. The tool considers credible hazardous outcomes from cesspool contamination through a lumped interdisciplinary approach. The end result is a single prioritization scheme that organizes census-based regions into Priority Level 1, Priority Level 2, and Priority Level 3 categories.

Categories are defined by the mathematical quantiles of 25% and 50% with the top 25% highest scoring areas designated with Priority Level 1, the next lower 75% to 50% with Priority Level 2, and the bottom 50% as Priority Level 3. Figures 21 - 24 provide island-specific maps of the statewide prioritization categories, synthesized by census tracts. Appendix A provides similar maps, but synthesized by census block-group and census block areas. Block-groups provide a higher resolution for ranking at the neighborhood scale, however, the quantity of prioritized block-groups (252) makes this resolution more difficult to manage through a policy lens. Prioritization by census blocks provides ranking at the individual city block level, but results in almost 2,000 individually ranked areas. Tables 4-7 below display a tabular inventory of the census tract prioritization categories and ranks. Appendix B also presents state- and island-wide risk-factor pivot tables that show how final prioritization scores were calculated based on the averaged scores for each of the fifteen Risk Factors.

The four main Hawaiian Islands contain an estimated 82,141 cesspools and have a total of 319 census tracts, although only 103 tracts contained more than 25 cesspools and were categorized within the HCPT. All results are updated as of 2022, See Appendix C for details.

Statewide Breakdown:
25% (26 tracts)**/13,821** cesspools (17%) = **Priority Level 1**
25% (26 tracts)**/12,367** cesspools (15%) = **Priority Level 2**
50% (51 tracts)**/55,237** cesspools (69%) = **Priority Level 3** *(Updated 2022)*

Results: O‘ahu

The island of O‘ahu contains an estimated 7,491 cesspools and has a total of 242 census tracts, although only 34 tracts contained more than 25 cesspools and were categorized within the HCPT.

O‘ahu Breakdown:

38% (13 tracts)**/4,779** cesspools (64%) = **Priority Level 1**

32% (11 tracts)**/1,640** cesspools (22%) = **Priority Level 2**

28% (10 tracts)**/1,072** cesspools (14%) = **Priority Level 3** *(Updated 2022)*

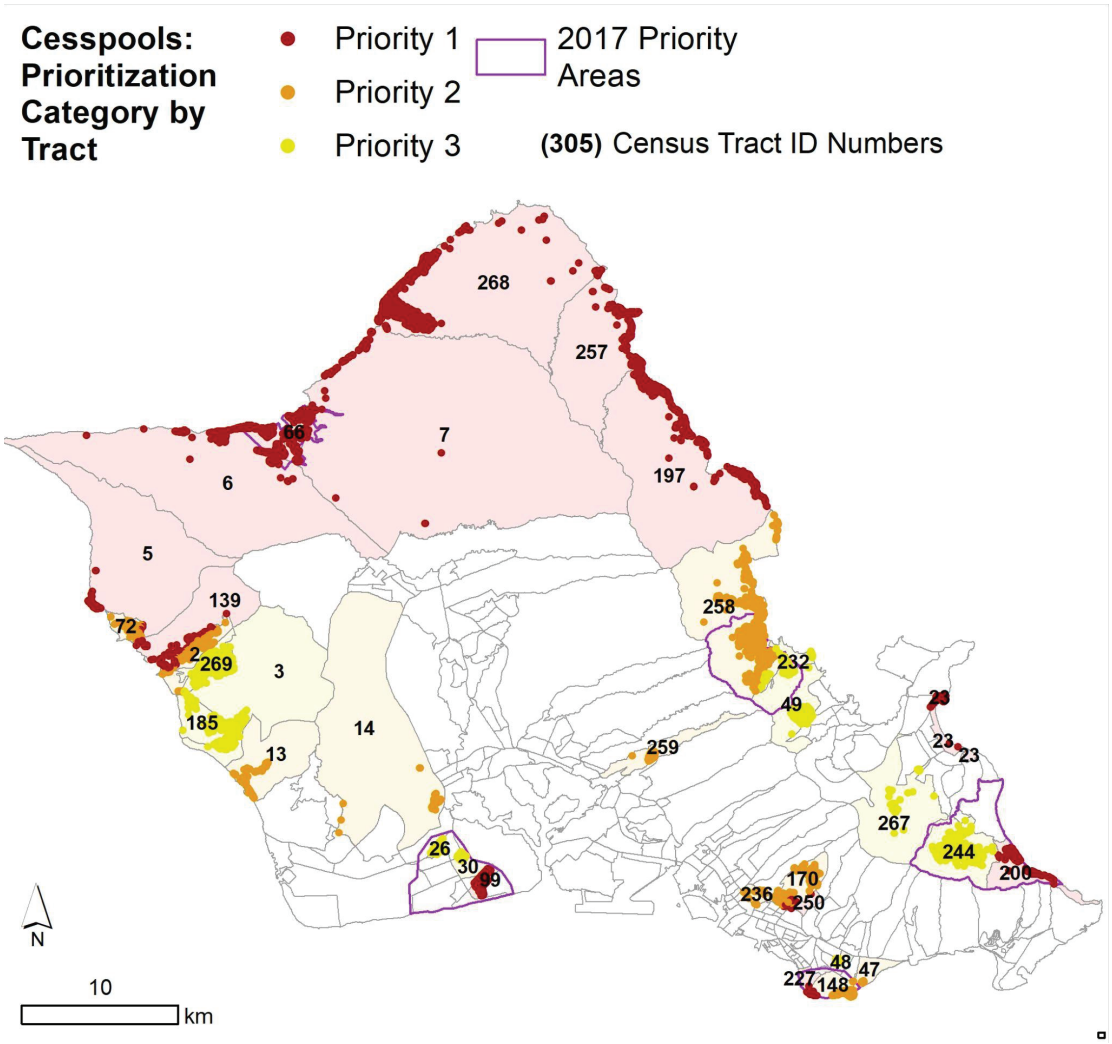


Figure 21: *O‘ahu cesspools (dots) colored by prioritization category, arranged by census tracts. Tracts are shown as lightly colored areas where the tract contains greater than 25 cesspools, and are shown as white areas where the tract contains less than 25 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

Table 4: *Prioritization categories and island-specific ranks for Oʻahu tracts. (Update 2022)*

Tract Name	Tract ID	Cesspool Count	Priority Category	Island-Specific Priority Rank
Hauula-Kaaawa	197	628	**Priority 1**	1
Haleiwa	66	324	**Priority 1**	2
Makua Valley	5	98	**Priority 1**	3
Laie	257	338	**Priority 1**	4
Waimanalo Beach-Homesteads	200	255	**Priority 1**	5
Kaena Point	6	847	**Priority 1**	6
Waimea-Kahuku	268	773	**Priority 1**	7
Kalaheo Avenue	23	132	**Priority 1**	8
Kawailoa	7	209	**Priority 1**	9
Campbell High School	99	893	**Priority 1**	10
Judd Hillside-Lowrey Avenue	250	78	**Priority 1**	11
Waianae Kai	139	172	**Priority 1**	12
Kapiolani Park	227	32	**Priority 1**	13
Nanakuli	13	96	**Priority 2**	14
Diamond Head	148	120	**Priority 2**	15
Kahaluu-Waikane	258	670	**Priority 2**	16
Lualualei-Camp Waianae	2	213	**Priority 2**	17
Makaha	72	89	**Priority 2**	18
Kunia West	14	54	**Priority 2**	19
Waialae-Kahala	47	39	**Priority 2**	20
Makiki Heights	176	55	**Priority 2**	21
Aiea Heights	259	106	**Priority 2**	22
Punchbowl	236	39	**Priority 2**	23
Round Top-Tantalus	170	159	**Priority 2**	24
Maili	185	100	**Priority 3**	25
Hawaii Prince Golf Course	30	51	**Priority 3**	26
Lualualei Transmitter	3	88	**Priority 3**	27
Haiku	49	146	**Priority 3**	28
Lualualei: Halona Road	269	232	**Priority 3**	29
Ahuimanu	232	99	**Priority 3**	30
Waimanalo	244	159	**Priority 3**	31
Ewa Gentry	26	94	**Priority 3**	32
Kapiolani Community College	48	65	**Priority 3**	33
Maunawili	267	38	**Priority 3**	34

Results: Maui

The island of Maui contains an estimated 11,038 cesspools and has a total of 31 census tracts, although only 23 tracts contained more than 25 cesspools and were categorized within the HCPT.

Maui Breakdown:

30% (7 tracts)**/924** cesspools (8%) = **Priority Level 1**

17% (4 tracts)**/3,148** cesspools (12%) = **Priority Level 2**

52% (12 tracts)**/6,971** cesspools (79%) = **Priority Level 3** *(Updated 2022)*

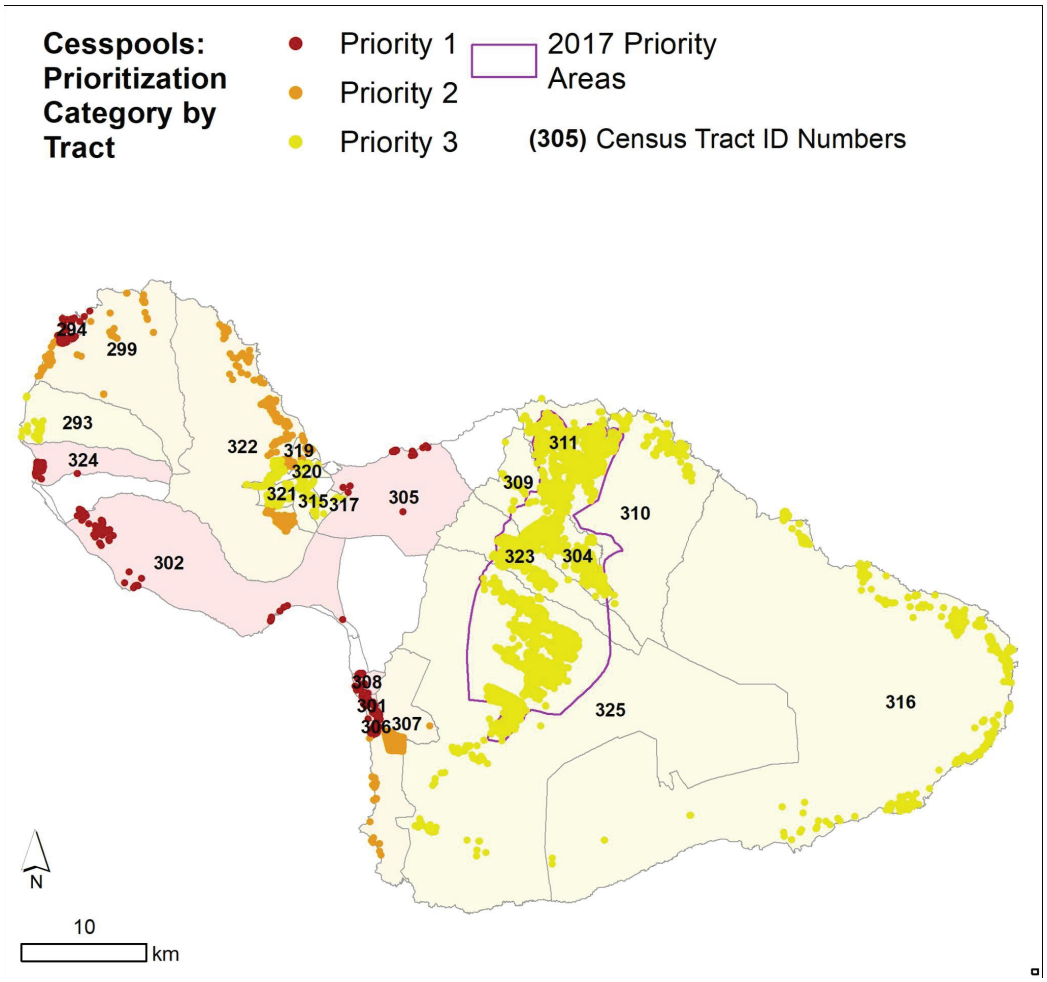


Figure 22: *Maui cesspools (dots) colored by prioritization category, arranged by census tracts. Tracts are shown as lightly colored areas where the tract contains greater than 25 cesspools, and are shown as white areas where the tract contains less than 25 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

Table 5: *Prioritization categories and island-specific ranks for Maui tracts. (Updated 2022)*

Tract Name	Tract ID	Cesspool Count	Priority Category	Island-Specific Priority Rank
Halama	308	84	**Priority 1**	1
Kahoma	324	280	**Priority 1**	2
Spreckelsville	305	35	**Priority 1**	3
Kamaole	301	134	**Priority 1**	4
Kapalua	294	223	**Priority 1**	5
Keawakapu	306	90	**Priority 1**	6
Launiupoko	302	78	**Priority 1**	7
Honokahua	299	85	**Priority 2**	8
Wailea	307	659	**Priority 2**	9
North Wailuku	319	69	**Priority 2**	10
Waihee-Waikapu	322	590	**Priority 2**	11
Honokowai	293	62	**Priority 3**	12
Kula	325	2268	**Priority 3**	13
Hana	316	537	**Priority 3**	14
West Kahului	315	60	**Priority 3**	15
Hali'imaile	309	1146	**Priority 3**	16
South Wailuku	321	281	**Priority 3**	17
Southeast Kahului	317	31	**Priority 3**	18
East Central Wailuku	320	64	**Priority 3**	19
Pukalani	323	1492	**Priority 3**	20
Makawao	304	891	**Priority 3**	21
Ha'iku	311	1413	**Priority 3**	22
Huelo	310	466	**Priority 3**	23

Results: Hawai‘i Island

Hawai‘i Island contains an estimated 48,596 cesspools and has a total of 33 census tracts. All 33 tracts contained more than 25 cesspools and were categorized within the HCPT.

Hawai‘i Island Breakdown:

9% (3 tracts)/**5,119** cesspools (11%) = **Priority Level 1**

15% (5 tracts)/**2,619** cesspools (6%) = **Priority Level 2**

76% (25 tracts)/**40,858** cesspools (84%) = **Priority Level 3** *(Updated 2022)*

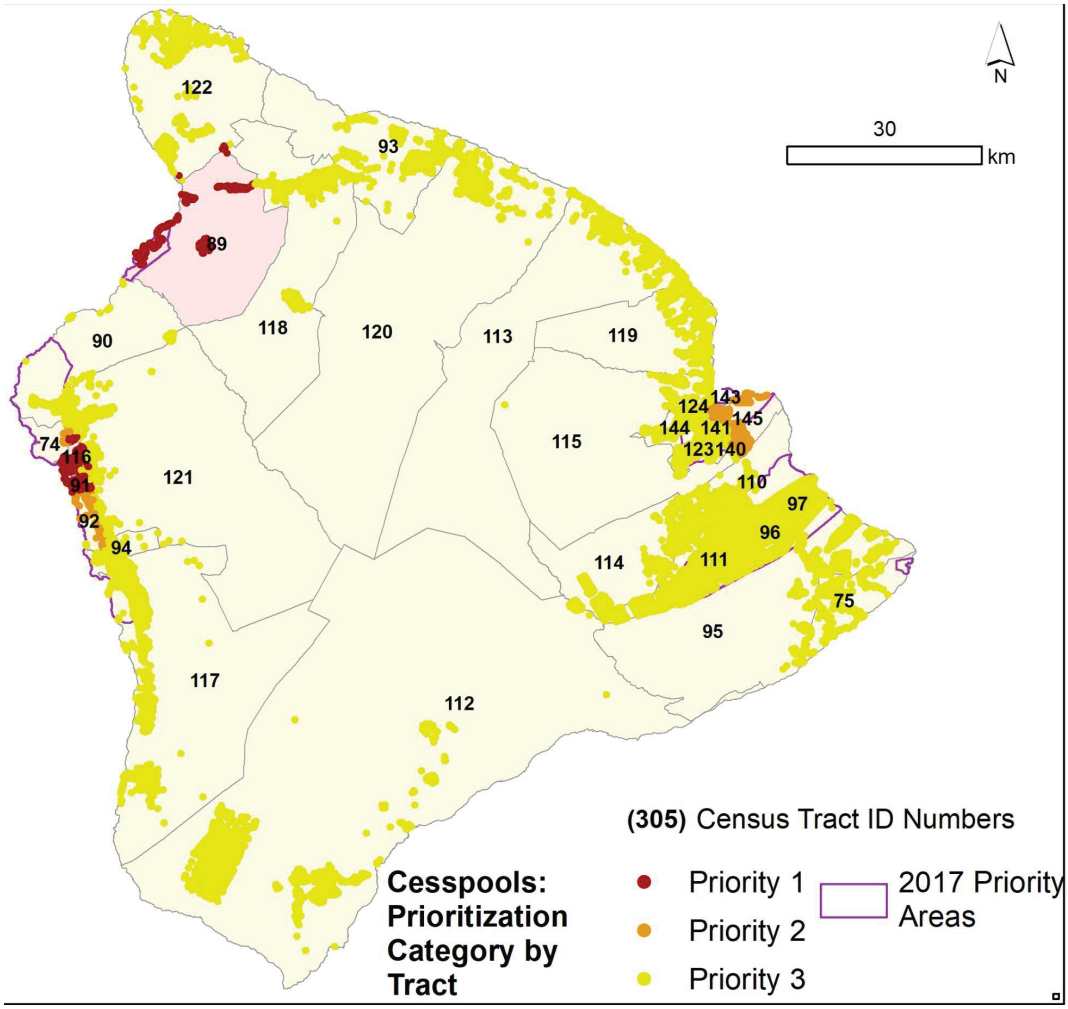


Figure 23: *Hawai‘i Island cesspools (dots) colored by prioritization category, arranged by census tracts. Tracts are shown as lightly colored areas where the tract contains greater than 25 cesspools, and are shown as white areas where the tract contains less than 25 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

Table 6: *Prioritization categories & island-specific ranks for Hawai'i tracts. (Updated 2022)*

Tract Name	Tract ID	Cesspool Count	Priority Category	Island-Specific Priority Rank
Holualoa	91	1761	**Priority 1**	1
Kailua	116	1334	**Priority 1**	2
Kawaihae-Waikoloa	89	2024	**Priority 1**	3
Hilo: Keaukaha-Pana'ewa	145	934	**Priority 2**	4
Hilo: Villa Franca-Kaiko'o	142	151	**Priority 2**	5
Kaumalumalu-Keahou	92	654	**Priority 2**	6
Hilo: University-Houselots	141	549	**Priority 2**	7
Kealakehe	74	530	**Priority 2**	8
Hilo: Puainako	140	1582	**Priority 3**	9
Hilo: Pu'u'eo-Downtown	143	350	**Priority 3**	10
Hualalai	121	1141	**Priority 3**	11
Pauka'a-Wailea	119	963	**Priority 3**	12
Konawaena	94	1059	**Priority 3**	13
Waimea-Pu'u Anahulu	118	2375	**Priority 3**	14
North Hilo	113	855	**Priority 3**	15
Upper Waiakea Forest Reserve	115	670	**Priority 3**	16
Kalaoa	90	1916	**Priority 3**	17
Hilo: Haihai	123	1510	**Priority 3**	18
South Kona	117	1999	**Priority 3**	19
Hilo: Kawailani	125	1608	**Priority 3**	20
Hilo: Piihonua-Kaumana	124	1828	**Priority 3**	21
Hawaiian Paradise Park	97	4187	**Priority 3**	22
North Kohala	122	2131	**Priority 3**	23
Honoka'a-Kukuihaele	93	1329	**Priority 3**	24
Pahoa	95	2137	**Priority 3**	25
Hilo: Kahuku-Kaumana	144	1192	**Priority 3**	26
Ka'u	112	2481	**Priority 3**	27
Kea'au	110	1515	**Priority 3**	28
Pa'auhau-Pa'auilo	120	971	**Priority 3**	29
Kalapana-Kapoho	75	1175	**Priority 3**	30
Orchidland-Ainaloa	96	1663	**Priority 3**	31
Volcano-Mt. View	114	1371	**Priority 3**	32
Upper Puna (Puna Mauka)	111	2651	**Priority 3**	33

Results: Kauaʻi

The island of Kauaʻi contains an estimated 14,300 cesspools and has a total of 13 census tracts. All 13 tracts contained more than 25 cesspools and were categorized within the HCPT.

Kauaʻi Breakdown:

23% (3 tracts)**/2,999** cesspools (20%) = **Priority Level 1**

46% (6 tracts)**/6,144** cesspools (45%) = **Priority Level 2**

31% (4 tracts)**/5,157** cesspools (33%) = **Priority Level 3** *(Updated 2022)*

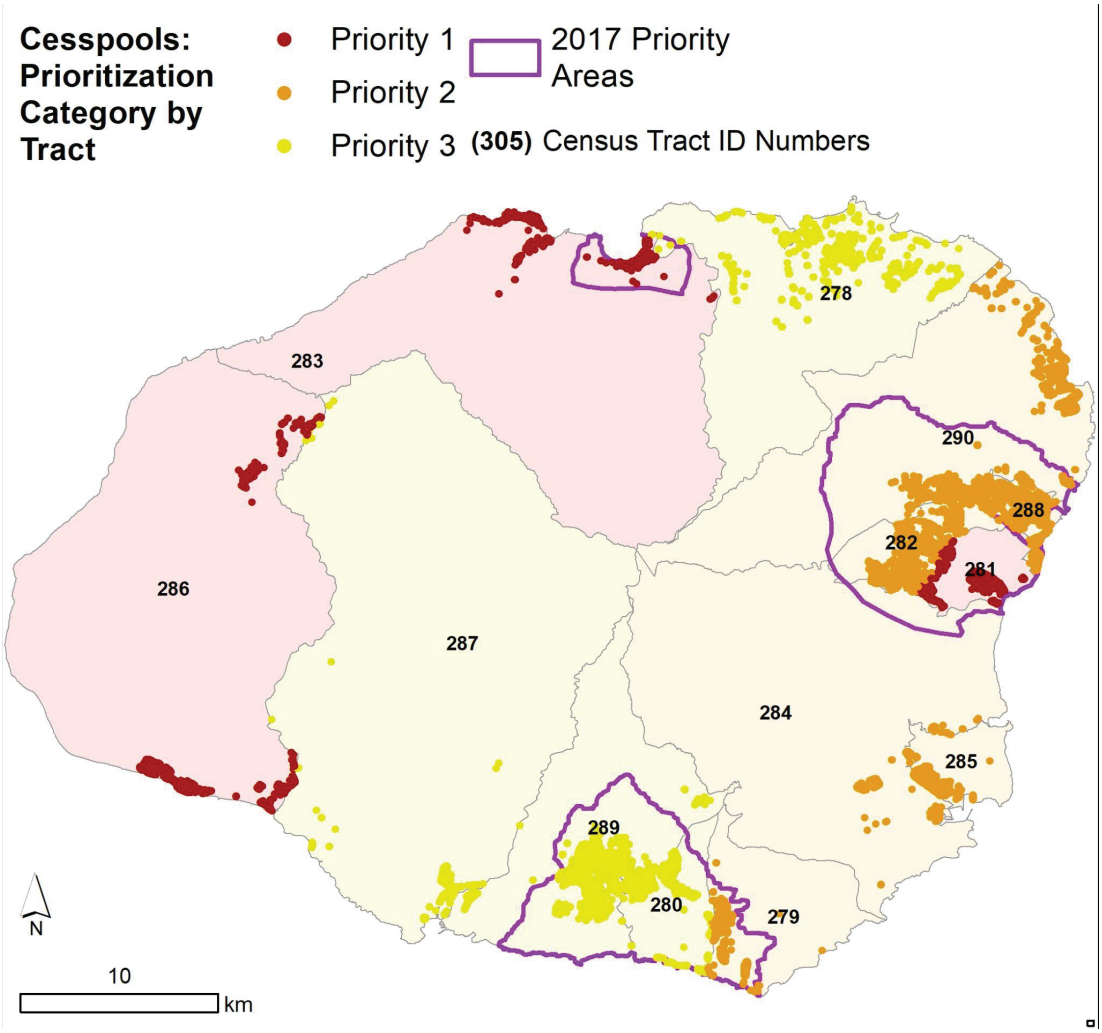


Figure 24: *Kauaʻi cesspools (dots) colored by prioritization category, arranged by census tracts. Tracts are shown as lightly colored areas where the tract contains greater than 25 cesspools, and are shown as white areas where the tract contains less than 25 cesspools. Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

Table 7: *Prioritization categories and island-specific ranks for Kaua'i tracts. (Updated 2022)*

Tract Name	Tract ID	Cesspool Count	Priority Category	Island-Specific Priority Rank
Ha'ena-Hanalei	283	554	**Priority 1**	1
Kekaha-Waimea	286	1210	**Priority 1**	2
Wailua Homesteads	281	1235	**Priority 1**	3
Kapa'a	288	2276	**Priority 2**	4
Wailua Houselots	282	1616	**Priority 2**	5
Koloa-Po'ipu	279	671	**Priority 2**	6
Anahola	290	980	**Priority 2**	7
Lihu'e	285	601	**Priority 2**	8
Puhi-Hanama'ulu	284	362	**Priority 2**	9
Kaumakani-Hanapepe	287	457	**Priority 3**	10
Omao-Kukui'ula	280	916	**Priority 3**	11
Princeville-Kilauea	278	1233	**Priority 3**	12
Eleele-Kalaheo	289	2189	**Priority 3**	13

Validation of Results

Hawai'i Act 132 funded a study led by Smith et al. (2021) to detect OSDS pollution in coastal waters. The study titled, the State-Wide Assessment of Wastewater Pollution Intrusion Into Coastal Regions of the Hawaiian Islands, used the $\delta^{15}N$ values of algal tissue collected in the nearshore environment to determine where nitrogen from wastewater was chronically present within the coastal water column. The study represents the most comprehensive and geographically widespread assessment of nearshore nitrogen source tracing in the state. The authors determined its value is most appropriately applied to a qualitative validation of the prioritization results. Though Smith et al. (2021) provides the best validation dataset available, it should be remembered that the geographic scale and physical drivers of the dataset have significant differences from the statewide, multi-factor extent of the HCPT.

Smith et al. (2021) were able to sample across approximately 50 km of coastline. However, this is still only a small percentage of the state's 1,600 km of coastline. These algal sampling

results are extremely high resolution, showing high variability between sites within hundreds of meters of each other. This exemplifies the complexity and spatial variability of water chemistry and OSDS impacts across large and complicated ecosystems. Nonetheless, generalizations can be made. Act 132 study results were formatted to be comparable to the HCPT results by averaging algal sample site $\delta^{15}N$ values into sample 'swath' averages, which represent swaths of coastline roughly 2 km in length. These were categorized by Smith et al. into:

1. Areas dominated by wastewater nitrogen ($\delta^{15}N$ values > 6‰);
2. Areas with mixed inputs of nitrogen ($\delta^{15}N$ values > 4‰ and < 6‰), and;
3. Areas with limited detection of wastewater N ($\delta^{15}N$ values < 4‰), based on breakpoints listed here.

$\delta^{15}N$ can inform us of the amount of bioavailable nitrogen from different sources. However, it is not necessarily representative of the level of nitrogen flux. Additionally, the $\delta^{15}N$ indicator is subject to limitations, most importantly mixing of nitrogen from other sources, especially agriculture which reduces the clarity of the wastewater nitrogen signature. This tracer only provides information related to coastal water nitrogen chemistry in the immediate sampling location, whereas the HCPT includes multiple other factors, including value-based considerations, that are not related to nitrogen flux. Therefore, algal data results cannot, and should not, fully explain the HCPT categorization results. However, the qualitative comparison remains a useful and thought-provoking exercise.

Table 8 provides a qualitative assessment of how prioritization categories from the HCPT match with the Smith et al. (2021) wastewater impact categories based on the geographic proximity of cesspools and known nitrogen transport factors such as groundwater flow paths and coastal water movement. Overall, the results of this validation indicate 25 of 33 swaths (≈75%) have HCPT prioritization and wastewater impact categories that match reasonably well. Whereas, eight swaths (≈25%) have differing categorizations. Explanations for a number of these outliers are provided in Smith et al. (2021). There are many limitations to comparing very different types of data. Differences in results should be expected. Figure 25 provides a map view of cesspool prioritization categories, aggregated by census blocks alongside the wastewater impact categories of algal sampling swaths produced by Smith et al. (2021).

Table 8: *Qualitative validation results comparison between HCPT prioritization categories and Smith et al. (2021) wastewater impact categories. Wastewater impact categories are based on observed algal $\delta^{15}N$ values averaged across 2 km nearshore swaths and are compared to the HCPT calculated categories of proximal cesspools.*

Swath	Average Algal $\delta^{15}N$ value (‰)	Wastewater Impact Category	HCPT Prioritization of Nearby Cesspools	Matching	Comments for non-matching areas
HPP, Puna	2.12	Limited	3	yes	--
Hamakua Coast	3.17	Limited	3	yes	--
Holualoa, Kona	4.9	Mixed	1/2	yes	--
Kailapa, S.Kohala	4.14	Mixed	3/2/1	yes	--
Keaukaha, Hilo	3.48	Limited	3/1	no	Flow paths may not intersect
Mahaiula, Kona	2.4	Limited	3/None	yes	--
Mauna Lani, Kohala	4.33	Mixed	1	yes	--
NELHA,Kailua-Kona	4.22	Mixed	3	no	Large numbers of upslope CP
Puako, S. Kohala	6.48	Dominated	1	yes	--
Wailoa River, Hilo	4.98	Mixed	3/2/1	yes	--
Kapaa	5.86	Mixed	3/2/1	yes	--
Nawiliwili	8.11	Dominated	2	yes	--
Waiohai	8.44	Dominated	1/2	yes	--
Paia	3.2	Limited	3/None	yes	--
Kihei North	1.91	Limited	3/None	yes	--
Kihei South	5.11	Mixed	1/2	yes	--
Lahaina Control	2.21	Limited	No CP	yes	--
North Shore Control	1.9	Limited	1	no	Few cesspools, high water currents.
South Maui Control	2.58	Limited	3/None	yes	--
Waiehu	6.88	Dominated	3	no	Wetland denitrification
Waihee Control	1.71	Limited	3	yes	--
Wailea	6.36	Dominated	1/2	yes	--
Wailea South	4.81	Mixed	2	yes	--
Diamond Head	5.96	Mixed	2	yes	--
Hauula	9.23	Dominated	1	yes	--
Kaaawa	10.3	Dominated	1	yes	--
Kalaeloa	5.37	Mixed	1/None	unclear	Other sources, undocumented OSDS?
Makua	2.29	Limited	3	yes	--
Mokapu	2.89	Limited	1	no	Unclear, complex geology?
Sunset Beach	3.67	Limited	1	no	Unclear, complex currents?
Waialua	9.81	Dominated	1	yes	--
Waianae	5.43	Mixed	2	yes	--
Wailupe	6.09	Dominated	No CP	no	Other, undocumented OSDS?

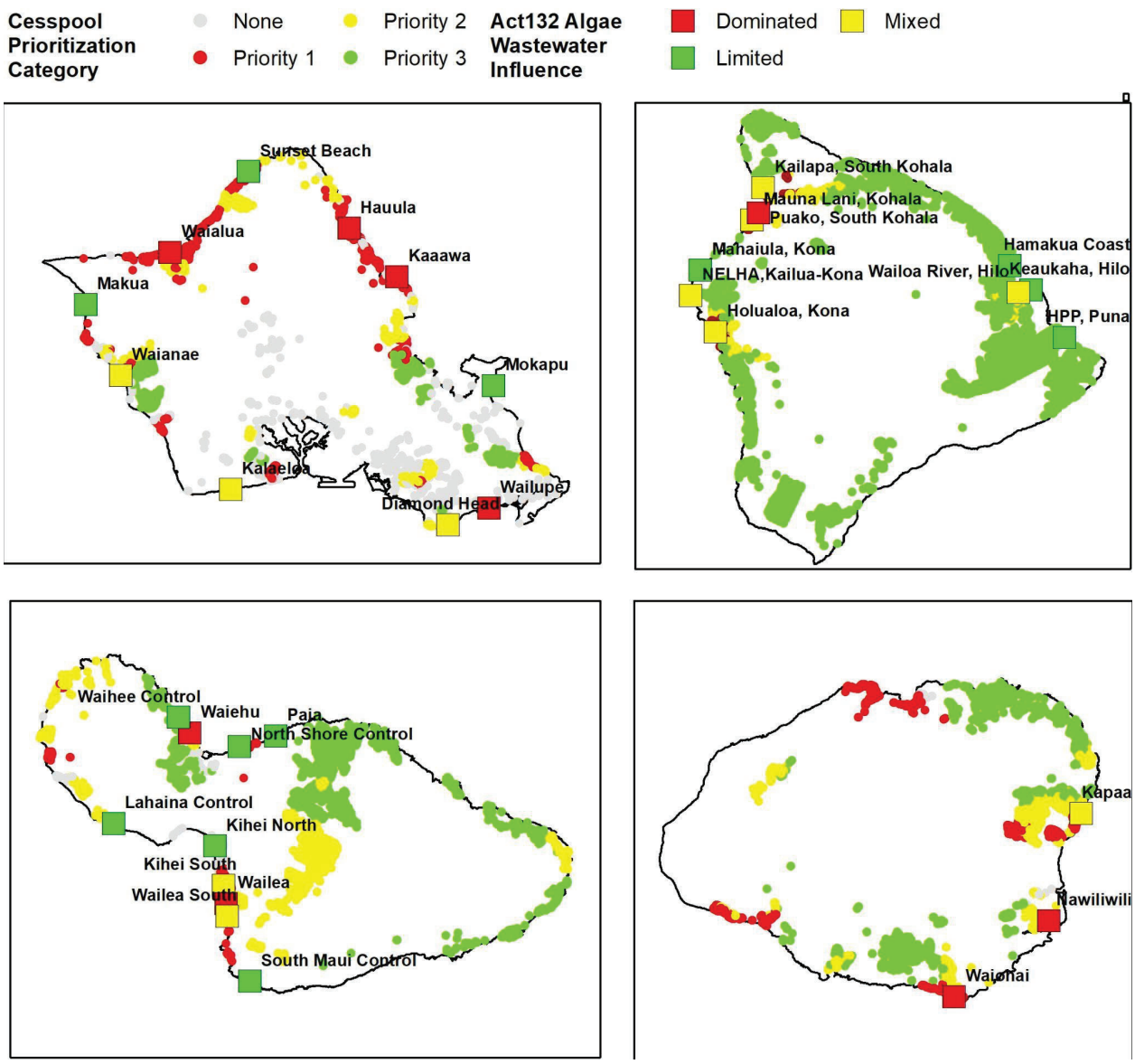


Figure 25: *Cesspool locations (circles) color coded by HCPT prioritization categories and aggregated by census blocks alongside algal sampling swaths (squares) from Smith et al. (2021) color coded by observed wastewater impact categories.*

Sensitivity Analysis of Priorities

Each factor used in the HCPT interacts with the environment in various ways and has different levels of importance to stakeholders and the community. For example, ocean conservation organizations may heavily prioritize coral reef protection, whereas the Board of Water Supply may prioritize impacts to drinking water wells more heavily. Unfortunately, it is impossible to weigh the factors proportionally to meet the demands of all stakeholders. Yet, it is acknowledged that each factor isn't equal in terms of its potential hazard and impact on the environment or human health. Because DOH is tasked with protecting human health and the environment, the tool includes factors that relate to these outcomes (i.e. distance to drinking water wells). A sensitivity analysis was performed to understand how weighting different factors may or may not change the score results. The process is an important way to test the robustness of the method and the types of factors chosen. If the weight of one factor disrupted the overall results disproportionately, it could compromise the structure of the tool. The sensitivity analysis was conducted using three scenarios where different weights were assigned to each risk factor, based on a hypothetical conceptual model of how different priorities might be expressed through adjustment of weights to different factors based upon the DOH mission and need.

The three weighting scenarios that were developed include:

1. **All inputs equally weighted:** Base scenario to which all others are compared.
2. **Human health priority:** Drinking water and human recreation are prioritized.
3. **Ecological health priority:** Ecosystem services and wildlife are prioritized.

It is recognized that some overlap exists between the scenarios, for example, factors that support ecological health often also benefit human health. Every effort was made to thoughtfully categorize the scenarios. Though imperfect, this method allows comparison for use and lends validity to future policy development. Ideally, the science in this tool would be straightforward enough for 'evidence-based policymaking.' However, with that, there is a level of pragmatism needed and an ability to combine scientific evidence with governance principles to translate the complex scientific principles into simple explanations for decision-making (Cairney & Oliver, 2017). The authors recognize the balance needed between robustness of the scientific methodology and the ability to make informed decisions to overcome problems.

Overall, it is the authors' opinions that using an equal weight method is feasible and acceptable for this exercise at this time. Sensitivity testing suggested that there may be

about a six to seven percent uncertainty in the final ranks of the census tracts if different risk factors are weighted reasonably, as was done with these three scenarios. Individual census tracts can change more, warranting further exercises to determine appropriate weighting. Specifically, through this type of test, the authors found that the rank of individual census tracts (when tracts are ordered by priority score) has a standard deviation of 6.2 ranks when the ecological health scenario is compared to the base scenario, and 6.3 ranks when the human health scenario is compared to the base scenario. Essentially, the further this deviation is from zero, the less the scenarios match or agree. Complete results and specifics about the sensitivity testing are provided in Appendix B.

Conclusion/Next Steps

The current report and the HCPT expand on the previous efforts to provide a sound, quantitative, up-to-date hazard assessment of geographic areas at risk from cesspool pollution. The hazard categories provide a framework to prioritize cesspool conversions by the CCWG. The HCPT uses the best available data and method, developed in consultation with local experts and DOH associates, to prioritize cesspools in the allotted time frame of the contract and CCWG needs. Though the prioritization process is inherently contextual, every effort has been made to create an objective evaluation of cesspool hazards in an equitable and fact-based methodology. The HCPT should be used in consultation with a suite of iterative decision-making strategies.

The HCPT is a dynamic data tool that can support additional analysis of cesspool conversion strategies and policies. Because additional data can be layered onto the prioritization results, there are numerous possibilities to explore interdisciplinary connections between cesspool conversion and social factors such as household income, language spoken, or internet connectivity. By analyzing various data types with priority conversion areas, outreach and education methods can become highly specialized and targeted to have the greatest impacts, saving money, time, and human resources.

Because the HCPT relies on accurate cesspool numbers and locations, future database refinement is warranted and recommended, including some level of ground-truthing. This will ensure that the HCPT results are accurate, but also allow DOH to track maintenance and upgrades more efficiently and effectively. The identified hazard areas can also inform future permit requirements and prioritization plans, including mandating larger lot sizes for future development, increased setback distances to the coast, and requiring advanced technologies where appropriate. County offices may wish to use the tool for future planning of subdivisions to avoid carrying capacity issues on the land, such as poor soil or

proximity to sensitive habitat or drinking water. Watershed or conservation organizations may find value in understanding areas most at risk from cesspool pollution and use the data for educational or management strategies. Finally, the HCPT can also identify areas where maintenance and inspection of OSDS will be critical to preserving water quality.

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References

Abaya, L. M., Wiegner, T. N., Colbert, S. L., Beets, J. P., Carlson, K. M., Kramer, K. L., Most, R., & Couch, C. S. (2018). A multi-indicator approach for identifying shoreline sewage pollution hotspots adjacent to coral reefs. Marine Pollution Bulletin, 129(1), 70–80. https://doi.org/10.1016/j.marpolbul.2018.02.005

Anderson, T.R., Fletcher, C.H., Barbee, M.M., Frazer, L.N., & Romine, B. (2015). Doubling of Coastal Erosion Under Rising Sea Level by Mid-Century in Hawai'i, Natural Hazards, doi:10.1007/s11069-015-1698-6.

Anderson, T.R., Fletcher, C.H., Barbee, M.M., Romine, B., Lemmo, S., & Delevaux, J.M.S. (2018). Modeling multiple sea level rise stresses reveals up to twice the land at risk compared to strictly passive flooding methods, Scientific Reports, 8:14484, DOI: 10.1038/s41598-018-32658-x.

Arnade, L. J. (1999). Seasonal Correlation of Well Contamination and Septic Tank Distance. Ground Water, 37(6), 920.

Asner, G.P., Vaughn, N.R., Heckler, J., Knapp, D.E., Balzotti, C., Shafron, E., Martin, R.E., Neilson, B.J., & Gove, J.M. (2020). Large-scale mapping of live corals to guide reef conservation. Proceedings of the National Academy of Sciences, 117(52), 33711–33718. https://doi.org/10.1073/pnas.2017628117

Bicki, J.T., & Brown, R.B. (1991). On-site sewage disposal: the influence of system density on water quality. Journal of Environmental Health 53:39–42. On-Site Sewage Disposal: The influence of system density on water quality on JSTOR

Borchardt, M.A., Bradbury, K.R., Alexander, E.C., Kolberg, R.J., Alexander, S.C., Archer, J.R., Braatz, L.A., Forest, B.M., Green, J.A., & Spencer, S.K. (2010). Norovirus outbreak caused by a new septic system in a Dolomite Aquifer. *Ground Water*, 49(1), 85–97. https://doi.org/10.1111/j.1745-6584.2010.00686.x

Brown, R.B., & Bicki, T.J. (1997). Notes in Soil Science: On-Site Sewage Disposal - Influence Of System Densities On Water Quality. Institute Of Food And Agricultural Sciences. University Of Florida Cooperative Extension Service. Retrieved from: Septic Density (purdue.edu)

Byappanahalli M.N., Nevers M.B., Korajkic A., Staley Z.R. & Harwood V.J. (n.d.). *Enterococci in the environment*. Microbiology and molecular biology reviews : MMBR. Retrieved September 23, 2021, from https://pubmed.ncbi.nlm.nih.gov/23204362/.

Byappanahalli, M.N., Roll, B.M., & Fujioka, R.S. (2012). Evidence for occurence, persistence, and growth potential of Escherichia coli and Enterococci In Hawaii's soil environments. *Microbes and Environments*, 27(2), 164–170. https://doi.org/10.1264/jsme2.me11305

Cairney, P., & Oliver, K. (2017). Evidence-based policymaking is not like evidence-based medicine, so how far should you go to bridge the divide between evidence and policy? *Health Research Policy and Systems*, 15(1). https://doi.org/10.1186/s12961-017-0192-x

Canadian Centre for Occupational Health and Safety. (2021). Hazard and Risk. Retrieved from: https://www.ccohs.ca/oshanswers/hsprograms/hazard_risk.html

Conservation International. (2021). Hawai'i, ho'i i ke kai momona: Return to an abundant ocean. Retrieved from: Hawai'i (conservation.org)

Cooper, J. A., Loomis, G. W., & Amador, J. A. (2016). Hell and High Water: Diminished Septic System Performance in Coastal Regions Due to Climate Change. PLOS ONE, 11(9). https://doi.org/10.1371/journal.pone.0162104

Donovan, M.K., Counsell, C.W.W., Lecky, J., & Donahue, M.J. (2020). Estimating indicators and reference points in support of effectively managing nearshore marine resources in Hawai'i. Report by Hawai'i Monitoring and Reporting Collaborative.

Environmental Protection Agency. (2020). Septic Systems and Drinking Water. EPA. https://www.epa.gov/septic/septic-systems-and-drinking-water.

Flanagan, K., Dixon, B., Rivenbark, T., & Griffin, D. (2019). An integrative Gis approach to analyzing the impacts of septic systems on the coast of Florida, USA. *Physical Geography*, 41(5), 407–432. https://doi.org/10.1080/02723646.2019.1671297

Foo, S. A., Walsh, W. J., Lecky, J., Marcoux, S., & Asner, G. P. (2020). Impacts of pollution, fishing pressure, and reef rugosity on resource fish biomass in West Hawai'i. Ecological Applications, 31(1). https://doi.org/10.1002/eap.2213

Giambelluca, T.W., Q. Chen, A.G. Frazier, J.P. Price, Y.-L. Chen, P.-S. Chu, J.K. Eischeid, and D.M. Delparte. (2013). Online Rainfall Atlas of Hawai'i. Bull. Amer. Meteor. Soc. 94, 313-316, doi: 10.1175/BAMS-D-11-00228.1.

Gingerich, Stephen B. & Oki, Delwyn S. (2000). Ground Water in Hawai'i: U.S. Geological Survey, Fact Sheet 126-00, 6 p. Retrieved from Ground Water in Hawaii (usgs.gov)

Habel, S., Fletcher, C.H., Rotzoll, K., & El-Kadi, A.I. (2017). Development of a model to simulate groundwater inundation induced by sea level rise and high tides in Honolulu, Hawai'i. Water Research, 114, 122-134. doi:10.1016/j.watres.2017.02.035

Habel, S., Fletcher, C.H., Anderson, T.R., & Thompson, P.R. (2020). Sea Level Rise Induced Multi-Mechanism Flooding and Contribution to Urban Infrastructure Failure. Scientific Reports, 10(1). https://doi.org/10.1038/s41598-020-60762-4

Hansen Allen & Luce Engineers, Inc. (2016). Tooele County Septic System Density Study. Retrieved from: Microsoft Word - Tooele County - Septic Density Study - FINAL.docx (tooelehealth.org)

Hawai'i Administrative Rules (HAR) 11-62 (Appendix D)

Hawai'i State Department of Health: Environmental Management Division. (2017). Report to the Twenty-Ninth Legislature State of Hawai'i 2018 Regular Session: Relating to Cesspools and Prioritization for Replacement. Retrieved from Microsoft Word - Re-Redrafted Cesspool Report - Final Draft_rev4 (hawaii.gov)

Hawai'i State Department of Health: Wastewater Branch. 2021. Wastewater Branch: Mission Statement. Retrieved from Wastewater Branch (hawaii.gov)

Hygnstrom, J., Skipton, S., Woldt, W. (2011). Residential Onsite Wastewater Treatment: The Role of Soil. University of Nebraska-Lincoln Extension. Retrieved from g1468.pdf (unl.edu)

Kappel, C.V., K.A. Selkoe, and Ocean Tipping Points (OTP). 2017. Wave Power Long-term Mean, 2000-2013 - Hawai'i. Distributed by the Pacific Islands Ocean Observing System (PacIOOS). http://pacioos.org/metadata/hi_otp_all_wave_avg.html.

Kinsley, C.B., Joy, D., Campbell, A., Feniak, D., Branson, D., Albert, T., Saurio, J. (2004.). A risk assessment model for Onsite systems applied to the city of Ottawa, Canada. On-Site Wastewater Treatment X, 21-24. https://doi.org/10.13031/2013.15759

Mair, A., & El-Kadi, A.I. (2013). Logistic regression modeling to assess groundwater vulnerability to contamination in Hawai'i, USA. Journal of Contaminant Hydrology, 153:1-23.

McKenzie, T., Dulai, H., & Chang, J. (2019). Parallels between stream and coastal water quality associated with groundwater discharge. PLOS ONE, 14(10). https://doi.org/10.1371/journal.pone.0224513

Moon, Q. (2021) Determining Potential Causes of Elevated Nitrate Levels in O'ahu's Drinking Water with Geospatial Analysis. Poster presented at the UH Manoa 2021 Spring Undergraduate Showcase, April 30, 2021.

Nagheli, S., Samani, N., & Barry, D.A. (2020). Multi-well capture zones in strip-shaped aquifers. PLOS ONE, 15(3). https://doi.org/10.1371/journal.pone.0229767

National Ag Safety Database. (N.D.) University of Wisconsin-Extension. Flooded Private Sewage Systems: Safety, Sanitation And Clean-Up Concerns. Retrieved from NASD - Flooded Private Sewage Systems: Safety, Sanitation And Clean-Up Concerns (nasdonline.org)

Natural Resources Conservation Service (NRCS). 2020. NRCS Soils Online Database. Retrieved from https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrcs142p2_053627

Oluwasola, E.I., Okunade, O.A., & Adesina, K. (2017). Impact of the Proximity of Septic Tanks on the Bacteriological Quality of Well Water from Private Households in Ado Ekiti, Nigeria. Impact of the Proximity of Septic Tanks on the Bacteriological Quality of Well Water from Private House-holds in Ado Ekiti, Nigeria (sciencedomain.org)

Oosting, A. (2011). Development of a risk assessment tool for developing prioritized management strategies for on-site systems. M.A. Sc., University of Guelph, 2010.

Oosting, A., & Joy, D. (2013). A GIS-Based model to assess the risk of on-site wastewater Systems impacting groundwater and surface water resources. *Canadian Water Resources Journal / Revue Canadienne Des Ressources Hydriques*, 36(3), 229–246. https://doi.org/10.4296/cwrj3603882

Pollock, D.W. (2012). User guide for MODPATH version 6: a particle tracking model for MODFLOW (p. 58). US: US Department of the Interior, US Geological Survey.

Robertson, W.D., Cherry, J.A., & Sudicky, E.A. (1991). Ground-water contamination from two small septic systems on sand aquifers: Ground Water, 29(1), p. 82–92.

Schaider, L. A., Rudel, R. A., Ackerman, J. M., Dunagan, S. C., & Brody, J. G. (2014). Pharmaceuticals, perfluorosurfactants, and other organic wastewater compounds in public drinking water wells in a shallow sand and gravel aquifer. Science of The Total Environment, 468-469, 384–393. https://doi.org/10.1016/j.scitotenv.2013.08.067

Schaider, L.A., Ackerman, J.M. & Rudel, R.A. (2016). Septic systems as sources of organic wastewater compounds in domestic drinking water wells in a shallow sand and gravel aquifer. Science of The Total Environment, 547, p. 470-481. Septic systems as sources of organic wastewater compounds in domestic drinking water wells in a shallow sand and gravel aquifer - ScienceDirect

Smith, C.M., Whittier, R.B. Amato, D.W., Dialer, M.L., Colbert, S., Shuler, C.K., Altman-Kurosaki, N.T., Vasconcellos, S., Markel, A.C., & Ornelas, B. (2021, In Press). State-Wide Assessment of Wastewater Pollution Intrusion Into Coastal Regions of the Hawaiian Islands. Report Prepared for the Hawai'i State Legislature, Hawai'i State Department of Health, & the Cesspool Conversion Working Group.

Sowah, R.A., Habteselassie, M.Y., Radcliffe, D.E., Bauske, E., & Risse, M. (2017). Isolating the impact of septic systems on fecal pollution in streams of suburban watersheds in Georgia, United States. Water Research, 108, 330–338. https://doi.org/10.1016/j.watres.2016.11.007

Strauch, A.M., Mackenzie, R.A., Bruland, G.L., Tingley, R., & Giardina, C.P. (2014). Climate change and land use drivers of fecal bacteria in TROPICAL Hawaiian rivers. *Journal of Environmental Quality*, 43(4), 1475–1483. https://doi.org/10.2134/jeq2014.01.0025

U.S. Census Bureau. (2021). Data. Census.gov. https://www.census.gov/data.html.

U.S. Census Bureau. (N.D). Census Tract and Block Numbering Areas. Chapter 10. Retrieved from: Ch10GARM.pdf (census.gov)

United States Environmental Protection Agency (EPA). (2006) State source water assessment and protection programs guidance. US EPA, Washington, DC. http://cfpub.epa.gov/safewater/sourcewater/sourcewater.cfm?action=Assessments. 28 Jan 2007

United States Environmental Protection Agency (EPA). (2017). Clean Water Rule: Streams and Wetlands Matter. Retrieved from Clean Water Rule: Streams and Wetlands Matter | Clean Water Rule | US EPA

Wedding, L. M., Lecky, J., Gove, J. M., Walecka, H.R., Donovan, M. K. (2018). Advancing the integration of spatial data to map human and natural drivers on coral reefs. PLOS ONE 13(3): e0189792. https://doi.org/10.1371/journal.pone.0189792.

Whittier, R., Rotzoll, K., Dhal, S., El-Kadi, A.I., Ray, C., & Chang, D. (2010). Groundwater source assessment program for the state of Hawai'i, USA: Methodology and example

application, J. Hydrogeology, 18: 711–723.

Whittier, R. and El-Kadi, A.I. (2009). Human and Environmental Risk Ranking of Onsite Sewage Disposal Systems. Hawai'i Department of Health. Retrieved from: Microsoft Word - OSDS_Report_Final-Draft.doc (hawaii.gov)

Whittier, R. and El-Kadi, A.I. (2014). Human and Environmental Risk Ranking of Onsite Sewage Disposal Systems for the Hawaiian Islands of Kauai, Molokai, Maui, and Hawaii. Hawai'i Department of Health. Retrieved from: https://scholarspace.manoa.hawaii.edu/bitstream/10125/50771/1/2014%20-%20OSDS%20-%20Hawaii-Kauai-Maui-Molokai.pdf

Wood, S.A., Guerry, A.D., Silver, J.M., Lacayo, M. (2013). Using social media to quantify nature-based tourism and recreation. Scientific Reports 3: 2976. Retrieved from https://www.nature.com/articles/srep02976

Van Genuchten, M. T. (1982). Analytical solutions of the one-dimensional convective-dispersive solute transport equation (No. 1661). US Department of Agriculture, Agricultural Research Service.

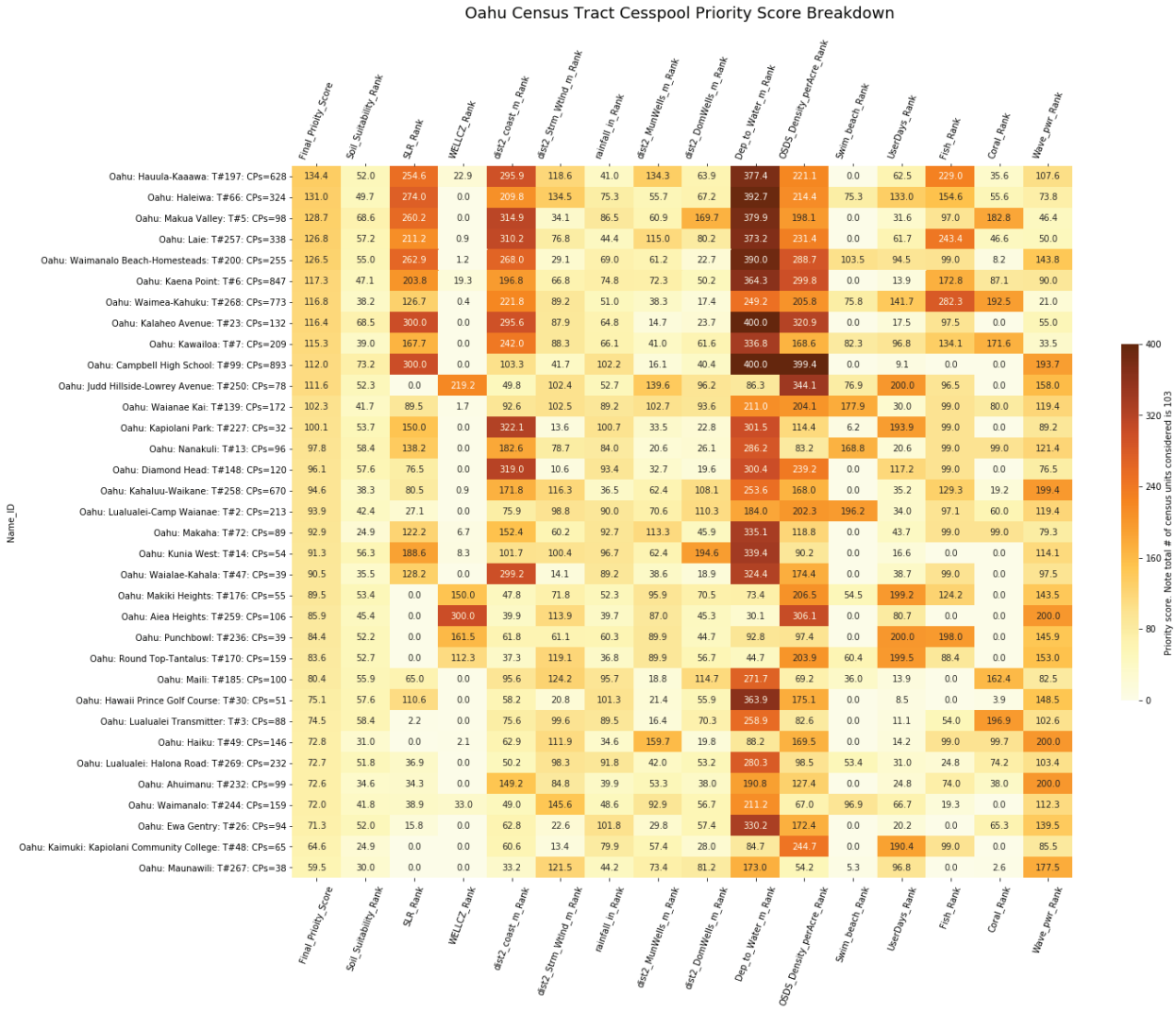
Verstraeten, I.M., Fetterman, G.S., Sonja S.K., Meyer, M.T., & Bullen T.D. (2004). Is Septic Waste Affecting Drinking Water From Shallow Domestic Wells Along the Platte River in Eastern Nebraska? USGS. fs07203l.pdf (usgs.gov)

Yates, M.V. (1985). Septic Tank Density and Ground-Water Contamination. Groundwater. 23(5),p. 586-591. Septic Tank Density and Ground-Water Contamination - Yates - 1985 - Groundwater - Wiley Online Library (hawaii.edu)

Appendix A: Additional Results

Additional Figures and tables are provided below. All results are updated as of 2022, See Appendix C for details.

Additional Results: O'ahu



Name_ID	Final_Priority_Score	Soil_Suitability_Rank	SLR_Rank	WELLCZ_Rank	dist2_coast_m_Rank	dist2_Strm_Wtnd_m_Rank	rainfall_in_Rank	dist2_MunWells_m_Rank	dist2_DomWells_m_Rank	Dep_to_Water_m_Rank	OSDS_Density_perAcre_Rank	Swim_beach_Rank	UserDays_Rank	Fish_Rank	Coral_Rank	Wave_pwr_Rank
Oahu: Hauula-Kaaawa: T#197: CPs=628	134.4	52.0	254.6	22.9	295.9	118.6	41.0	134.3	63.9	377.4	221.1	0.0	62.5	229.0	35.6	107.6
Oahu: Haleiwa: T#66: CPs=324	131.0	49.7	274.0	0.0	209.8	134.5	75.3	55.7	67.2	392.7	214.4	75.3	133.0	154.6	55.6	73.8
Oahu: Makua Valley: T#5: CPs=98	128.7	68.6	260.2	0.0	314.9	34.1	86.5	60.9	169.7	379.9	198.1	0.0	31.6	97.0	182.8	46.4
Oahu: Laie: T#257: CPs=338	126.8	57.2	211.2	0.9	310.2	76.8	44.4	115.0	80.2	373.2	231.4	0.0	61.7	243.4	46.6	50.0
Oahu: Waimanalo Beach-Homesteads: T#200: CPs=255	126.5	55.0	262.9	1.2	268.0	29.1	69.0	61.2	22.7	390.0	288.7	103.5	94.5	99.0	8.2	143.8
Oahu: Kaena Point: T#6: CPs=847	117.3	47.1	203.8	19.3	196.8	66.8	74.8	72.3	50.2	364.3	299.8	0.0	13.9	172.8	87.1	90.0
Oahu: Waimea-Kahuku: T#268: CPs=773	116.8	38.2	126.7	0.4	221.8	89.2	51.0	38.3	17.4	249.2	205.8	75.8	141.7	282.3	192.5	21.0
Oahu: Kalaheo Avenue: T#23: CPs=132	116.4	68.5	300.0	0.0	295.6	87.9	64.8	14.7	23.7	400.0	320.9	0.0	17.5	97.5	0.0	55.0
Oahu: Kawailoa: T#7: CPs=209	115.3	39.0	167.7	0.0	242.0	88.3	66.1	41.0	61.6	336.8	168.6	82.3	96.8	134.1	171.6	33.5
Oahu: Campbell High School: T#99: CPs=893	112.0	73.2	300.0	0.0	103.3	41.7	102.2	16.1	40.4	400.0	399.4	0.0	9.1	0.0	0.0	193.7
Oahu: Judd Hillside-Lowrey Avenue: T#250: CPs=78	111.6	52.3	0.0	219.2	49.8	102.4	52.7	139.6	96.2	86.3	344.1	76.9	200.0	96.5	0.0	158.0
Oahu: Waianae Kai: T#139: CPs=172	102.3	41.7	89.5	1.7	92.6	102.5	89.2	102.7	93.6	211.0	204.1	177.9	30.0	99.0	80.0	119.4
Oahu: Kapiolani Park: T#227: CPs=32	100.1	53.7	150.0	0.0	322.1	13.6	100.7	33.5	22.8	301.5	114.4	6.2	193.9	99.0	0.0	89.2
Oahu: Nanakuli: T#13: CPs=96	97.8	58.4	138.2	0.0	182.6	78.7	84.0	20.6	26.1	286.2	83.2	168.8	20.6	99.0	99.0	121.4
Oahu: Diamond Head: T#148: CPs=120	96.1	57.6	76.5	0.0	319.0	10.6	93.4	32.7	19.6	300.4	239.2	0.0	117.2	99.0	0.0	76.5
Oahu: Kahaluu-Waikane: T#258: CPs=670	94.6	38.3	80.5	0.9	171.8	116.3	36.5	62.4	108.1	253.6	168.0	0.0	35.2	129.3	19.2	199.4
Oahu: Lualualei-Camp Waianae: T#2: CPs=213	93.9	42.4	27.1	0.0	75.9	98.8	90.0	70.6	110.3	184.0	202.3	196.2	34.0	97.1	60.0	119.4
Oahu: Makaha: T#72: CPs=89	92.9	24.9	122.2	6.7	152.4	60.2	92.7	113.3	45.9	335.1	118.8	0.0	43.7	99.0	99.0	79.3
Oahu: Kunia West: T#14: CPs=54	91.3	56.3	188.6	8.3	101.7	100.4	96.7	62.4	194.6	339.4	90.2	0.0	16.6	0.0	0.0	114.1
Oahu: Waialae-Kahala: T#47: CPs=39	90.5	35.5	128.2	0.0	299.2	14.1	89.2	38.6	18.9	324.4	174.4	0.0	38.7	99.0	0.0	97.5
Oahu: Makiki Heights: T#176: CPs=55	89.5	53.4	0.0	150.0	47.8	71.8	52.3	95.9	70.5	73.4	206.5	54.5	199.2	124.2	0.0	143.5
Oahu: Aiea Heights: T#259: CPs=106	85.9	45.4	0.0	300.0	39.9	113.9	39.7	87.0	45.3	30.1	306.1	0.0	80.7	0.0	0.0	200.0
Oahu: Punchbowl: T#236: CPs=39	84.4	52.2	0.0	161.5	61.8	61.1	60.3	89.9	44.7	92.8	97.4	0.0	200.0	198.0	0.0	145.9
Oahu: Round Top-Tantalus: T#170: CPs=159	83.6	52.7	0.0	112.3	37.3	119.1	36.8	89.9	56.7	44.7	203.9	60.4	199.5	88.4	0.0	153.0
Oahu: Maili: T#185: CPs=100	80.4	55.9	65.0	0.0	95.6	124.2	95.7	18.8	114.7	271.7	69.2	36.0	13.9	0.0	162.4	82.5
Oahu: Hawaii Prince Golf Course: T#30: CPs=51	75.1	57.6	110.6	0.0	58.2	20.8	101.3	21.4	55.9	363.9	175.1	0.0	8.5	0.0	3.9	148.5
Oahu: Lualualei Transmitter: T#3: CPs=88	74.5	58.4	2.2	0.0	75.6	99.6	89.5	16.4	70.3	258.9	82.6	0.0	11.1	54.0	196.9	102.6
Oahu: Haiku: T#49: CPs=146	72.8	31.0	0.0	2.1	62.9	111.9	34.6	159.7	19.8	88.2	169.5	0.0	14.2	99.0	99.7	200.0
Oahu: Lualualei: Halona Road: T#269: CPs=232	72.7	51.8	36.9	0.0	50.2	98.3	91.8	42.0	53.2	280.3	98.5	53.4	31.0	24.8	74.2	103.4
Oahu: Ahuimanu: T#232: CPs=99	72.6	34.6	34.3	0.0	149.2	84.8	39.9	53.3	38.0	190.8	127.4	0.0	24.8	74.0	38.0	200.0
Oahu: Waimanalo: T#244: CPs=159	72.0	41.8	38.9	33.0	49.0	145.6	48.6	92.9	56.7	211.2	67.0	96.9	66.7	19.3	0.0	112.3
Oahu: Ewa Gentry: T#26: CPs=94	71.3	52.0	15.8	0.0	62.8	22.6	101.8	29.8	57.4	330.2	172.4	0.0	20.2	0.0	65.3	139.5
Oahu: Kaimuki: Kapiolani Community College: T#48: CPs=65	64.6	24.9	0.0	0.0	60.6	13.4	79.9	57.4	28.0	84.7	244.7	0.0	190.4	99.0	0.0	85.5
Oahu: Maunawili: T#267: CPs=38	59.5	30.0	0.0	0.0	33.2	121.5	44.2	73.4	81.2	173.0	54.2	5.3	96.8	0.0	2.6	177.5

Figure A1: *Pivot table showing census-tract based priority scores, (leftmost column) and individual risk factor scores, which were averaged to calculate the overall priority score of each census tract for O'ahu. (Updated 2022)*

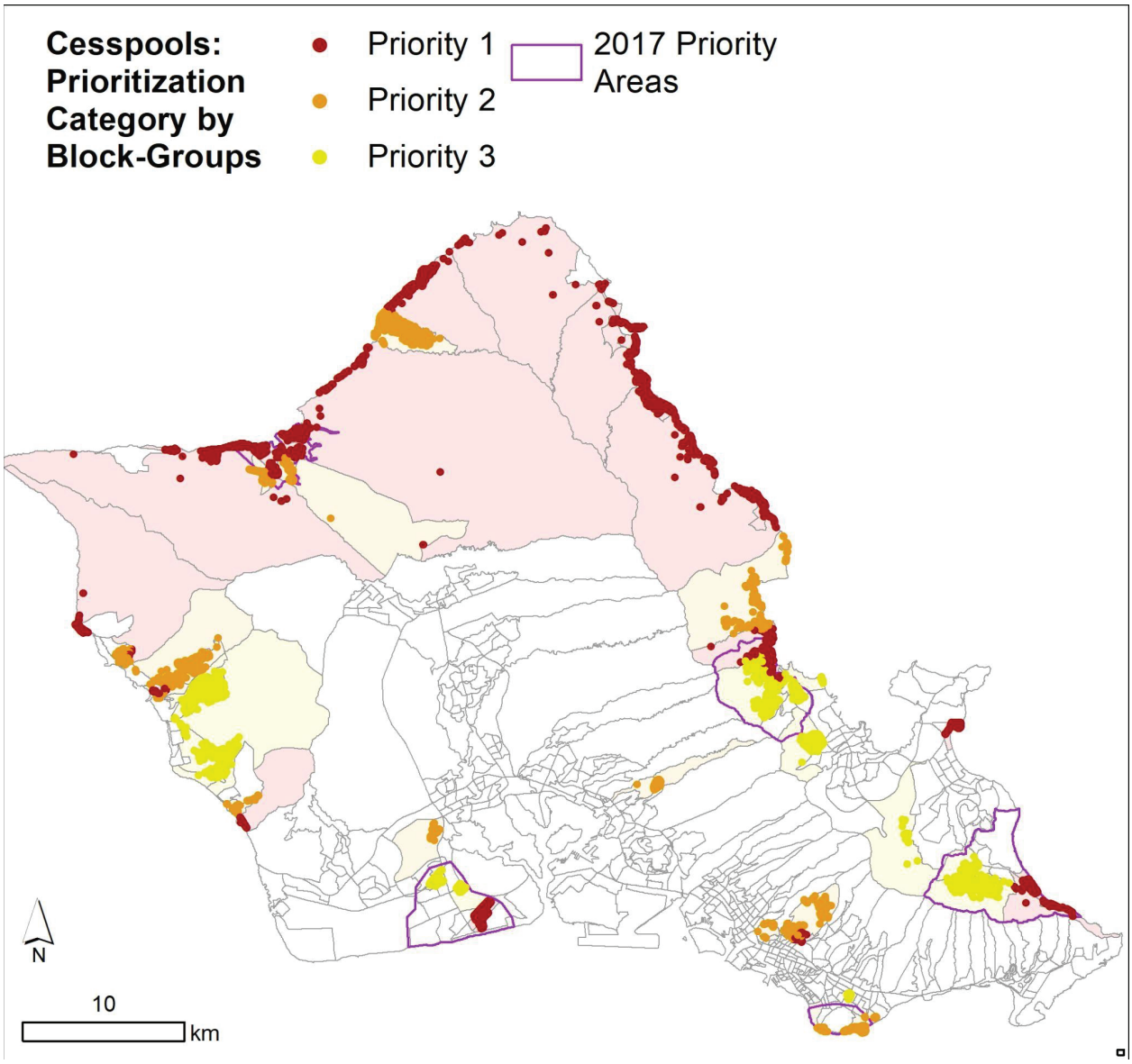


Figure A2: *O'ahu cesspools (dots) colored by prioritization category, arranged by census block-groups. Block-groups are shown as lightly colored areas where the block-group contains >20 cesspools. White areas signify the block-group contains <20 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

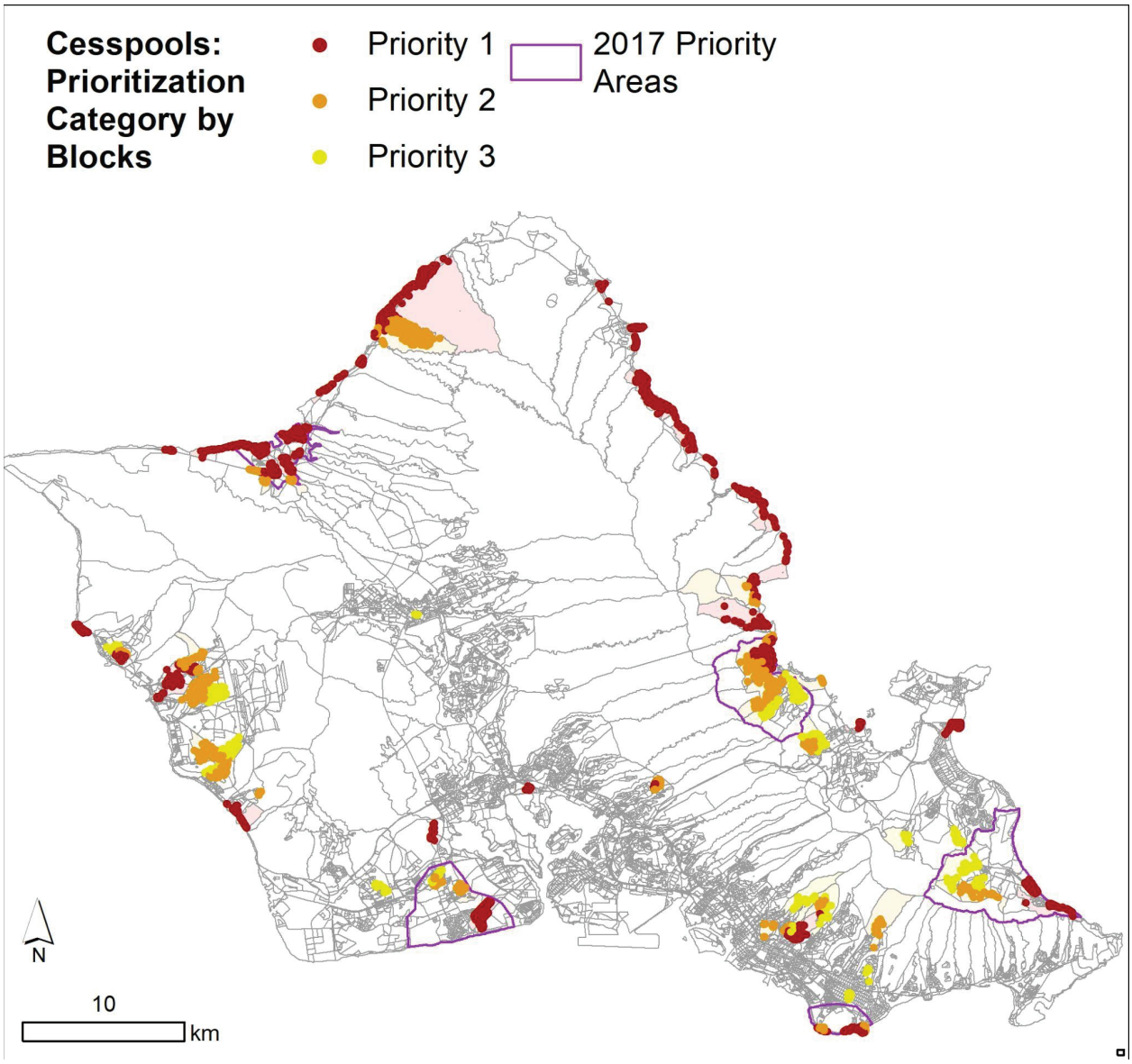


Figure A3: *O'ahu cesspools (dots) colored by prioritization category, arranged by census blocks. Blocks are shown as lightly colored areas where the block contains >10 cesspools. White areas signify the block contains <10 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

Additional Results: Maui

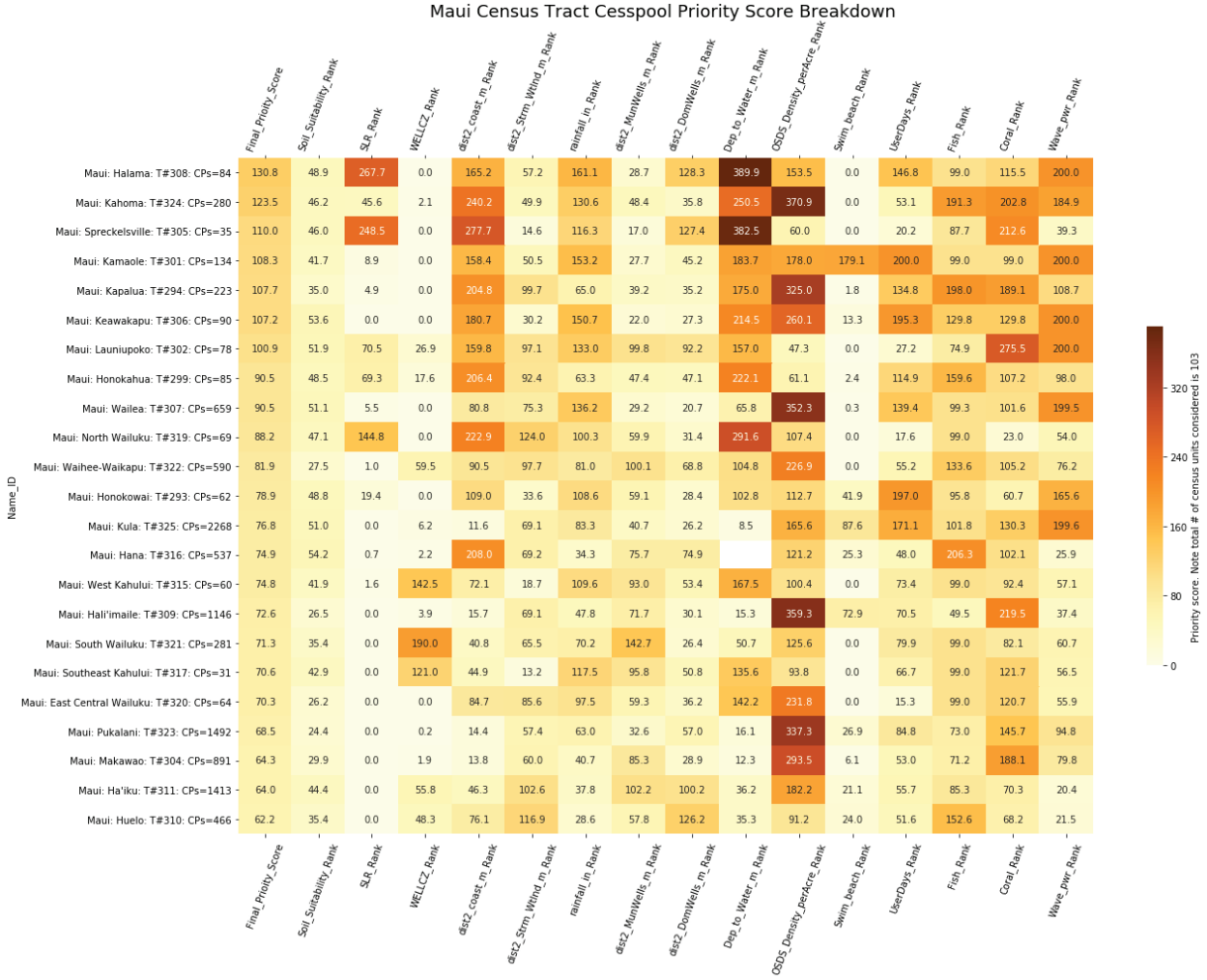


Figure A4: *Pivot table showing census-tract based priority scores, (leftmost column) and individual risk factor scores, which were averaged to calculate the overall priority score of each census tract for Maui. (Updated 2022)*

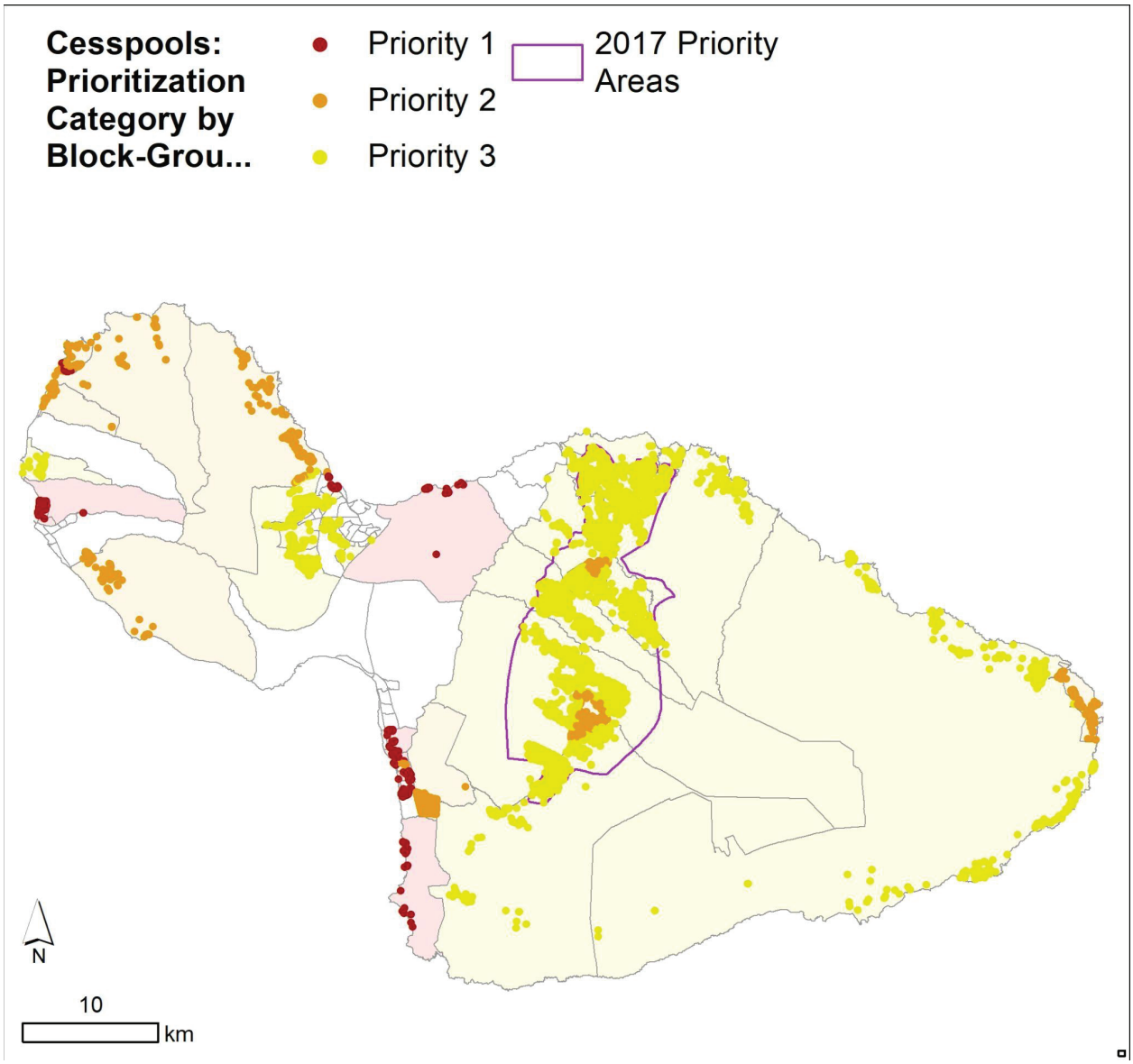


Figure A5: *Maui cesspools (dots) colored by prioritization category, arranged by census block-groups. Block-groups are shown as lightly colored areas where the block-group contains >20 cesspools. White areas signify the block-group contains <20 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

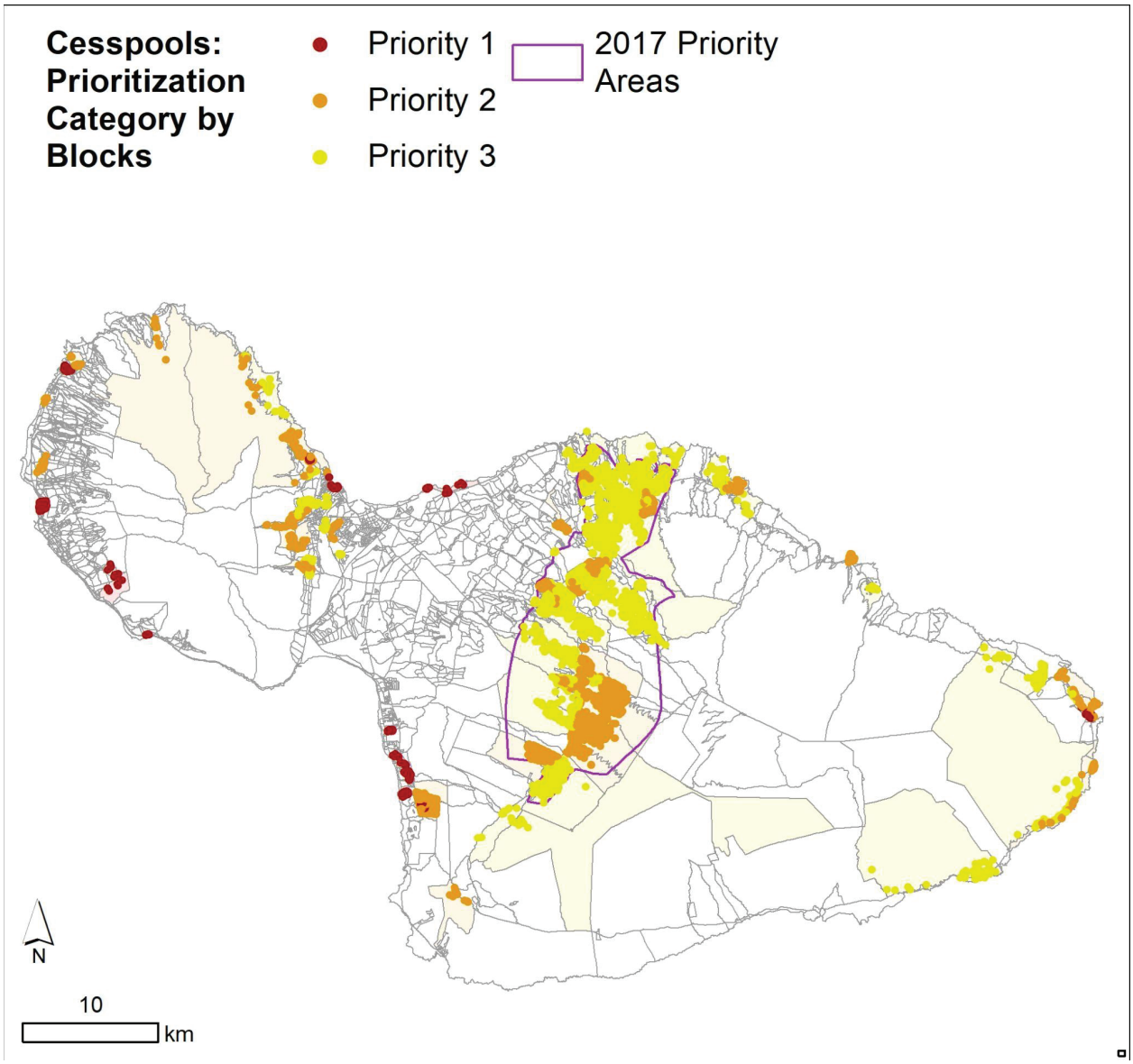
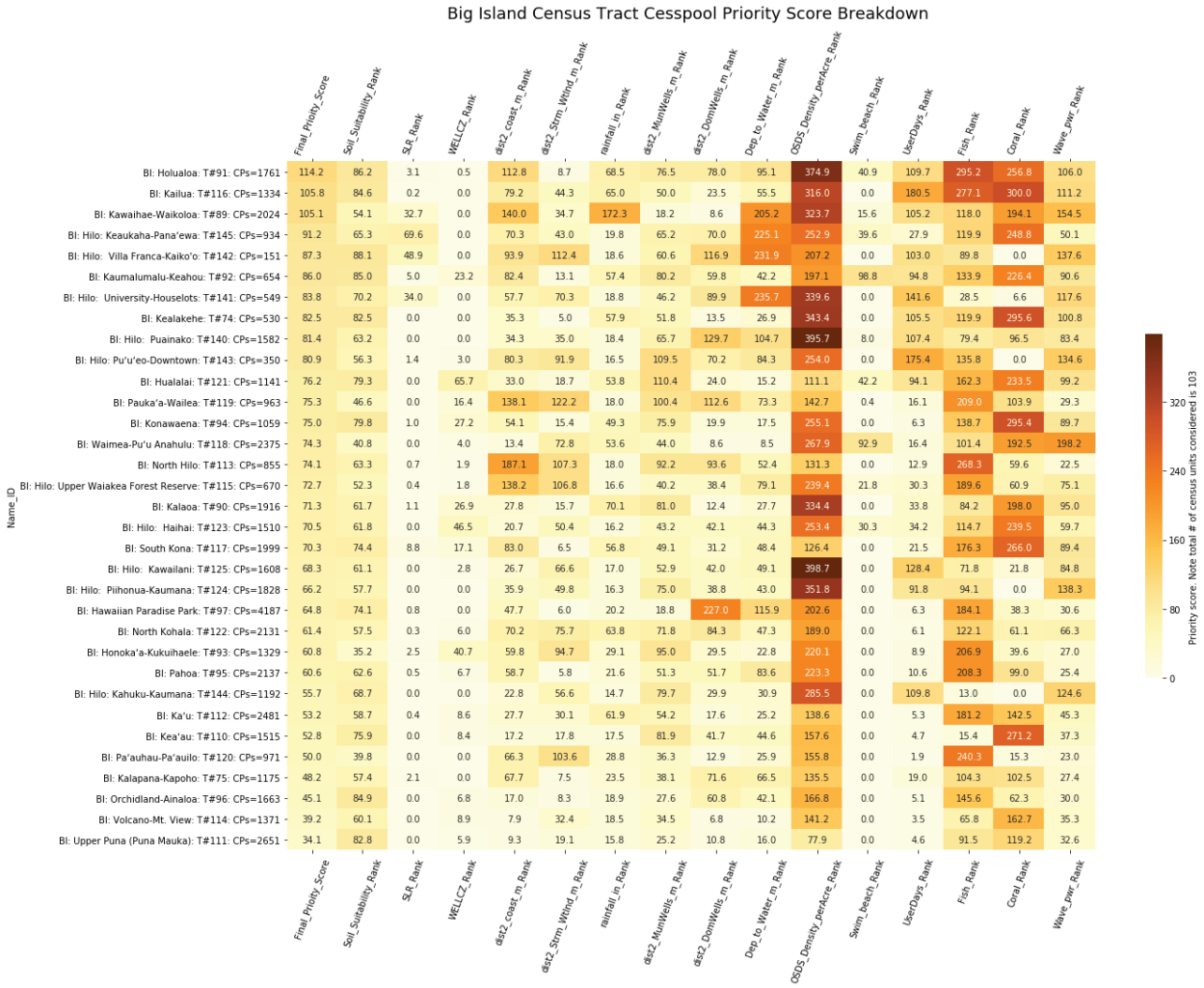


Figure A6: *Maui cesspools (dots) colored by prioritization category, arranged by census blocks. Blocks are shown as lightly colored areas where the block contains >10 cesspools. White areas signify the block contains <10 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

Additional Results: Hawai‘i Island



Name_ID	Final_Priority_Score	Soil_Suitability_Rank	SLR_Rank	WELLCZ_Rank	dist2_coast_m_Rank	dist2_Strm_Wtrhd_m_Rank	rainfall_in_Rank	dist2_MunWells_m_Rank	dist2_DomWells_m_Rank	Dep_to_Water_m_Rank	OSDS_Density_perAcre_Rank	Swim_beach_Rank	UserDays_Rank	Fish_Rank	Coral_Rank	Wave_pwr_Rank
BI: Holualoa: T#91: CPs=1761	114.2	86.2	3.1	0.5	112.8	8.7	68.5	76.5	78.0	95.1	374.9	40.9	109.7	295.2	256.8	106.0
BI: Kailua: T#116: CPs=1334	105.8	84.6	0.2	0.0	79.2	44.3	65.0	50.0	23.5	55.5	316.0	0.0	180.5	277.1	300.0	111.2
BI: Kawaihae-Waikoloa: T#89: CPs=2024	105.1	54.1	32.7	0.0	140.0	34.7	172.3	18.2	8.6	205.2	323.7	15.6	105.2	118.0	194.1	154.5
BI: Hilo: Keaukaha-Pana'ewa: T#145: CPs=934	91.2	65.3	69.6	0.0	70.3	43.0	19.8	65.2	70.0	225.1	252.9	39.6	27.9	119.9	248.8	50.1
BI: Hilo: Villa Franca-Kaiko'o: T#142: CPs=151	87.3	88.1	48.9	0.0	93.9	112.4	18.6	60.6	116.9	231.9	207.2	0.0	103.0	89.8	0.0	137.6
BI: Kaumalumalu-Keahou: T#92: CPs=654	86.0	85.0	5.0	23.2	82.4	13.1	57.4	80.2	59.8	42.2	197.1	98.8	94.8	133.9	226.4	90.6
BI: Hilo: University-Houselots: T#141: CPs=549	83.8	70.2	34.0	0.0	57.7	70.3	18.8	46.2	89.9	235.7	339.6	0.0	141.6	28.5	6.6	117.6
BI: Kealakehe: T#74: CPs=530	82.5	82.5	0.0	0.0	35.3	5.0	57.9	51.8	13.5	26.9	343.4	0.0	105.5	119.9	295.6	100.8
BI: Hilo: Puainako: T#140: CPs=1582	81.4	63.2	0.0	0.0	34.3	35.0	18.4	65.7	129.7	104.7	395.7	8.0	107.4	79.4	96.5	83.4
BI: Hilo: Pu'u'eo-Downtown: T#143: CPs=350	80.9	56.3	1.4	3.0	80.3	91.9	16.5	109.5	70.2	84.3	254.0	0.0	175.4	135.8	0.0	134.6
BI: Hualalai: T#121: CPs=1141	76.2	79.3	0.0	65.7	33.0	18.7	53.8	110.4	24.0	15.2	111.1	42.2	94.1	162.3	233.5	99.2
BI: Pauka'a-Wailea: T#119: CPs=963	75.3	46.6	0.0	16.4	138.1	122.2	18.0	100.4	112.6	73.3	142.7	0.4	16.1	209.0	103.9	29.3
BI: Konawaena: T#94: CPs=1059	75.0	79.8	1.0	27.2	54.1	15.4	49.3	75.9	19.9	17.5	255.1	0.0	6.3	138.7	295.4	89.7
BI: Waimea-Pu'u Anahulu: T#118: CPs=2375	74.3	40.8	0.0	4.0	13.4	72.8	53.6	44.0	8.6	8.5	267.9	92.9	16.4	101.4	192.5	198.2
BI: North Hilo: T#113: CPs=855	74.1	63.3	0.7	1.9	187.1	107.3	18.0	92.2	93.6	52.4	131.3	0.0	12.9	268.3	59.6	22.5
BI: Hilo: Upper Waiakea Forest Reserve: T#115: CPs=670	72.7	52.3	0.4	1.8	138.2	106.8	16.6	40.2	38.4	79.1	239.4	21.8	30.3	189.6	60.9	75.1
BI: Kalaoa: T#90: CPs=1916	71.3	61.7	1.1	26.9	27.8	15.7	70.1	81.0	12.4	27.7	334.4	0.0	33.8	84.2	198.0	95.0
BI: Hilo: Haihai: T#123: CPs=1510	70.5	61.8	0.0	46.5	20.7	50.4	16.2	43.2	42.1	44.3	253.4	30.3	34.2	114.7	239.5	59.7
BI: South Kona: T#117: CPs=1999	70.3	74.4	8.8	17.1	83.0	6.5	56.8	49.1	31.2	48.4	126.4	0.0	21.5	176.3	266.0	89.4
BI: Hilo: Kawailani: T#125: CPs=1608	68.3	61.1	0.0	2.8	26.7	66.6	17.0	52.9	42.0	49.1	398.7	0.0	128.4	71.8	21.8	84.8
BI: Hilo: Piihonua-Kaumana: T#124: CPs=1828	66.2	57.7	0.0	0.0	35.9	49.8	16.3	75.0	38.8	43.0	351.8	0.0	91.8	94.1	0.0	138.3
BI: Hawaiian Paradise Park: T#97: CPs=4187	64.8	74.1	0.8	0.0	47.7	6.0	20.2	18.8	227.0	115.9	202.6	0.0	6.3	184.1	38.3	30.6
BI: North Kohala: T#122: CPs=2131	61.4	57.5	0.3	6.0	70.2	75.7	63.8	71.8	84.3	47.3	189.0	0.0	6.1	122.1	61.1	66.3
BI: Honoka'a-Kukuihaele: T#93: CPs=1329	60.8	35.2	2.5	40.7	59.8	94.7	29.1	95.0	29.5	22.8	220.1	0.0	8.9	206.9	39.6	27.0
BI: Pahoa: T#95: CPs=2137	60.6	62.6	0.5	6.7	58.7	5.8	21.6	51.3	51.7	83.6	223.3	0.0	10.6	208.3	99.0	25.4
BI: Hilo: Kahuku-Kaumana: T#144: CPs=1192	55.7	68.7	0.0	0.0	22.8	56.6	14.7	79.7	29.9	30.9	285.5	0.0	109.8	13.0	0.0	124.6
BI: Ka'u: T#112: CPs=2481	53.2	58.7	0.4	8.6	27.7	30.1	61.9	54.2	17.6	25.2	138.6	0.0	5.3	181.2	142.5	45.3
BI: Kea'au: T#110: CPs=1515	52.8	75.9	0.0	8.4	17.2	17.8	17.5	81.9	41.7	44.6	157.6	0.0	4.7	15.4	271.2	37.3
BI: Pa'auhau-Pa'auilo: T#120: CPs=971	50.0	39.8	0.0	0.0	66.3	103.6	28.8	36.3	12.9	25.9	155.8	0.0	1.9	240.3	15.3	23.0
BI: Kalapana-Kapoho: T#75: CPs=1175	48.2	57.4	2.1	0.0	67.7	7.5	23.5	38.1	71.6	66.5	135.5	0.0	19.0	104.3	102.5	27.4
BI: Orchidland-Ainaloa: T#96: CPs=1663	45.1	84.9	0.0	6.8	17.0	8.3	18.9	27.6	60.8	42.1	166.8	0.0	5.1	145.6	62.3	30.0
BI: Volcano-Mt. View: T#114: CPs=1371	39.2	60.1	0.0	8.9	7.9	32.4	18.5	34.5	6.8	10.2	141.2	0.0	3.5	65.8	162.7	35.3
BI: Upper Puna (Puna Mauka): T#111: CPs=2651	34.1	82.8	0.0	5.9	9.3	19.1	15.8	25.2	10.8	16.0	77.9	0.0	4.6	91.5	119.2	32.6

Figure A7: *Pivot table showing census-tract based priority scores, (leftmost column) and individual risk factor scores, which were averaged to calculate the overall priority score of each census tract for Hawai‘i Island. (Updated 2022)*

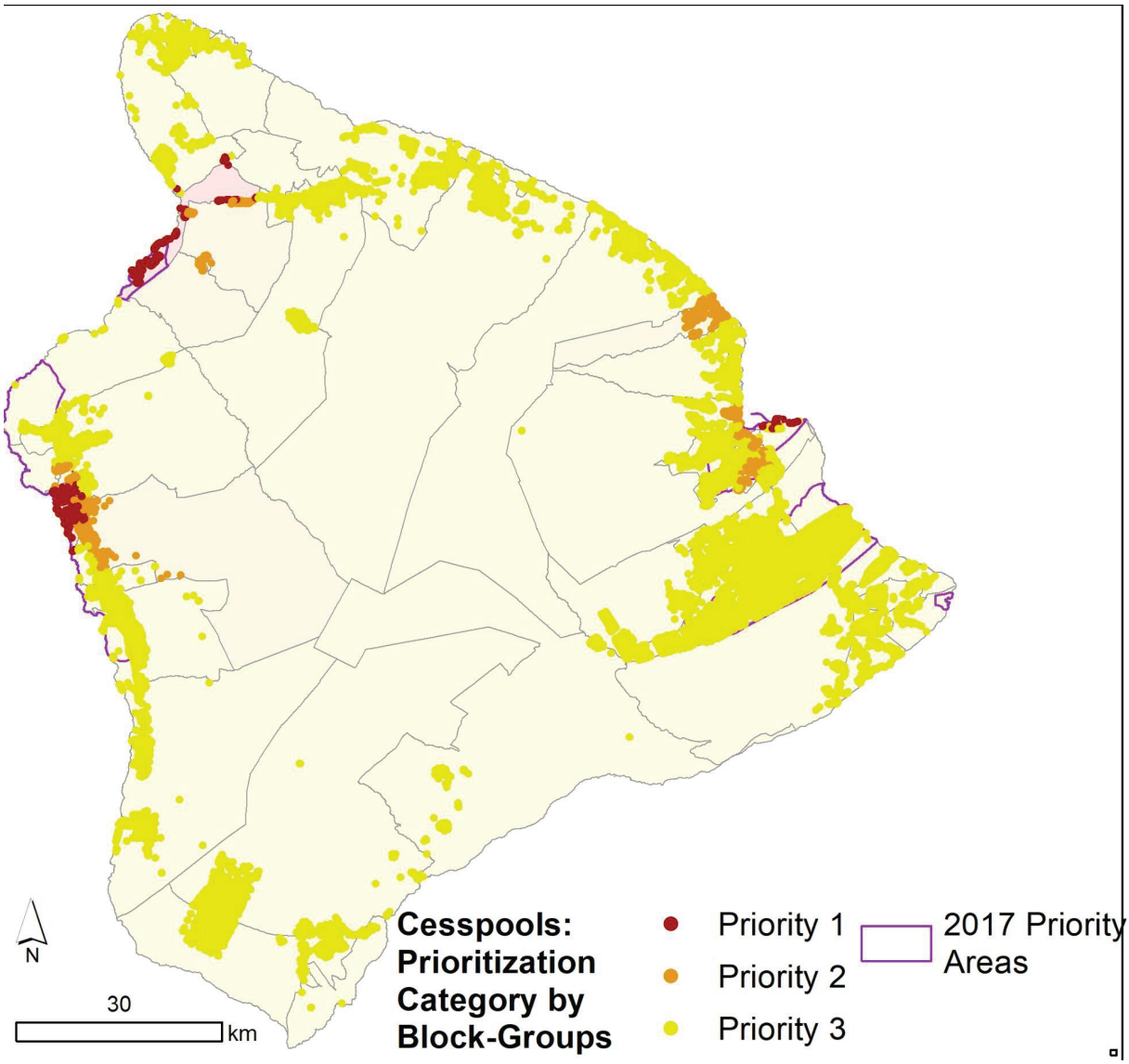


Figure A8: *Hawai'i Island cesspools (dots) colored by prioritization category, arranged by census block-groups. Block-groups are shown as lightly colored areas where the block-group contains >20 cesspools. White areas signify the block-group contains <20 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

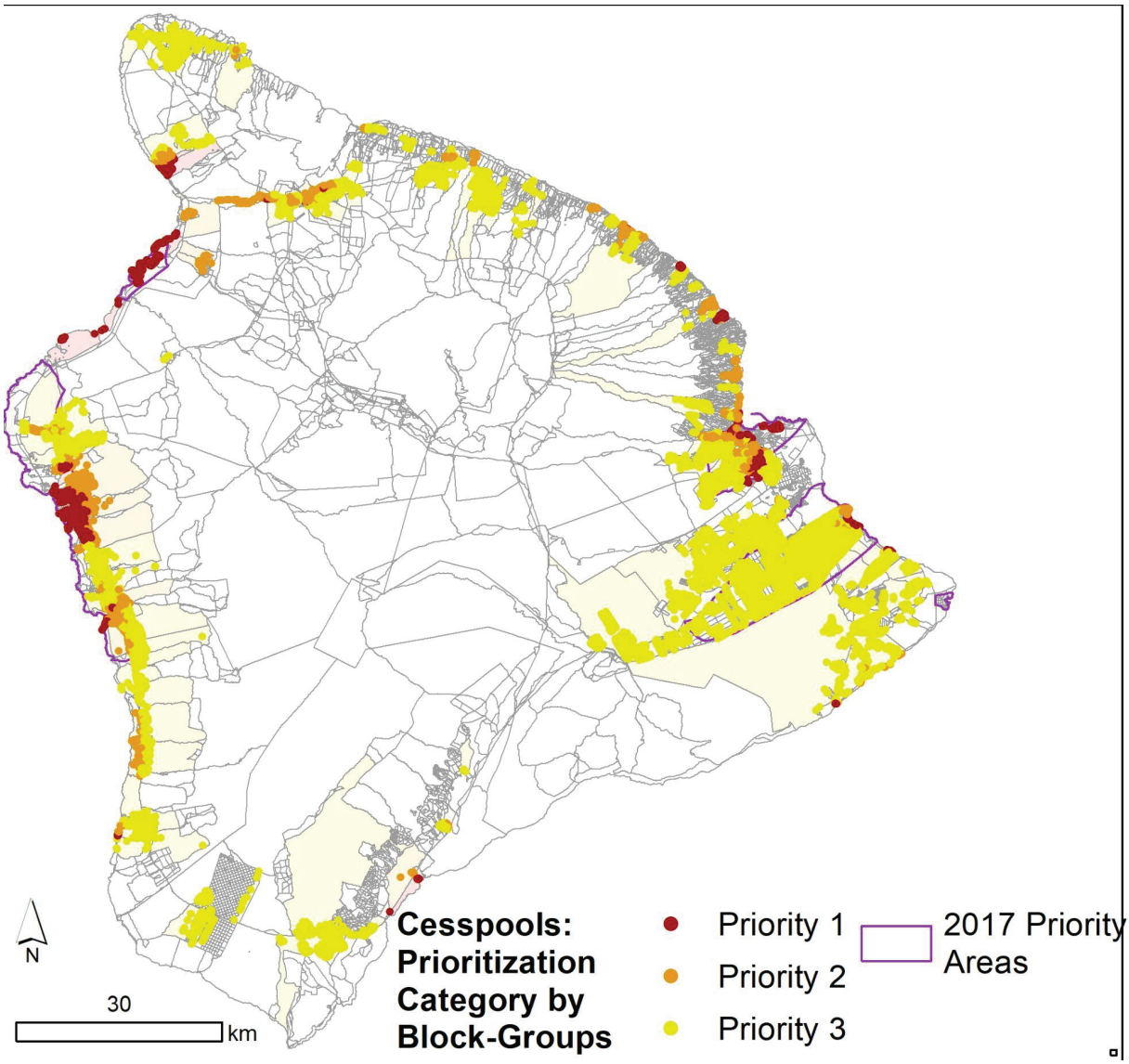


Figure A9: *Hawai'i Island cesspools (dots) colored by prioritization category, arranged by census blocks. Blocks are shown as lightly colored areas where the block contains >10 cesspools. White areas signify the block contains <10 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

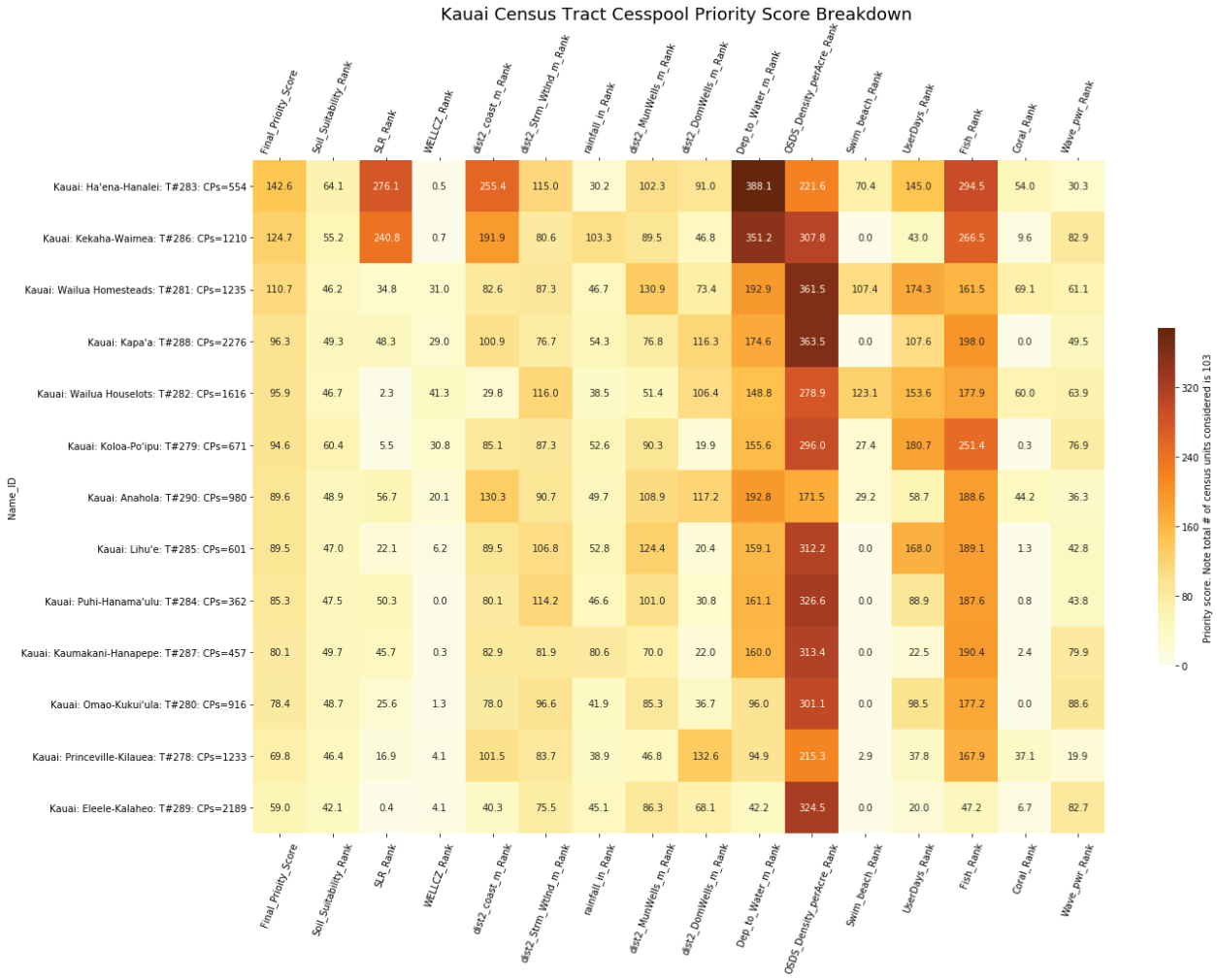


Figure A10: *Pivot table showing census-tract based priority scores, (leftmost column) and individual risk factor scores, which were averaged to calculate the overall priority score of each census tract for Kaua‘i. (Updated 2022)*

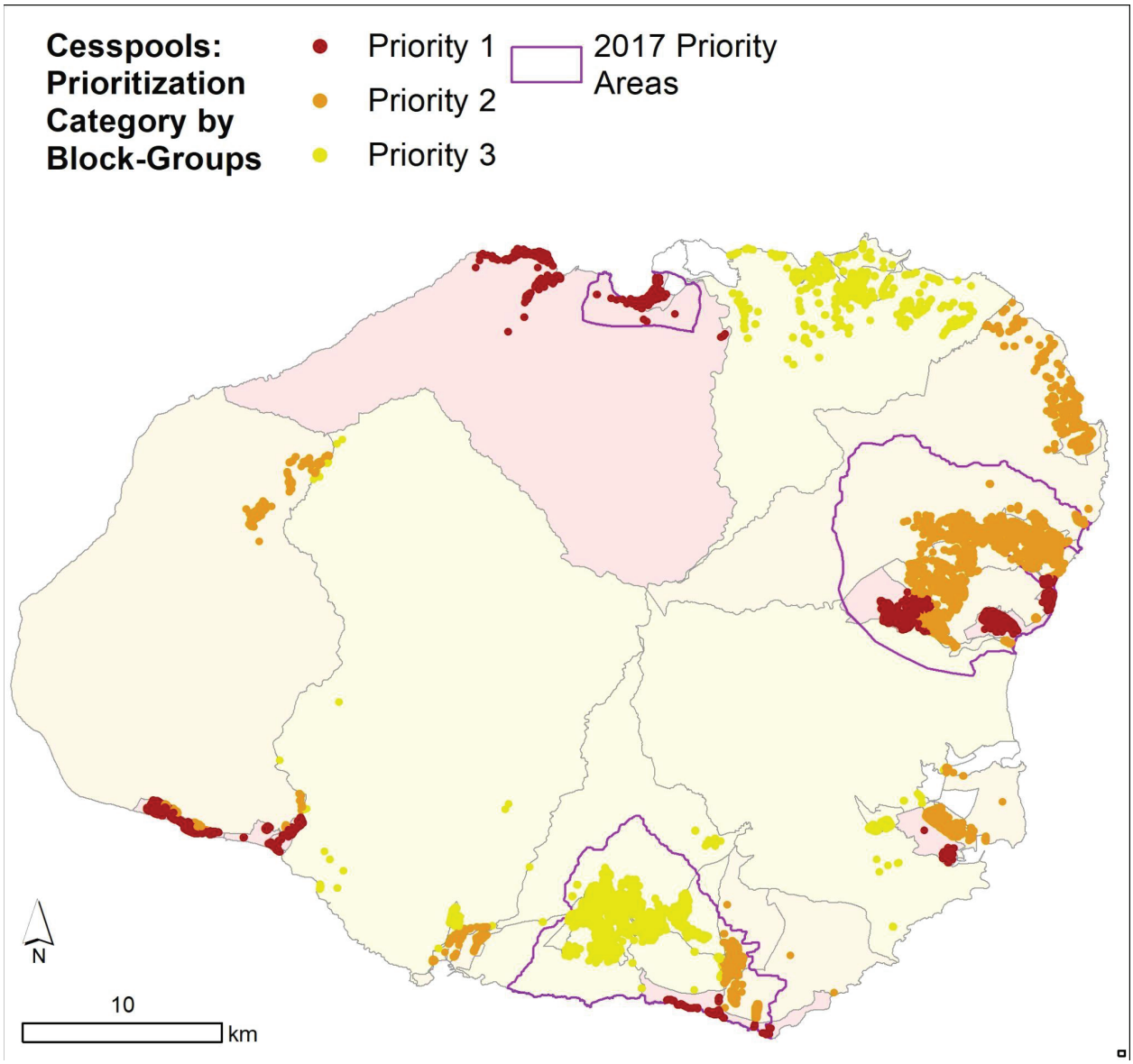


Figure A11: *Kaua'i cesspools (dots) colored by prioritization category, arranged by census block-groups. Block-groups are shown as lightly colored areas where the block-group contains >20 cesspools. White areas signify the block-group contains <20 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

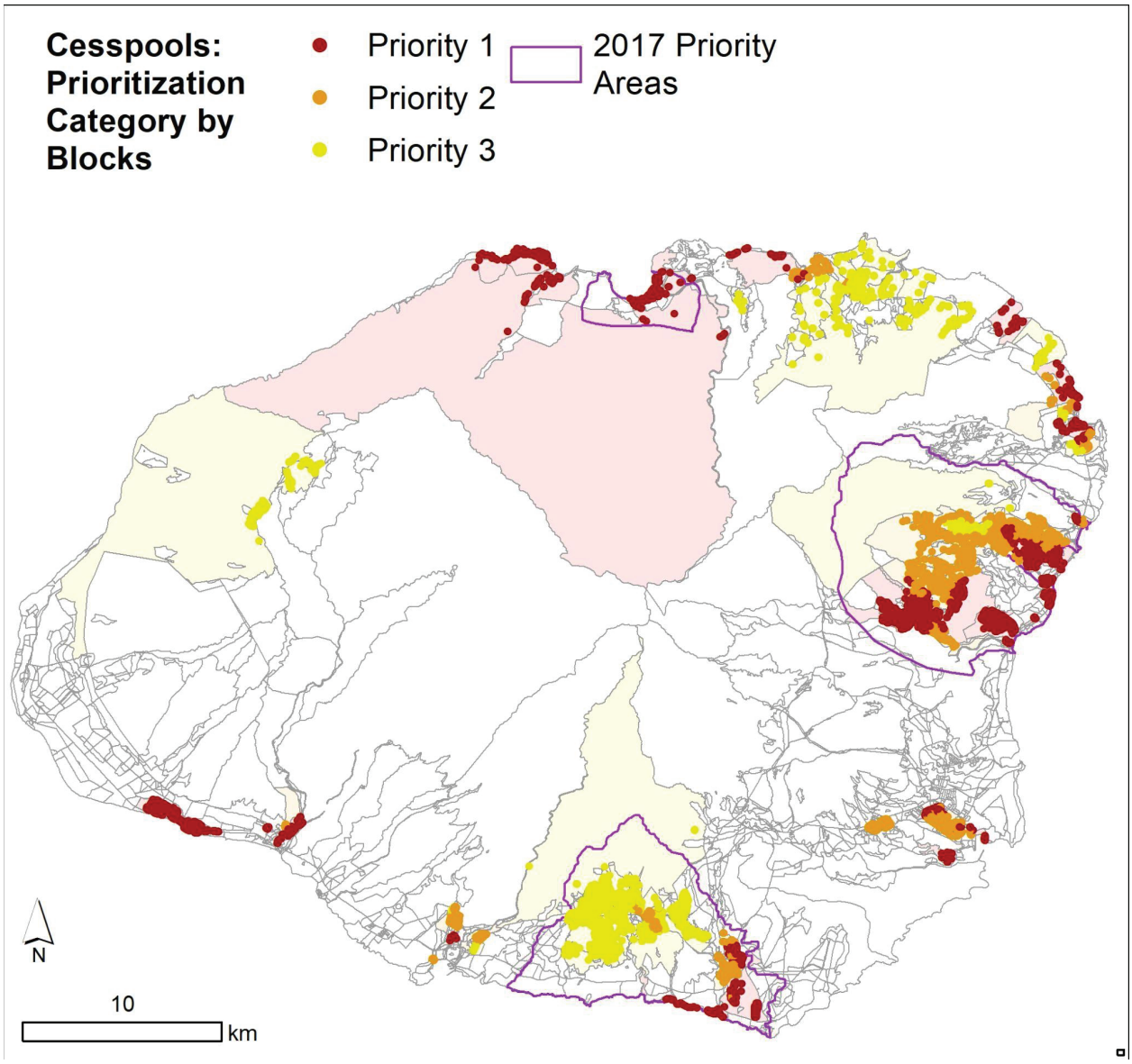


Figure A12: *Kaua'i cesspools (dots) colored by prioritization category, arranged by census blocks. Blocks are shown as lightly colored areas where the block contains >10 cesspools. White areas signify the block contains <10 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas. (Updated 2022)*

Additional Results: Statewide

Figure A13 (full page) below provides a pivot table consisting of all 103 census tracts.

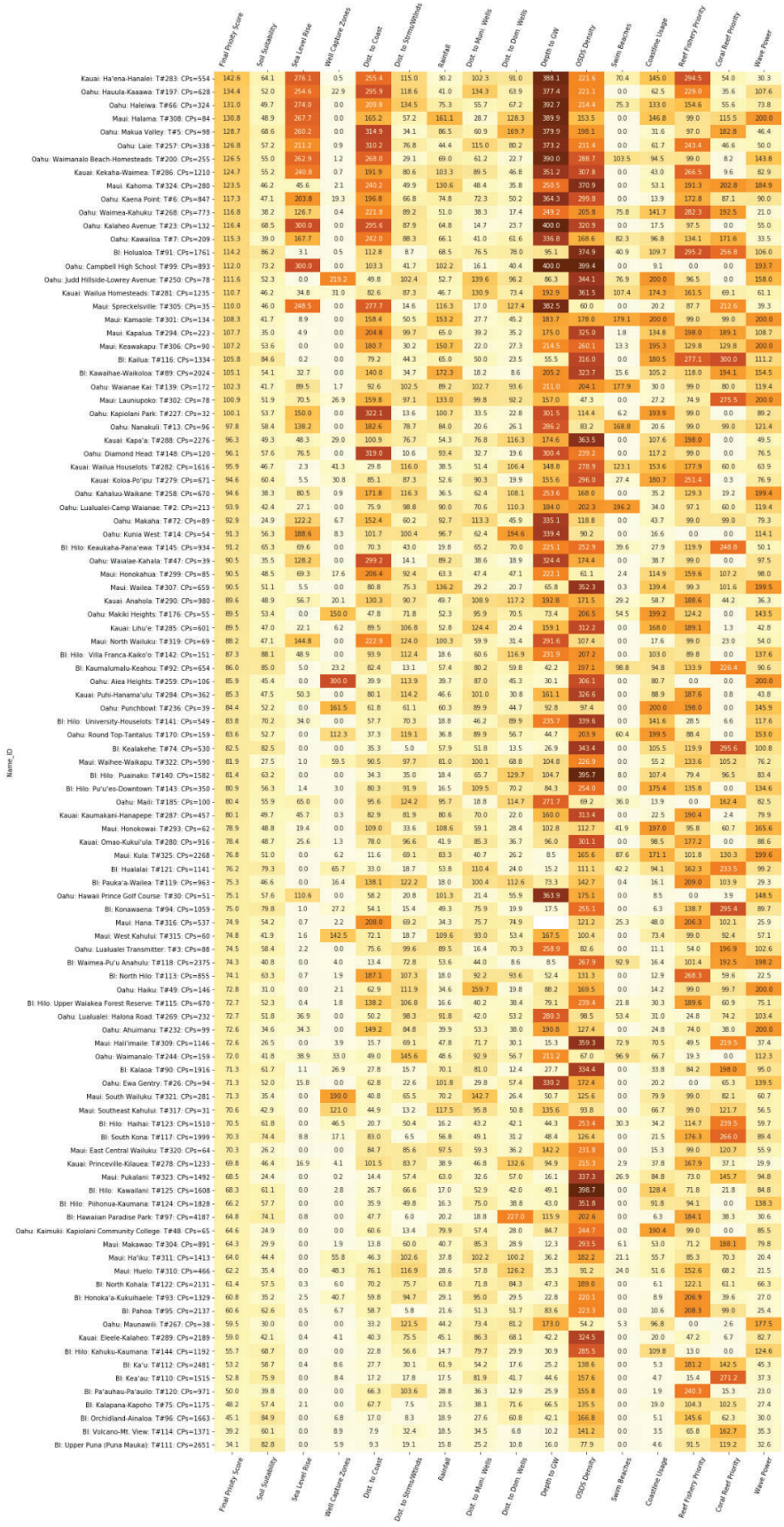

Final Priority Score
Soil Suitability
Sea Level Rise
Well Capture Zones
Dist. to Coast
Dist. to StormWinds
Rainfall
Dist. to Muni. Wells
Dist. to Dom. Wells
Depth to GW
OSDS Density
Swim Beaches
Coastline Usage
Reef Fishery Priority
Coral Reef Priority
Wave Power
Name_ID
Priority Score. Note: total # of census units considered is 103
400
320
240
160
80
0

Figure A13. *Pivot table showing statewide census-tract based priority scores, (leftmost column) and individual risk factor scores, which were averaged to calculate the overall priority score of each census tract. (Updated 2022)*

Comparative Analysis with 2017 Priority Areas

To indicate where new priority areas from this work overlap with 2017 priority areas, additional information was appended to the prioritization by adding a + sign and differing darker color categories (Fig. A14). This overlap was defined as an area with greater than 50% of its cesspools falling within a 2017 priority zone. The comparative analysis for all Priority Categories is defined for each census unit as:

1. Priority Level 1 (+): The top 25% of the Census Unit Priority Scores that also have 50% or more of their cesspool units falling within a 2017 priority zone.
2. Priority Level 1: The top 25% of the Census Unit Priority Scores that do not have 50% or more of their cesspool units falling within a 2017 priority zone.
3. Priority Level 2 (+): The middle 25% (50%-25%) of the Census Unit Priority Scores that also have 50% or more of their cesspool units falling within a 2017 priority zone.
4. Priority Level 2: The middle 40% (50%-25%) of the Census Unit Priority Scores that do not have 50% or more of their cesspool units falling within a 2017 priority zone.
5. Priority Level 3 (+): The bottom 50% of the Census Unit Priority Scores that do have 50% or more of their cesspool units falling within a 2017 priority zone.
6. Priority Level 3: The bottom 50% of the Census Unit Priority Scores that do have 50% or more of their cesspool units falling within a 2017 priority zone.

While these categories are not used in the primary results, the tool does make them available should they be useful for future prioritization or management purposes.

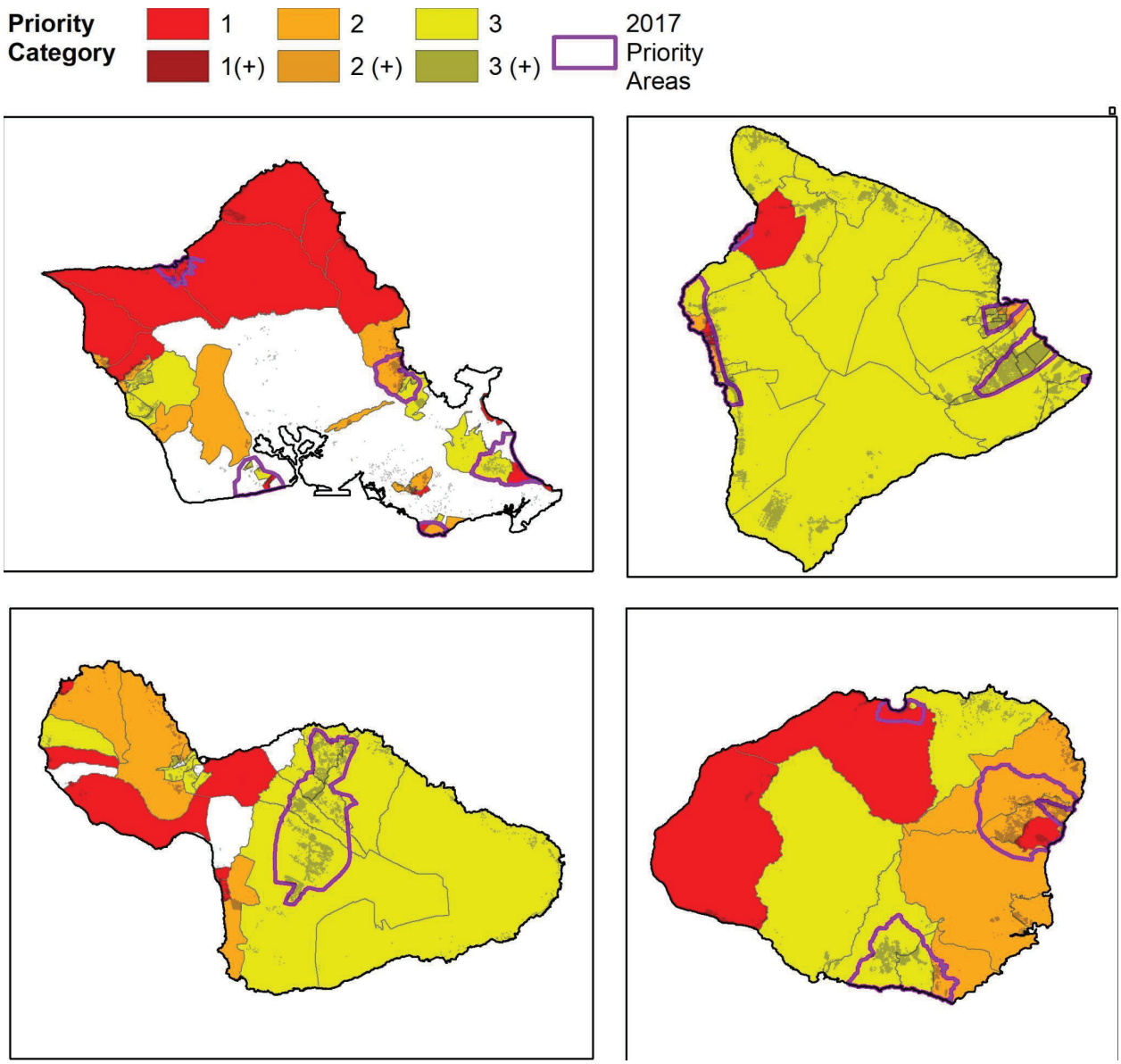


Figure A14: *Statewide prioritization at the census tract level showing added data from comparative analysis with 2017 Priority Areas. This data is for informational purposes and not used in the final results of the HCPT. (Updated 2022)*

Appendix B

Sensitivity Analysis of Priorities

The final Census Unit Aggregated Prioritization Score is derived from a simple average of all of the risk-factor (Input Section) prioritization scores that go into the analysis. This method of calculation rests on the implicit assumption that each factor is just as important as all of the other factors. However, in reality, each factor likely has a different degree of importance to different stakeholders, based on their overall objectives. While the HCPT provides the ability to apply weights to each factor in order to change the relative importance of each, the actual determination of appropriate weights is no simple matter. This is complicated by the fact that there is not a single end goal for cesspool upgrades. For example, optimizing the prioritization for human health factors (e.g. reducing contamination to drinking water wells or reducing pathogens at beaches) may sacrifice benefits to ecological systems such as coral and fish. Negative effects from cesspools manifest through multiple different hazard outcomes, including but not limited to drinking water quality degradation, coastal water quality impacts, human exposures to pathogens, and discharge of contaminants of emerging concern. The HCPT considers all of these hazard outcomes through a lumped approach. In reality, all of these outcomes are interconnected as human health is ultimately dependent on maintaining healthy ecosystems.

To explore how assigning different degrees of importance to different factors may skew outcomes of statewide prioritization, a sensitivity analysis was conducted. The sensitivity analysis compared three different scenarios where different weights were assigned to each risk factor, based on a hypothetical conceptual model of how different priorities might be expressed through the adjustment of weights to different factors.

Table B1 presents the different weights used to generate results for the sensitivity testing. It should be noted that weights applied in these scenarios are to be considered as examples only and do not constitute an actual prioritization process.

Table B1. *Example sensitivity testing scenario weights.*

Risk Factor	Base Scenario	Ecological Scenario	Human Health Scenario
Distance to Coastline (m)	1	3	1
Distance to Streams+Wetlands (m)	1	3	1
Distance to Municipal Wells (m)	1	1	4
Distance to Domestic Wells (m)	1	1	2
Well capture zones	1	1	3
Depth to Groundwater (m)	1	2	2
Cesspool Density (Units per Acre)	1	2	2
Sea Level Rise	1	2	2
Soil Suitability	1	2	2
Rainfall (in.)	1	1	1
Coastline Usage	1	1	3
Coral Reef Priority	1	4	1
Reef Fishery Priority	1	2	1
Swimming Beaches	1	1	3
Ocean Circulation(wave energy)	1	3	2

Figure B1 below shows the sensitivity test results graphically, whereas each census tract is represented by a row, labeled by the tract name, ID number, and the number of cesspools on the inventory falling within its borders. Each column is the final priority rank (where tracts are ranked based on their final priority scores) of the tract within each sensitivity test scenario. The heatmap is sorted by the base scenario rank with the most impacted tracts at the top of the figure. Note the figure is broken into two halves to fit the page.

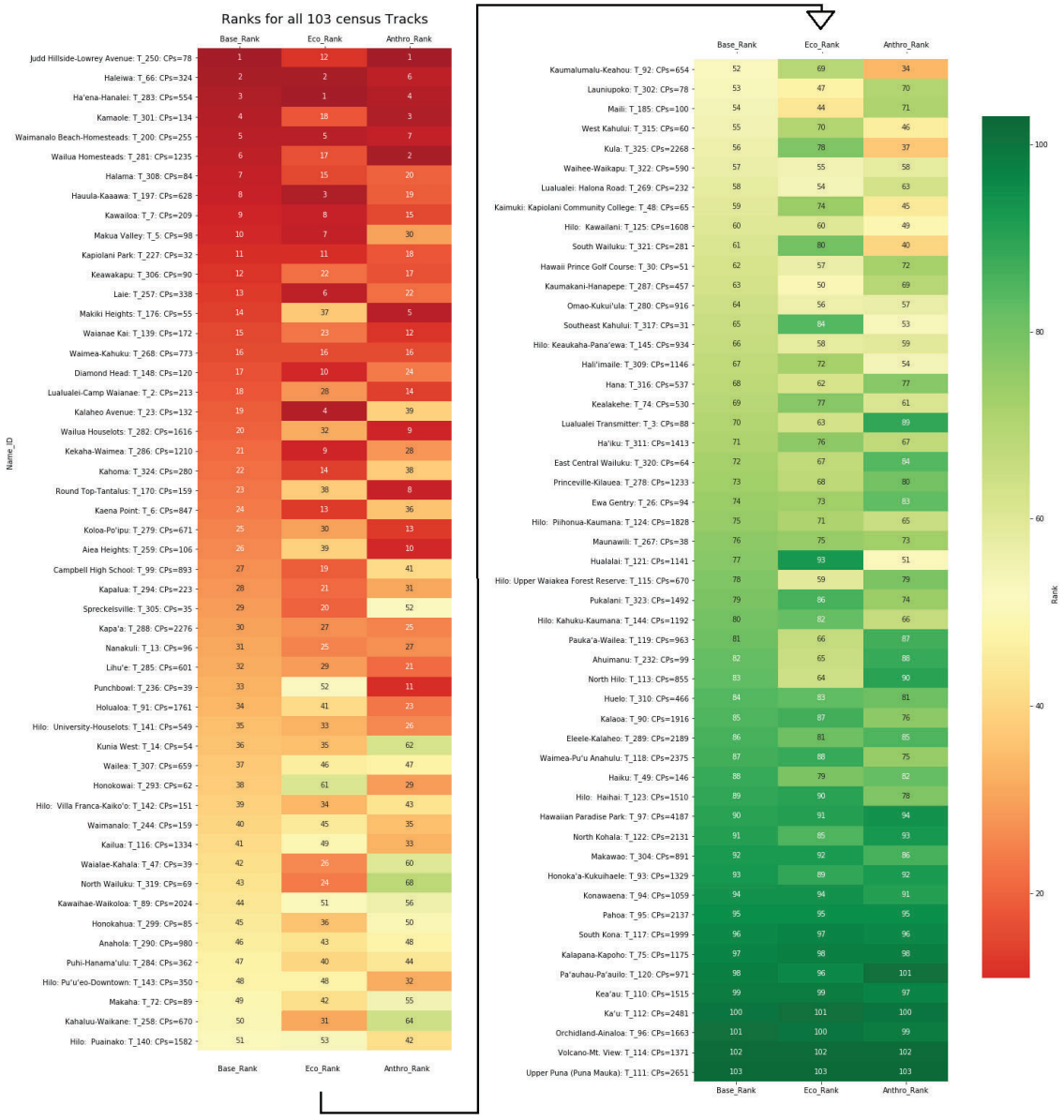


Figure B1. *Results of the sensitivity analysis, where each column represents how census tracts are prioritized (via a statewide ranking) for each of the three scenarios. The leftmost being the base scenario where all weights are equal to one, the middle column represents the Ecological Scenario and the rightmost represents the human health scenario.*

To quantify the difference between the sensitivity test scenarios numerically, the deviation from the base scenario was calculated for each tract by simply subtracting the rank of the tract in the test scenario by its rank in the base scenario and taking the absolute value of the result. This metric shows how far up or down the ranking an individual track will move given the changes in the risk-factor weights. Relevant statistics are compiled in Table B2 below. These statistics indicate that the average expected change in ranking if the risk factor weights were modified to the extent they were in this test, would be on the average order of 6 to 9 places, though it could change up to 26 places in the maximum case. Overall, considering the rankings cover 103 census tracts, this translates into an 'uncertainty' of less than 10% on the final results, thereby lending greater confidence to the final priority rankings (using the base scenario) presented in this report.

Table B2. *Statistical table describing the deviations in ranking values of individual census tracts between the Base Scenario and the other test scenarios. Higher mean or median (50th percentile) deviations indicate that the test scenario, on average, yields a prioritization result that has a higher degree of difference when compared to the base scenario.*

Statistics for Deviations in Ranks	Ecological Scenario Deviations	Human Health Scenario Deviations
Mean	6.93	8.35
Standard Dev.	6.25	6.37
Min	0	0
25th percentile	1	3
50th percentile	5	8
75th percentile	11	12
Max	25	26

Appendix C

Risk-Factor Weighting Workshops and Addendum

After the publication of the 2021 Hawai‘i Cesspool Hazard Assessment & Prioritization Tool Report & Technical Appendices an update was performed in mid-2022 to better represent the disparity in importance of each of the input risk-factors. All figures and tabular results in this 2022 Updated version of the Hawai‘i Cesspool Hazard Assessment & Prioritization Tool Report & Technical Appendices reflect the revision of the tool and present results generated using weights derived from the methodology described in the addendum below, the Hawai‘i Cesspool Hazard Assessment & Prioritization Tool: Risk-Factor Assessment Survey and Workshops: Addendum to 2021 Report & Technical Appendices, June 2022, by Melanie Lander, Michael Mezzacapo, and Christopher Shuler.

Hawai‘i Cesspool Hazard Assessment & Prioritization Tool

Risk-Factor Assessment Survey and Workshops

Addendum to 2021 Report & Technical Appendices

June 2022

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1. Project Purpose and Background

This document describes ongoing efforts to assist the cesspool conversion process since the release of the publication, the 'Hawai'i Cesspool Hazard Assessment & Prioritization Tool Report & Technical Appendices' in August 2021. In particular, this report addendum provides updates to the iterative cesspool prioritization methodology and expert opinion workshops held in early 2022. The prioritization of cesspools presents a useful method to quantify their relative impact on human and environmental health. Prioritization will also inform timetables recommended by the State of Hawai'i Cesspool Conversion Working Group (CCWG) for conversion to more advanced forms of wastewater treatment. This work was undertaken on behalf of the State of Hawai'i Department of Health (DOH) Wastewater Branch to inform ongoing DOH and CCWG planning processes for statewide cesspool conversion plan development.

In 2021, the 'Hawai'i Cesspool Hazard Assessment & Prioritization Tool Report & Technical Appendices' was created to provide the DOH and CCWG with a comprehensive and data driven method to prioritize which cesspools likely have the most impact on human and environmental health. The report included consideration of fifteen risk-factors used to assess each geographic area's vulnerability to contamination from cesspools. The factors were intended to be used to inform cesspool conversion prioritization and onsite wastewater planning throughout the state of Hawai'i.

These factors included:

1. Distance to municipal drinking water wells;
2. Distance to domestic drinking water wells;
3. Well capture zones
4. Distance to streams and wetlands;
5. Distance to coastline;
6. Sea level rise zones;
7. Precipitation;
8. Depth to groundwater;
9. Soil characteristics;
10. Cesspool density;
11. Coral cover;
12. Fish biomass/recovery potential;
13. Beach user-days;
14. Proximity to lifeguarded beach; and
15. Coastal ocean circulation proxy

This information and associated data were included in a geographic information system (GIS) tool titled: the Hawai‘i Cesspool Prioritization Tool (HCPT), accessible through http://hawaiicesspooltool.org. The 2021 version of the HCPT weighted each of the fifteen risk factors equally in its prioritization calculation.

In 2022, the DOH directed a team from the University of Hawai‘i (UH) Sea Grant College Program (Hawai‘i Sea Grant), UH Water Resources Research Center, and One World One Water, LLC to refine the HCPT structure by developing and implementing an expert-driven methodology for weighting of the fifteen risk-factors. Specifically, the project team sought to answer these questions:

- Does weighting the fifteen risk-factors equally reflect the best available knowledge of subject matter experts relative to the risk of cesspool contamination?
- If not, which of the fifteen risk-factors are most critical to consider in the cesspool conversion prioritization process?
- How does an expert-informed weighting process change the priority rankings in each of the geographic areas outlined by the 2021 report (equal weights)?

2. Process and Methodology

a. Participants

The end goal of the updated weighting process was to synthesize contributions from a panel of experts into fifteen numeric weighting factors corresponding to each of the risk-factors used in the HCPT. The process was initiated by identifying subject matter areas related to the risk-factors used in the tool. Experts in each subject-matter area from Hawai'i, the Pacific, and the continental United States were identified by the project team and the DOH through research and personal recommendations. Invitees were contacted either by email or phone and briefed on the project background and purpose, and invited to participate in the expert weighting exercise.

The participant areas of expertise included:

DOH Regulatory and Wastewater Engineering
Coral Reef Ecosystems
Wells, Groundwater, and Drinking Water
Society and Economics
Surface Water, Aquatic Resources, Wildlife
Wastewater Engineering and Soils
Tourism and Recreation
Oceanography and Microbiology
Coastal Geochemistry and Water Quality
Native Hawaiian Affairs and Water Law
Coastal Biology and Limu
Center for Water Resource Management
Water Quality and Sewage Pollution
Public Drinking Water
Coral Reefs and Coastal Processes
Law, Policy, and Planning
State Coastal Planning
UH Environmental Science Students

b. Workshops, Survey, and Analysis

Two virtual workshops were held on the Zoom virtual meeting platform, and participants were asked to independently complete a survey during the interval between the workshop events. The first workshop was held on Wednesday, March 2nd, 2022 and lasted for one hour. Workshop 1 focused on providing background and context to attendees, as well as explaining the survey, which was used to collect quantitative and qualitative information from participants. Following Workshop 1, the 2021 'Hawai'i Cesspool Hazard Assessment & Prioritization Tool Report & Technical Appendices' and the website for the online HCPT

were shared with participants, along with the detailed instructions about the online survey which were shared orally during Workshop 1.

The survey consisted of thirty questions. For each of the fifteen risk-factors, the survey asked for users to assign a weight from 1-5 for each factor.

The Scoring Rubric was defined as:

> *Weight of (1) Baseline: Factor is important, but not exceptionally.*
>
> *Weight of (2) Double weight: Factor is more important than baseline.*
>
> *Weight of (3) Triple weight: Factor is very important.*
>
> *Weight of (4) Quadruple weight: Factor is one of the most important factors of all.*
>
> *Weight of (5) Extremely important: reserved for the single or few factors that are the primary drivers of impact.*

Users were then asked to provide a brief explanation of why they weighed the factor as they did, and to share references and other relevant information that informed their decisions. Participants were also asked if they wished to share their name and affiliation within the addendum report. This choice was optional so participants could speak freely and openly.

Following the survey period (March 2nd-23rd, 2022) and preceding the second workshop, the project team processed the survey results in order to share them with the participants and to facilitate discussion and feedback during the second workshop.

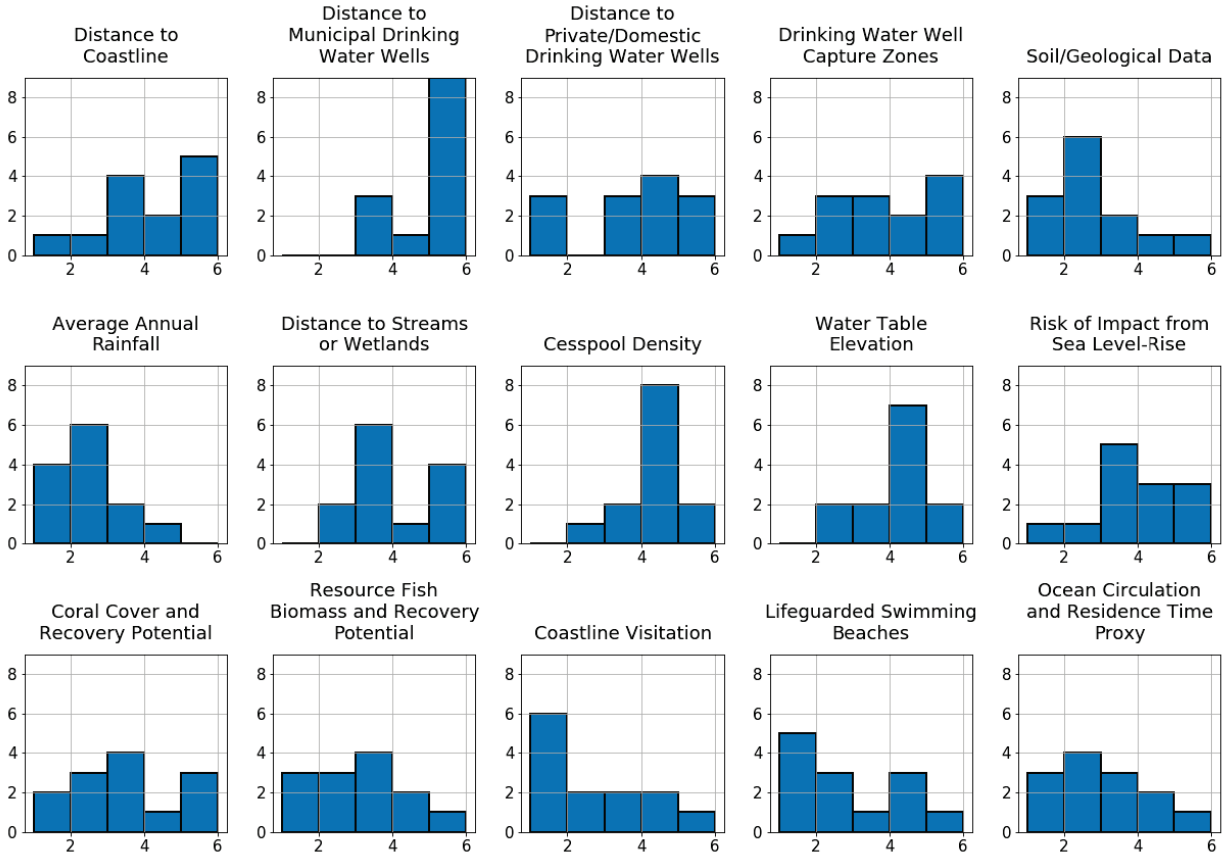
The second workshop was held on Wednesday, March 30th, 2022 and lasted two hours. The primary focus of Workshop 2 was communicating the results of the survey and analysis. The intent of the survey was to create a 'multiplication factor', or weight, for each of the fifteen risk-factors. Survey results were collected in a Google Form, which populated quantitative responses (weighted rankings) into a Google spreadsheet. Pandas, the Python analysis library, was used for the quantitative analysis of the results.

Raw Data from Survey:

Respondent Number	Distance to Coastline	Distance to Municipal Drinking Water Wells	Distance to Private/ Domestic Drinking Water Wells	Drinking Water Well Capture Zones	Soil/ Geological Data	Average Annual Rainfall	Distance to Streams or Wetlands	Cesspool Density	Water Table Elevation	Risk of Impact from Sea Level-Rise	Coral Cover and Recovery Potential	Resource Fish Biomass and Recovery Potential	Coastline Visitation	Lifeguarded Swimming Beaches	Ocean Circulation and Residence Time Proxy
0	5	5	3	3	4	4	5	4	4	3	3	3	4	4	3
1	1	5	4	4	5	2	3	4	4	3	3	3	3	3	2
2	4	5	5	5	2	1	3	4	4	3	1	1	1	1	1
3	2	5	4	5	2	3	2	4	2	3	3	3	3	2	4
4	5	5	3	5	3	3	5	5	4	5	3	3	1	2	3
5	3	3	3	2	2	2	3	4	3	4	2	1	1	1	2
6	3	5	1	4	1	2	5	3	5	5	5	5	5	5	4
7	5	5	5	3	2	2	3	4	3	4	4	4	4	4	2
8	3	5	5	2	3	2	3	4	4	1	2	2	2	2	1
9	4	5	4	5	2	2	5	3	4	3	5	4	2	4	5
10	3	3	4	3	1	1	2	5	4	2	2	2	1	1	3
11	5	3	1	2	2	1	3	2	2	4	5	2	1	1	2
12	5	4	1	1	1	1	4	4	5	5	1	1	1	1	1

Histograms were used and presented in the workshop to display the spectrum of weights assigned by the group to each of the fifteen risk factors. Histograms are useful in this context because they not only show which factors scored the 'highest' (higher weights being equivalent to a greater level of importance in prioritization considerations), but also indicate the spread of participants' rankings, which is quantified as the standard deviation of each risk-factor's results. This spread indicated the level of consensus among respondents, with a higher standard deviation equating to a greater difference of opinion among respondents and a lower standard deviation indicating better consensus.

Histograms:



It was necessary to combine each of the participants' responses into a single weight for each factor. However, there are many mathematical ways to achieve this result and each has unique advantages and disadvantages. Therefore, a number of aggregation techniques were explored. These included basic statistical metrics, specifically the mean and median of each distribution, as well as a non-parametric calculation that counted the number of individual scores given to each factor (i.e. 4, '1's', 3 '2's', etc.), and used a separate weighting factor for each of the sums of scores. These "weighted weights" were then normalized into

a single number (see https://github.com/cshuler/Act132_Cesspool_Prioritization for details). The different aggregation methods were presented to the participants of the second workshop and due to the similarity in the results of each, and the desire to communicate simply and effectively, it was agreed upon that the median value of each of the raw weights was the preferred method for calculating a single weight for each factor.

Quantitative analysis:

Factor	Mean	Median	Standard Deviation	Rank: 1	Rank: 2	Rank: 3	Rank: 4	Rank: 5	Weighted Weights
Distance to Municipal Drinking Water Wells	4.5	5	0.9	0	0	3	1	9	6.4
Distance to Coastline	3.7	4	1.3	1	1	4	2	5	4.6
Drinking Water Well Capture Zones	3.4	3	1.4	1	3	3	2	4	3.8
Distance to Streams or Wetlands	3.5	3	1.1	0	2	6	1	4	4
Distance to Private/Domestic Drinking Water Wells	3.3	4	1.5	3	0	3	4	3	4
Risk of Impact from Sea Level-Rise	3.5	3	1.2	1	1	5	3	3	4
Coral Cover and Recovery Potential	3	3	1.4	2	3	4	1	3	3
Cesspool Density	3.8	4	0.8	0	1	2	8	2	4.8
Water Table Elevation	3.7	4	0.9	0	2	2	7	2	4.4
Soil/Geological Data	2.3	2	1.2	3	6	2	1	1	1.4
Resource Fish Biomass and Recovery Potential	2.6	3	1.3	3	3	4	2	1	2.2
Coastline Visitation	2.2	2	1.4	6	2	2	2	1	1.8
Lifeguarded Swimming Beaches	2.4	2	1.4	5	3	1	3	1	2
Ocean Circulation	2.5	2	1.3	3	4	3	2	1	2
Average Annual Rainfall	2	2	0.9	4	6	2	1	0	0.8

c. Survey Outcomes

The weighting activity for each of the fifteen risk-factors resulted in fairly normal distributions for most parameters. Only *Distance to Municipal Drinking Water Wells* had a median score of '5'. This was the highest weighted ranking, indicating that the factor is 'Extremely important: reserved for the single or few factors that are the primary drivers of impact' and also had the second lowest standard deviation of all factors, which denotes concurrence among the survey respondents. Four factors scored as '4: *Quadruple weight: Factor is one of the most important factors of all*'. These factors included *Distance to Coastline*, *Distance to Private/Domestic Drinking Water Wells*, *Cesspool Density*, and *Water Table Elevation*. Four factors scored as '3: Triple weight: Factor is very important'. These factors included *Drinking Water Well Capture Zones*, *Distance to Streams or Wetlands*, *Risk of Impact from Sea Level Rise*, *Coral Cover and Recovery Potential*, and *Resource Fish Biomass and Recovery Potential*. Five factors scored as '2: Double weight: Factor is more important than baseline'. These factors included, *Soil/Ecological Data*, *Coastline Visitation*, *Lifeguarded Swimming Beaches*, *Ocean Circulation*, and *Average Annual Rainfall*. No factors scored as '1: Baseline: Factor is important, but not exceptionally'. The factors with the highest levels of concurrence (lowest standard deviation) were *Cesspool Density*, which ranked as a '4' and *Distance to Municipal Drinking Wells*, which ranked as a '5'.

Factor	Weight
Distance to Municipal Drinking Water Wells	5
Distance to Coastline	4
Distance to Private/Domestic Drinking Water Wells	4
Cesspool Density	4
Water Table Elevation	4
Drinking Water Well Capture Zone	3
Distance to Streams or Wetlands.	3
Risk of Impact from Sea Level Rise.	3
Coral Cover and Recovery Potential	3
Resource Fish Biomass and Recovery Potential	3
Soil/Ecological Data	2
Coastline Visitation	2
Lifeguarded Swimming Beaches	2
Ocean Circulation and Residence Time Proxy	2
Average Annual Rainfall	2

3. Limitations and Notable Feedback

The methods of gathering expert feedback included some limitations which should be noted to improve future iterations of this or similar processes,
which are further elaborated in the following subsections.

a. Attendance

The workshops were held virtually to encourage the highest level of attendance possible during the COVID-19 pandemic and as recommended by local and national guidelines. Not all attendees of the first workshop elected to participate in the subsequent survey, nor did all initial attendees attend the second workshop. However, the number of participants and their representative spectrum of expertise was considered acceptable to continue with the weighting exercise. The survey results were processed and analyzed with the potential for future exercises to build upon the results if deemed appropriate. An alternative meeting structure could have requested participants to attend a full day 'seminar' during which the content of both workshops and the survey would have occurred during a single, though substantially longer, meeting. This approach would have capitalized on the 'captive audience' to ensure a high level of participation in the survey. However, due to the time commitment of such an event, which likely would have lasted 4-5 hours, it is unknown whether attendance would have actually increased with this format compared to the chosen format of multiple workshops held several weeks apart with the survey taken in between.

b. Areas of Expertise and the Survey Scoring Rubric

Attendees were invited to participate in the workshops so that they could provide their subject-matter knowledge and enhance the weighting process. In the 2021 iteration of the prioritization exercise all factors were considered equal. The 2022 workshops were intended to interrogate this approach and create a more rigorous methodology for weighting the factors based on a broader spectrum of expertise. However, no one can be an expert in all subject areas. In order to account for the fact that respondents may have ranked certain factors with a low weight because they felt less informed about those subject areas, a 'weighted weight' which ignored low ranks was added to the statistical analysis. Ultimately, it was determined that the three analysis options (mean, median, and 'weighted weights') produced comparable results.

c. Feedback on Data Sets

<u>i. Regional Variability</u>

Relating to the risk-factors 'Soils and Average Annual Rainfall':

The prioritization tool was designed for management decisions at the state level, and the fifteen data sets used as risk-factors were selected based on their statewide coverage. However, Hawai‘i has certain regions with distinct characteristics. For instance, the hydrogeology of the Kona region of Hawai‘i Island is markedly different from most other areas of the state in that water dissipates quickly from the surface into the subterranean environment. In this region, coastal water quality is greatly influenced by land-based contaminants. Similarly, preliminary research shared by the participants indicates great differences in wastewater as well as other indicators in Kona vs. Hilo, substantiating the potential role of rainwater in dilution of contaminants prior to entering coastal waters. In certain circumstances, 'outlier' areas of the state, in this case one of the driest and one of the wettest regions, may merit further consideration and scenario planning when developing prioritization and conversion timelines. It was also noted that peak rainfall, which can cause cesspool overflow, may be more descriptive in areas prone to intense precipitation, compared to average annual rainfall which is less likely to capture such events. Rather than a one-size-fits-all analysis, this tool can be considered as a foundational layer for statewide management and decision-making.

ii. Policy Gaps

Relating to the risk-factor 'Cesspool Density':
Since 2000, the United States Environmental Protection Agency (EPA) has banned large-capacity cesspools, which are generally defined as serving over twenty individuals. However, participants noted that not only are some large-capacity cesspools still in operation in Hawai‘i, but certain high-density residential areas with active cesspools are contributing contaminants to the environment in a similar way to those of 'large capacity'. Yet, these cesspools are subject to the same state-level regulations as any other cesspool. This comment was made to highlight the enforcement gap between banned large-capacity cesspools and high-density operational cesspools, and to reinforce the participant's ranking of 'Cesspool Density' as a highly important factor for conversion consideration.

iii. Complications Along the Coast

Relating to the risk-factors 'Distance to Coastline' and 'Sea Level Rise Exposure':
Participants discussed the fact that many oceanfront homes are already experiencing visible tidal fluctuations in their cesspools. Though 'Distance to Coastline' is a straightforward indicator of the potential for land-sea connectivity, Hawai‘i does have some coastal real estate located on bluffs, high above sea level. For this reason, 'Sea Level Rise Exposure' is likely to be a more appropriate indicator of cesspools located at or near current sea level, with both present-day or future potential for groundwater inundation and cesspool failure. Participants also noted the quandary of residential homes with cesspools and the most imminent risk of coastal erosion (i.e., the North Shore of Oahu) for whom cesspool replacement is threatened by large winter storms and swells. These homeowners may elect to wait 'until the last minute' (closer to 2050) to replace their

systems given the variability in erosion on a multi-decadal timescale, though those homes may be high-risk to human and environmental health given their extreme proximity to the ocean and high likelihood of total cesspool failure (i.e. system collapse).

iv. Redundancy

Relating to the risk-factors 'Beach user-days', 'Proximity to lifeguarded beach', 'Distance to Coastline', and 'Sea Level Rise Exposure':

Because the two factors 'Distance to Coastline' and 'Sea Level Rise Exposure' already have the potential to highlight those cesspools with the most direct impact on coastal areas, participants pointed out that the risk-factors 'Beach user-days' and 'Proximity to lifeguarded beach' may be duplicative. It can be noted that from a human health perspective, the risk-factors 'Beach user-days' and 'Proximity to lifeguarded beach' more readily highlight concentrations of human activity than 'Distance to Coastline', and 'Sea Level Rise Exposure'. In particular, areas like Kula, Maui which are regarded as "up country" have a direct and hazardous impact on Kihei, Maui beaches, despite their distance from the coastline.

d. Feedback on Methodology

i. Socio-Economic Considerations

This prioritization exercise focuses primarily on the cesspool risk-factors impacting human and environmental health. This provides a foundation to build upon, and can be further enhanced through the use of socio-economic data. When U.S. Census tracts are overlain on the HCPT tool, attributes like median household income can provide further insight and decision-making information. For instance, the state could compare Priority 1 areas of the greatest potential for contamination to areas of the lowest median household income. The intersection of these two layers would illustrate possible recipient areas for grant funding to facilitate the conversion of active cesspools into more advanced forms of wastewater treatment.

ii. Survey Design

The survey asked participants to consider each of the fifteen risk-factors according to a scoring rubric, by assigning a weight from 1-5 for each factor. For the weights of 5 (Extremely important: reserved for the single or few factors that are the primary drivers of impact) and 4 (Quadruple weight: Factor is one of the most important factors of all), the scoring rubric suggested that survey taker limit the number of high weights that were assigned (i.e. 'reserved for the single or few factors…). These instructions may have been interpreted differently by each participant. An alternative would have been to overtly limit the number of each ranking that could be assigned (i.e. allocating a single '5', up to three '4's, etc.).

To view the complete survey responses and feedback, please navigate to: https://github.com/cshuler/Act132_Cesspool_Prioritization/blob/main/Workshop2_analysis/Workshop%202%20Data%20Analysis.ipynb

4. Prioritization Results

The HCPT prioritization method places each geographic area into three Prioritization Categories that include:

1. **Priority Level 1:** Greatest contamination hazard (map color of red).
2. **Priority Level 2:** Significant contamination hazard (map color of orange).
3. **Priority Level 3:** Pronounced contamination hazard (map color of yellow).

Under the 2021 equal weighting scenario, the total number of cesspools in the state categorized as Priority Level 1 was 13,885, with 13,482 and 54,058 as Priority Level 2 and Priority Level 3, respectively. Approximately 35%, 7%, 21%, and 37% of cesspools in the Priority Level 1 group are located on Oʻahu, Maui, Kauaʻi, and Hawaiʻi Island, respectively.

Under the 2022 expert-informed weighting scenario, the total number of cesspools in the state categorized as Priority Level 1 was 13,821, with 12,367 and 55,237 as Priority Level 2 and Priority Level 3, respectively. Approximately 35%, 7%, 21%, and 37% of cesspools in the Priority Level 1 group are located on Oʻahu, Maui, Kauaʻi, and Hawaiʻi Island, respectively.

Census tracts that changed as a result of the expert-informed weighting process included:

Island, Census Tract Number (Tract #), and Cesspool Count	Original Rank	New Workshop Rank
Kauai		
Kauai: Puhi-Hanama'ulu: Tract#284: Cesspool Count =362	3 (Low)	2 (Medium)
Oahu		
Oahu: Nanakuli: Tract#13: Cesspool Count =96	1 (High)	2 (Medium)
Oahu: Kapiolani Park: Tract#227: Cesspool Count =32	2 (Medium)	1 (High)
Maui		
Maui: Honokowai: Tract#293: Cesspool Count =62	2 (Medium)	3 (Low)
Maui: Waihee-Waikapu: Tract#322: Cesspool Count =590	3 (Low)	2 (Medium)
Maui: Kula: Tract#325: Cesspool Count =2268	2 (Medium)	3 (Low)
Hawaiʻi Island		
BI: Hilo: University-Houselots: Tract#141: Cesspool Count =549	3 (Low)	2 (Medium)
BI: Hilo: Puʻuʻeo-Downtown: Tract#143: Cesspool Count =350	2 (Medium)	3 (Low)

Overall, there were minimal differences between the HCPT's 2021 equal weighting scenario and the 2022 expert-informed version of the tool. Statewide, eight census tracts shifted in priority designation between the two methodological approaches. Of these eight census tracts, the shift in priority was limited to a single step; e.g. none of the census tracts went from high to low priority or low to high priority.

The relative similarity between the two versions of the tool serves to validate the overall robustness of the 2021 HCPT tool. In many locations, similarities can be attributed to the fact that the cesspools which ranked as the highest priority for conversion negatively impact multiple aspects of social and environmental health, and the weights of individual factors are less important than the sum of the many impacts on risk-factors in the high priority ranked areas. This outcome was also alluded to by a sensitivity test detailed in the 2021 report, where hypothetical weights were applied to each factor collectively within different weighting scenarios. The sensitivity test indicated the changes in prioritization under different weighting strategies were likely to show small differences. Nonetheless, despite the limited magnitude of change, the social-science based weighting exercise was extremely valuable for not only demonstrating the validity of the results, but also for improving the robustness of the tool's methodology, including expanding the dimensionality of the tool's input. This robustness is now demonstrated by way of incorporating the expert judgements of knowledgeable practitioners and scholars.

5. Next Steps

The results of this effort will be shared with the DOH Wastewater Branch to inform ongoing cesspool conversion prioritization efforts. This work and the HCPT is only one part of Hawai‘i’s cesspool conversion prioritization process, as numerous other datasets including social, financial, and water quality impacts will also be factored into the cesspool prioritization process.

6. Technical Contributors

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Executive Summary

Background

In 2017, the Hawai‘i State Legislature passed Act 125 mandating that all of Hawai‘i’s estimated 80,000+ cesspools be replaced by 2050. Cesspools are a substandard sewage disposal method and are widely recognized to harm human health and the environment. An essential step in meeting this critical goal is defining a replacement prioritization method for different geographic areas and social categories. This project and its deliverables will help the State use its limited resources which are spread over a large and diverse landmass, to determine the most vulnerable areas of contamination more efficiently. The data and information presented in this report will assist the Cesspool Conversion Working Group (CCWG) and the Hawai‘i State Department of Health (DOH) reevaluate and replace older statewide cesspool prioritization methods developed between 2009 and 2017. Though this report and the former prioritization efforts share some overlap in their approaches to evaluate the hazards cesspools pose, including using some of the same inputs and assumptions involved in individual calculations, there are significant differences concerning the methodology and results. This project will provide the CCWG and its Data and Prioritization Subgroup with updated information and data to make informed planning and preparation decisions through the geographic information system (GIS) tool titled: the Hawai‘i Cesspool Prioritization Tool (HCPT) and this report and technical appendices.

Objectives

The HCPT and the associated report and recommendations will assist the CCWG in creating a long-term cesspool upgrade plan for delivery to the Hawai‘i State Legislature in 2022. The HCPT’s top three objectives are to:

1. Identify a comprehensive list of risk factors and develop a new cesspool prioritization and hazard assessment for the four main Hawaiian Islands;
2. Examine and categorize previously uncategorized (Priority Level 4) cesspools;
3. Reevaluate the 2017 DOH Cesspool Prioritization Report and provide recommendations based on new findings where appropriate.

Methodology

A simplified geospatial hazard-based model (data with a geographical or map-based component) was developed to integrate multiple types of risk factors to visualize, assign,

and rank each factor at the individual cesspool level and collectively. The data used for the tool includes physical drivers and impacts on social and ecological assets. Physical drivers were defined as elements that control the movement of pollution, reduce capacity, or otherwise affect the overall level of impact a cesspool has on the land and also the water quality nearby. Social and ecological drivers represent quantifiable human and environmental values within the areas affected by the discharge of cesspool effluent. The tool applies high-confidence groundwater models (currently used by DOH) to determine effluent (human waste) flow paths and to link each cesspool unit to the estimated location along the coastline most affected by its discharge. Due to the model framework and request from the DOH, the current HCPT does not evaluate other sources of groundwater pollution, including agriculture or injected wastewater, or integrate observed coastal or groundwater quality observations as did the previous report. A total of fifteen risk factors were included in the model:

1. Distance to municipal or domestic drinking water wells;
2. Well capture zones;
3. Distance to streams and wetlands;
4. Distance to the coastline;
5. Sea level rise zones;
6. Precipitation;
7. Depth to groundwater;
8. Groundwater flow paths;
9. Soil characteristics;
10. Cesspool density;
11. Coral cover;
12. Fish biomass/recovery potential;
13. Beach user-days;
14. Proximity to a lifeguarded beach; and
15. Coastal ocean circulation proxy

Although the method chosen assigns a cumulative hazard score to each cesspool in the inventory, combination effects from nearby cesspools and the practicalities of management approaches make it more beneficial to group scores by pre-defined geographic areas from the United States Census. The HCPT categorizes priority areas based on existing census-designated boundaries, including census tracts, block-groups, and blocks where the number of cesspools exceeds a minimum threshold. The HCPT was designed to be as objective as possible with prioritization based solely on the relationships between datasets, thereby reducing human bias as much as possible. All data used in the HCPT is at the

statewide scale, normalized, and based on regulatory rules or modeling outputs.

Results

The HCPT prioritization method (Figure ES1) places each geographic area into three Prioritization Categories that include:

1. **Priority Level 1:** Greatest contamination hazard (map color of red).
2. **Priority Level 2:** Significant contamination hazard (map color of orange).
3. **Priority Level 3:** Pronounced contamination hazard (map color of yellow).

The total number of cesspools in the state categorized as Priority Level 1 was 13,885, with 13,482 and 54,058 as Priority Level 2 and Priority Level 3, respectively. Approximately 35%, 7%, 21%, and 37% of cesspools in the Priority Level 1 group are located on Oʻahu, Maui, Kauaʻi, and Hawaiʻi Island, respectively.

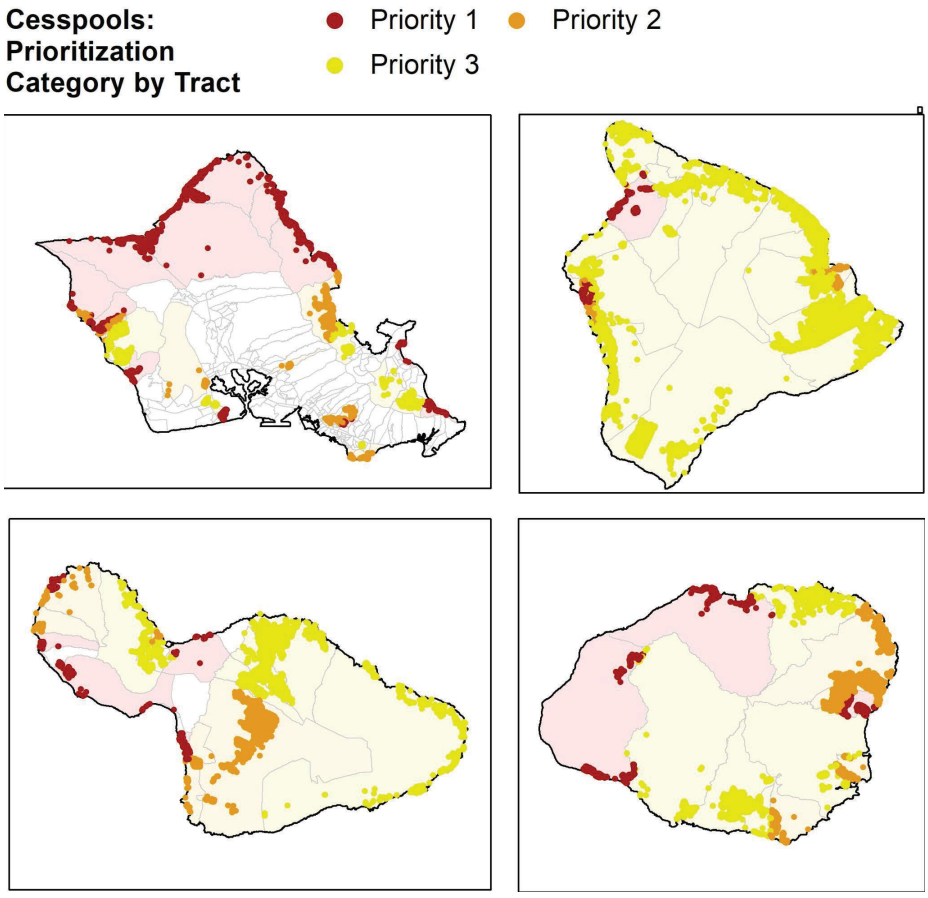


Figure ES1. *Statewide map highlighting the simplistic design of the three-tiered categories, census tracts, and their respective colors to signify a priority score.*

Key Takeaways:

1. A shift in priority ranking is to be expected due to the amount of available data and the use of census tract areas to frame the overall scores. The few areas with previous scientific data supporting the presence of wastewater pollution should be treated accordingly and factored in separately when developing conversion schemes.

2. Results and information from the 2017 prioritization effort are not part of the HCPT and are included in this report for reference and comparative purposes only, including using the 2017 priority category titles, i.e., Priority Level 1, 2, and 3.

3. Observation-based tracer (water quality) datasets were intentionally excluded from the HCPT algorithm used to calculate prioritization scores.

4. The authors recommend that all statewide cesspool inventory continue to be refined and, if possible, ground-truthed to ensure the most accurate results of the tool and for future statewide OSDS management and cesspool conversion.

5. All cesspools are substandard sewage disposal systems and pose some threat to their surroundings. Therefore, each cesspool in the inventory was assigned a priority ranking, and this analysis considers none to be exempt from conversion.

6. The tool is merely a starting point for assessing the areas with the most significant hazards and is meant to support the development of a thorough and thoughtful cesspool conversion plan. The tool cannot make decisions regarding cesspool conversion prioritization timelines.

Abstract

Cesspools are a substandard sewage disposal method and widely recognized to harm human health and the environment. The state of Hawai‘i has an estimated 82,000 cesspools. To address pollution concerns, the Hawai‘i State Legislature mandated replacement of all cesspools by 2050. A major step in achieving this goal is to categorize cesspools based on potential or realized harm to humans and the environment. This report details a comprehensive tool designed for this purpose. After researching similar efforts, methods and datasets were chosen that met the needs of state government, cultural values, and environmental sensitivities. The Hawai‘i Cesspool Prioritization Tool (HCPT) was developed by integrating fifteen risk-factors that either control or relate to how cesspool impacts are distributed across communities and the environment. These factors were processed with a geospatial model to calculate a single prioritization score for every cesspool in Hawai‘i. Because sewage pollution impacts are cumulative, individual scores were consolidated by census boundary areas. Results from the HCPT prioritization were validated through comparison with a statewide assessment of nearshore wastewater impacts funded by Hawai‘i Act 132. Future data, organized within census area frameworks, can be layered onto the results to address equity and outreach challenges.

The HCPT was designed to be as objective as possible with prioritization based solely on the relationships between datasets, thereby reducing human bias as much as possible. All data used in the HCPT is at the statewide scale, normalized, and based on regulatory rules or modeling outputs. The total number of cesspools in the state categorized as Priority Level 1 was 13,885, with 13,482 and 54,058 as Priority Level 2 and Priority Level 3, respectively. Approximately 35%, 7%, 21%, and 37% of cesspools in the Priority Level 1 group are located on O‘ahu, Maui, Kaua‘i, and Hawai‘i Island respectively.

Background and Motivation

In 2017, the Hawai‘i State Legislature passed Act 125 mandating that all cesspools be replaced by 2050. A report produced by the Hawai‘i Department of Health Environmental Management Division in 2017 titled: Report To The Twenty-Ninth Legislature State of Hawai‘i 2018 Regular Session: Relating To Cesspools and Prioritization for Replacement (DOH Cesspool Prioritization Report) detailed a prioritization method to identify

high-priority cesspools across the state (Hawai‘i State Department of Health: Environmental Management Division, 2017). However, new data and recent directives by the Cesspool Conversion Working Group (CCWG) and Hawai‘i State Department of Health (DOH) have provided the necessary information and catalyst to reevaluate the original prioritization methods and framework. Prioritization of cesspool areas helps the State use its limited resources spread over a large diverse archipelago more efficiently, reducing any uncertainties to determine vulnerable areas of contamination. This project aims to provide the CCWG and its Data and Prioritization Subgroup with updated information and data through the creation of a geographic information system (GIS) tool titled: the Hawai‘i Cesspool Prioritization Tool (HCPT).

Objectives

The HCPT will assist the CCWG in creating a long-term cesspool upgrade plan for delivery to the Hawai‘i State Legislature in 2022. This project's main objectives are to:

4. Identify a comprehensive list of factors that will assist in the creation of a new cesspool prioritization and hazard assessment for the four main Hawaiian Islands;
5. Examine and categorize previously uncategorized (Priority Level 4) cesspools;
6. Reevaluate the 2017 DOH Cesspool Prioritization Report. Provide recommendations based on new findings where appropriate;
7. Identify possible exemption criteria for cesspools in areas not in need of time-sensitive cesspool upgrades;
8. Develop a web-based tool to prioritize and view specific cesspools based on identified attributes and data.

Comparison to 2017 Prioritization

The DOH requested that the results of previous efforts to categorize cesspools not be included in the new priority ranking methodology. Nonetheless, 2017 priority areas are overlaid onto the HCPT maps for comparison purposes and transparency.

The two prioritization efforts share some overlap in their methods to evaluate the hazards cesspools pose, including using some of the same inputs and assumptions involved in individual calculations. However, there are also significant differences concerning the methodology and results. For example, the previous prioritization effort evaluated the risk ranking of onsite sewage disposal systems (OSDS) at the resolution of broad geographic regions, e.g. Upcountry Maui. The HCPT treats all cesspools as nonpoint pollution sources, lumping them into finer scale frameworks of United States Census Bureau tracts, blocks and block-groups. Additionally, the HCPT algorithm does not require inputs in the form of

documented impacts from cesspools, as previous assessments have. Doing so would limit where the tool can be applied, and would inherently result in bias towards places that have previously been selected for scientific studies or routine monitoring. The method in the HCPT decreases subjectivity in defining prioritization areas and simplifies public interactions with the tool, while still maintaining in-depth analysis of individual cesspools for DOH personnel. Additionally, the HCPT did not evaluate existing infrastructure elements such as nearby sewer mains, injection wells, or future sewer plans. However, these are essential elements that should be included in an overall conversion scheme.

There is some usefulness in understanding the process used for previous efforts to prioritize cesspools as a mechanism to evaluate the new results. **The information provided below is not part of the HCPT and included for reference and comparative purposes only.** The 2017 DOH Cesspool Prioritization Report identified fourteen critical locations that should receive priority when implementing a replacement plan. The previous report's prioritization method relied upon the following five factors:

1. The density of cesspools in an area;
2. Soil characteristics;
3. Proximity to drinking water sources, streams, and shorelines;
4. Groundwater inputs (agriculture and injected wastewater); and
5. Physical characteristics of coastal waters that may compound the impacts of wastewater.

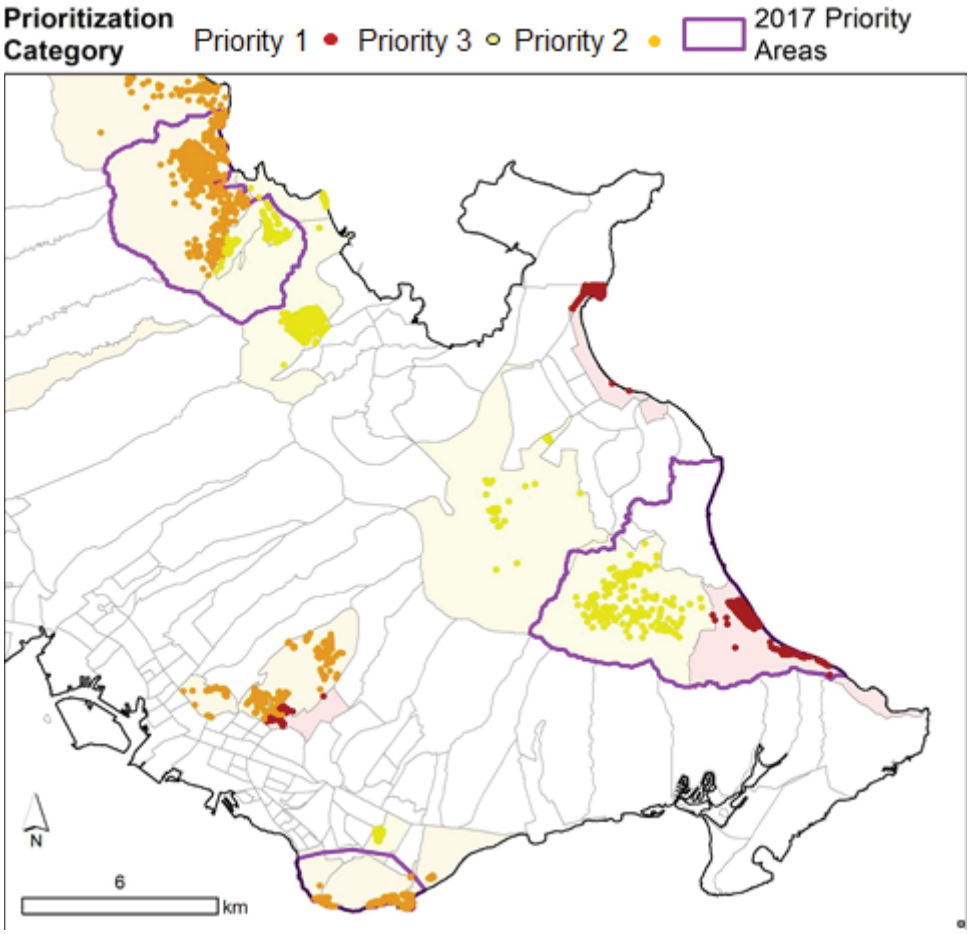


Figure 1. *Example map of Oʻahu highlighting the locations of previous 2017 priority areas paired with the newly developed priority scheme, synthesized by census tracts.*

In order to demonstrate how the newly designated priority areas overlap with the 2017 priority areas from DOH, the authors also performed a comparative analysis, detailed in Appendix A. There readers can view how the HCPT results fit into previous efforts. Further discussion of why and how the schemes differ follows in subsequent sections. **Finally, with direction from DOH and the CCWG, the HCPT continued use of the 2017 priority category titles, i.e. Priority Level 1, 2 and 3. However, the definitions that accompany the old 2017 priority categories are not continued and do not apply to the HCPT.**

Conceptual Model

Before continuing, it is important to clarify the language used in this report. The terms risk and hazard are often used interchangeably. However, for this exercise, the term hazard will be used to denote potential for harm. The Canadian Centre for Occupational Health and

Safety (2021) defines a hazard as "any source of potential damage, harm or adverse health effects on something or someone." Risk is defined as "the chance or probability that a person will be harmed or experience an adverse health effect if exposed to a hazard, see Equation 1 (Canadian Centre for Occupational Health and Safety, 2021). Identifying specific risks, such as the number of people who will contract an illness from cesspool pollution is beyond the capability of this assessment. We can, however, estimate the risk of a hazard that may cause harm to people or the environment and offer a priority ranking to achieve this goal. In our prioritization, this was done through evaluation of the cesspool distance to a hazard or potential for exposure to wastewater contaminants through mechanisms such as swimming or drinking water. A complete evaluation and integration of exposure science is beyond the scope of this project.

$$\text{Risk} = \text{hazard} \times \text{exposure}$$

Equation 1. *Risk equals hazard times exposure.*

Tool Structure

The current report and HCPT expand on the previous efforts to provide a quantitative, up-to-date hazard assessment of geographic areas that may be adversely impacted by cesspool pollution. The HCPT uses the most up-to-date data available and its methods are reproducible and transparent. Relevant information, including source code, is publicly accessible through published notes books located on GitHub (click here to view). It was developed in consultation with local experts, engineers, and government associates to prioritize cesspools in the allotted time frame of the contract and CCWG needs. Though the prioritization process is inherently contextual, every effort has been made to create a non-biased objective evaluation of cesspool hazards in an equitable and fact-based methodology. There will be shifts in ranking between the old prioritization method and the new method. **The shift in ranking is to be expected due to the amount of available data and the use of census tract areas to frame the overall scores. For the few areas that have previous scientific data supporting the presence of wastewater pollution, they should be treated accordingly and factored in separately when developing conversion schemes.** The current HCPT does not evaluate other sources of groundwater pollution (agriculture or injected wastewater) or integrate observed coastal or groundwater quality observations as did the previous report. It was determined that other sources of groundwater pollution can significantly complicate the behavior of wastewater tracers, and the geographic extent of water quality data availability is very limited for statewide application.

Therefore, observation-based tracer datasets were intentionally excluded from the algorithm used to calculate prioritization scores. Instead, the HCPT's results are validated against the most robust statewide assessment of coastal wastewater impact available using observed and modeled nitrogen impacts from the Hawai'i Act 132 statewide study of sewage contamination.

The HCPT uses the following criteria (risk factors) to calculate a geographic prioritization score:

1. Distance to municipal or domestic drinking water wells;
2. Well capture zones;
3. Distance to streams and wetlands;
4. Distance to coastline;
5. Sea level rise zones;
6. Precipitation;
7. Depth to groundwater;
8. Groundwater flow paths;
9. Soil characteristics;
10. Cesspool density;
11. Coral cover;
12. Fish biomass/recovery potential;
13. Beach user-days;
14. Proximity to lifeguarded beach; and
15. Coastal ocean circulation proxy

As mentioned previously, adverse impacts from cesspools are cumulative. Therefore, it was important to identify a proper scale to evaluate the updated priority ranks. The HCPT frames cumulative cesspool pollution within United States Census Bureau tract boundaries to achieve this goal. The United States Census Bureau (n.d.) identifies census tracts as "small, relatively permanent geographic entities within counties (or the statistical equivalents of counties) delineated by a committee of local data users. Generally, census tracts have between 2,500 and 8,000 residents, and boundaries that follow visible features." Using census tract boundaries allows for more detailed resolution and increases objectivity from previous efforts. There are approximately 320 census tracts within the state of Hawai'i, and of these, just over 100 have a sufficient number of cesspools (greater than 25) to be ranked by the HCPT. Two additional census layers are available for analysis and include census block groups with 837 total and 236 ranked (greater than 20 cesspools) and census blocks with 22,780 total and 1,107 ranked (greater than 10 cesspools).

The new prioritization method utilized in the HCPT tool places each geographic area into three priority categories (Figure 1):

1. **Priority Level 1:** Greatest contamination hazard (map color of red).
2. **Priority Level 2:** Significant contamination hazard (map color of orange).
3. **Priority Level 3:** Pronounced contamination hazard (map color of yellow).

When homeowners use the HCPT web-based map tool they will enter a property TMK or address into a search bar. The HCPT will display the cesspool location(s) on a map with a color-coded dot of the corresponding priority. In addition, the surrounding census tract will be highlighted in the hazard category color to further help display the data. The public portion of the HCPT was designed to help homeowners obtain the most pertinent information in the fastest method possible. The DOH will have access to individual layers and ranking of cesspools in a similar online map tool for planning and management purposes.

While updating the prioritization method, the authors were asked to make recommendations to identify potential exemption criteria for groups of cesspools that are unlikely to severely impact the environment and human health. **In reality, all cesspools are substandard sewage disposal systems and pose some threat to their surroundings. Therefore, each cesspool in the inventory was assigned a priority ranking, and none are considered by this analysis to be exempt from conversion.** However, from a policy perspective, it is untenable to review every single system on an individual level. Therefore, the tool results are consolidated into prioritization areas using census boundaries at multiple different resolutions. In order to not skew the census area priority ranks by including areas with a small number of cesspools, a minimum number of cesspools within each census area was established, and those census areas with less than the minimum number were not ranked. Specifically, the cesspools in census tracts with less than 25 units were not ranked on the tract level, cesspools in census block-groups with less than 20 units were were not ranked on the block-group level, and cesspools in census blocks with less than 10 units were were not ranked on the block level. **Despite the fact that these more isolated cesspool units are likely to be less prone to contributing to cumulative effects, they nonetheless do receive a priority score, but only at the individual cesspool level.**

Tool Development

After researching related legal, academic, and gray literature via internet searches and academic databases including Google Scholar, Web of Science, and Pubmed, a simplified

geospatial hazard-based model was developed to visualize, assign, and rank multiple factors to point locations on a map. This method assigns a cumulative hazard score to each cesspool in the inventory. Similar tools for OSDS prioritization described in the literature were considered when developing this methodology for Hawai‘i, and include Hawai‘i Department of Health (2017); Flanagan et al. (2019); Kinsley et al. (2004); and Oosting & Joy (2013). Although the HCPT provides a hazard score for every individual cesspool in the inventory, combination effects of nearby units, as well as the practicalities of management approaches mean it is more beneficial to aggregate these scores by pre-defined geographic areas, similar to Kinsley et al. (2004) and Oosting & Joy (2013). However, Hawai‘i has a unique political structure and both highly urbanized and rural populations, making traditional ecological/political aggregate frameworks, such as watershed boundaries, incompatible. Instead, the HCPT uses existing census-designated boundaries as described in the Background and Motivation section. The prioritization scores of all cesspools within each census area are averaged, and this average score is then assigned to the census-boundary area to represent the cumulative hazards from all cesspools in that unit. **Although the variables used likely have various interrelationships, each input in the tool is distinct in its representation of hazards and treated as independent of one another for simplicity.**

By using an aggregated risk and hazard assessment methodology, the tool estimates the likelihood of adverse impacts or pressures to a given area resulting from human activities (cesspool effluent discharge). Additionally, the HCPT differs from other models by incorporating societal and environmental values such as beach visitor use, fishery health, coral cover, and the potential for cesspool remediation to improve coastal ecosystems. The tool cannot evaluate all social and environmental information relevant to cesspool pollution or decision-making associated with cesspool conversion, nor is the tool intended to replace robust planning, policy, and management processes. **The tool is merely a starting point for assessing the areas with the most significant hazards and is meant to support development of a thorough and thoughtful cesspool conversion plan. The tool cannot make decisions regarding cesspool conversion prioritization timelines.**

Developing a tool that is unique to Hawai‘i means there are several differences from the method(s) used previously to prioritize cesspool hazards in Hawai‘i, and methods that exist across the continental United States. These differences include:

- Incorporating high-confidence groundwater models to determine effluent flow paths and to link each cesspool unit to the location along the coastline most affected by its discharge. These models have previously been validated through the

sampling of coastal wastewater indicators, and are considered to be relevant for this purpose.

- Considering impacts to social and ecological assets located downgradient from each cesspool as a part of the overall ranking. These include lifeguarded beaches, coral reef habitat, fish biomass, and a proxy for coastline usage.
- Calculating cumulative hazard scores (based on nonpoint source pollution dispersion) using non-arbitrary census-designated areas at multiple resolutions to develop a more realistic nonpoint source pollution framework.
- Excluding parameters such as lot size or system age. Hawai‘i is an outlier when comparing continental models to evaluate OSDS priority zones because of limited real estate space and the high density of OSDS per acre. Age was excluded because cesspools have similar impacts irrespective of maintenance or system age.
- Assumes all properties are occupied year-round versus actual property use (i.e., seasonal, vacation rental)
- Excludes commercial and industrial properties.
- Incorporates sea level rise projections from the Hawai‘i Sea Level Rise Viewer.

The HCPT moves beyond qualitative methods and assessments using water quality impact research, which is subject to sampling bias and limited for statewide analysis. The focus is instead on measurable environmental factors, regulations, and values (with statewide data) tied to water quality to create a quantitative assessment that can add future data to refine scores if needed. However, not all areas have data for measurable impacts. Therefore, some assumptions were made when data gaps existed or simplifications were required, which will be discussed further in elements of the Methodology section.

The HCPT development team aims to use an iterative user design process for its web-based map/public viewer. Our goal is to understand human dimensions and needs regarding cesspool prioritization information. Because the process is iterative, several updates of the tool may be created to serve different audiences. The audience for the public map tool is primarily homeowners, while the advanced map tool is developed for internal DOH scientists, and other state employees indirectly involved in the cesspool conversion issue and associated wastewater challenges.

Methodology/Dataset Categories

This section will describe the framework and systems used to create the HCPT as well as the challenges encountered. The results of the tool rely on the best publicly available data.

As the tool was being developed, several challenges were identified regarding data consistency and quality. These include:

- TMK number discrepancies with county tax data and DOH database.
- Accuracy of OSDS classification (cesspool, septic, aerobic treatment unit).
- Accuracy of the number of OSDS.
- Limited statewide data regarding water quality indicators/impacts.
- Limited data on sewer laterals (private/municipal).

Physical Drivers and Environmental Quality Hazards

Physical drivers, for this report, are elements that control the movement, reduce capacity, or otherwise affect the overall level of impact a cesspool has on the land and also the water quality nearby. Much of the data used in the HCPT is also used by agencies like DOH or county water supply departments for source water protection and public health. The impact an individual cesspool has on its surroundings depends on many factors. Even with readily available data, it is difficult to assess impact due to various environmental factors and complex interactions. No tool can fully predict or assess all environmental variables. Primary factors that contribute to the HCPT include physical factors such as soil suitability and surrounding geology, location, and proximity to environmentally sensitive areas like wetlands and coastlines. Additional factors include social and ecological assets affected through the coastal discharge point of effluent, and cumulative impacts of other nearby cesspools. **Importantly, the tool's concept is based on the hypothesis that the more cesspools in an area, the less effective natural soil and subsurface systems will be at degrading cesspool effluent.**

Because this project was designed to assess cesspools statewide, only data that was at the statewide scale were used. Though this may exclude other important datasets, DOH requested a statewide methodology. Where these datasets had missing values, gaps were filled using the best available proxies described below in their categories. **Generally, only datasets with a minimum of 90% geographic coverage of the state were used.** Often, the geographic coverage of many of these datasets only extended across the four main Hawaiian Islands. While it is recognized that there are cesspool impacts on the outer islands of Molokaʻi, Lanai, and Niʻihau, these islands were not included in a number of key datasets necessary to this analysis. The authors recommend that DOH establish a ranking system for these islands when time and funding allows. The relationship between the cesspool location and the geographic distribution of the hazard or risk-factor was either defined as a scalar value (1 to 100) or a categorical value (0 or 100) through individual

scaling factors based on regulatory or evidence-based thresholds. For example, any cesspool within 50 feet of the coastline was assigned a scalar score of 100 based on the state regulatory setback distance.

Value-Based Environmental/Human Hazards

While the physical factors can control the level of impact a cesspool typically has, other factors can help quantify human and environmental value within the areas affected by the discharge of cesspool effluent. In order to develop scores for these values, the HCPT uses groundwater models developed by DOH. The models assess where cesspool effluent will discharge along the coast and where impacts will be realized. Because DOH is tasked with protecting human and environmental health, the following ecological and social factors were included in the calculation of priority scores:

1. Lifeguard tower locations/swimming beaches
2. Coral cover/recovery potential
3. Resource fish biomass/recovery potential
4. Coastline usage and visitation (user-days)

More detailed information about each input is provided in the sections below.

Cesspool Locations/Grouping

The basis of the HCPT begins with cesspool locations. Cesspool location data was obtained from the State of Hawai'i Geospatial Data Portal. O'ahu cesspool location data was created in 2008 and the other island(s) cesspool data was developed in 2010. However, it was evident that updates would be needed to develop an accurate assessment of cesspool prioritization in 2021. Efforts were made to update known errors, incorporate data from 2020, add cesspools installed before the 2016 statewide ban of new cesspools, and remove cesspools that have been converted. **The authors recommend that all statewide cesspool data continue to be refined and, if possible, ground-truthed to ensure the most accurate results of the tool and for future statewide OSDS management and cesspool conversion.**

The prioritization framework and algorithms rely on having accurate information regarding the location and number of cesspools. Updates include the incorporation of recent (up to 2020) permitting data from the DOH Individual Wastewater System Database (IWD) including newly (before 2017) permitted cesspools and units that have been converted to septic tanks or other treatment systems. County tax records and dwelling database information was also used to exclude parcels that did not contain residential buildings with at least one bathroom and bedroom. Additionally, the cesspool inventory was originally

created at the TMK level, resulting in tens of thousands of TMK's with multiple cesspool units on some parcels. These units were extracted out and defined as individual geospatial points, thereby ensuring that each individual cesspool was represented as a discrete point on the landscape. While these updates provided greater confidence in the inventory used, significant work on the cesspool inventory is still required to remedy inconsistencies in the database. Future database research development is warranted. However, doing so is outside of this project's scope and is recommended for completion when sufficient time and funding can be made available.

In order to develop a cumulative hazard score, cesspools need to be grouped into appropriate and logical clusters. Several methods were explored, including using watershed or aquifer boundaries. For the final analysis, United States Census tract data was chosen. Census tracts are small, statistical subdivisions updated by local participants prior to each decennial census to provide a stable set of geographic units to present statistical data. (U.S. Census Bureau, 2021). According to the United States Census Bureau, census tracts cover areas with fairly standardized population sizes between 1,200 and 8,000 people. A census tract usually covers a contiguous area, however, the spatial size of census tracts varies widely depending on the density of settlement. Census tract boundaries are defined with the intention of long-term stability so statistical comparisons can be made through time, though census tracts are occasionally split due to population growth or merged following substantial population decline (U.S. Census Bureau, 2021). Additionally, census tract boundaries generally follow visible and identifiable features, though they can follow nonvisible legal boundaries, such as a minor civil division or incorporated place boundaries to allow for census-tract-to-governmental-unit relationships since these boundaries tend to remain unchanged between censuses (U.S. Census Bureau, 2021).

Synthesis: Prioritization and Ranking

To combine data from multiple risk factors, such as depth to groundwater or soil suitability at the individual cesspool level, the tool overlays the individual fifteen input data layers (risk factors) onto each cesspool point's attribute data table. Each layer's data values are then normalized to a 0-100 score specific to the risk factor at each cesspool point. Individual methods used to convert various input data values to 0-100 priority scores are described in the Input Data section below. For clarity, these individual scores will be referred to as **Risk-Factor Scores**.

Next, the fifteen **Risk-Factor Scores** are averaged to generate a single **Cesspool Prioritization Score** for each cesspool. Therefore, each of the 82,000+ cesspools in the inventory has an individual prioritization score, making it possible to resolve differences at

the individual cesspool level. However, because the impacts of wastewater effluent are cumulative, the tool then aggregates cesspools into census-based geographic areas, as described in the section above, and uses the arithmetic mean **Cesspool Prioritization Score** of all cesspools within each census unit to assign a **Census Unit Prioritization Score** to every census unit that contains more than a minimum number of twenty-five cesspools. **Census Unit Cesspool Prioritization Scores** are calculated at the census tract, census block group, and census block levels to provide flexibility in management applications. To further digest these scores for management purposes, it was decided to use the final **Census Unit Prioritization Scores** to categorize each census unit into one of three priority levels, which will be referred to as **Prioritization Categories.**

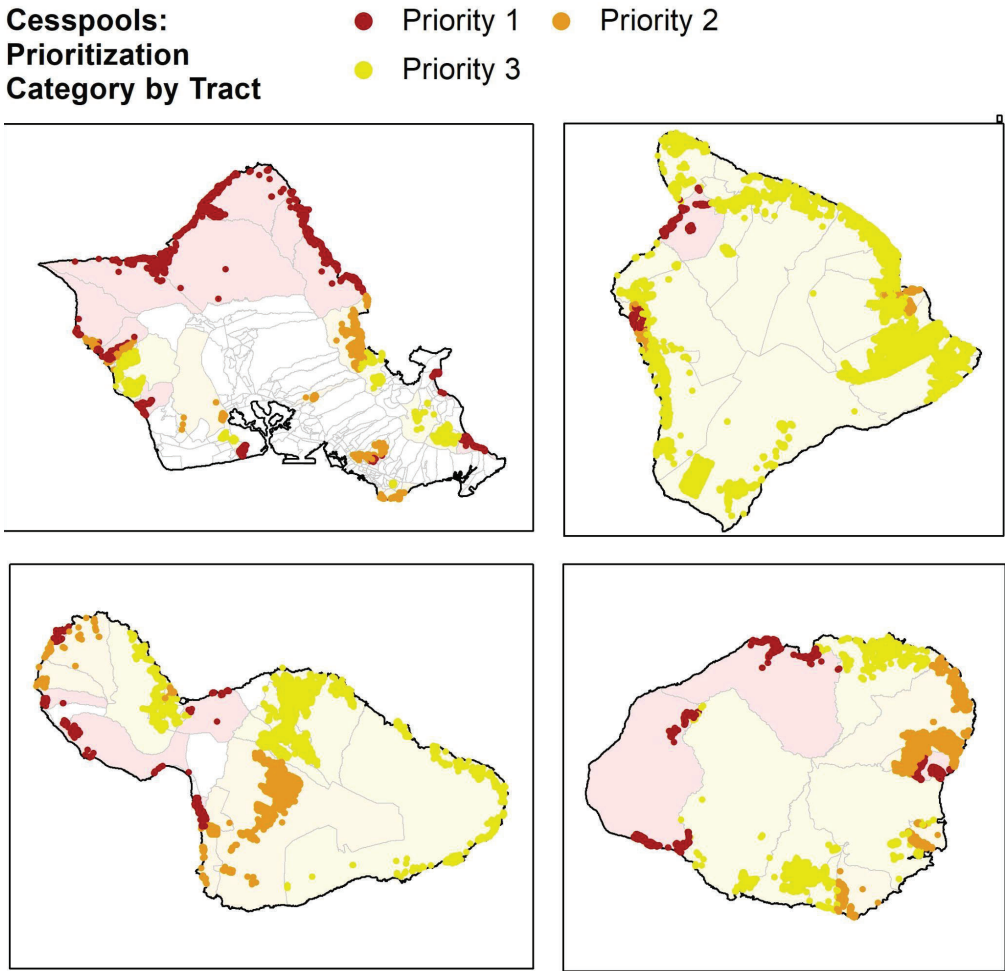


Figure 2. *Statewide map highlighting the simplistic design of the three-tiered categories, census tracts, and their respective colors to signify a priority score.*

The new prioritization method (Figure 2) places each geographic area into three Prioritization Categories that include:

4. **Priority Level 1:** Greatest contamination hazard (map color of red).
5. **Priority Level 2:** Significant contamination hazard (map color of orange).
6. **Priority Level 3:** Pronounced contamination hazard (map color of yellow).

After reviewing the prioritization score results, the findings revealed a fairly normally distributed pattern among the three groups. And, through review of Oosting & Joy's (2013) use of raster data preparation and risk contouring –which represent the mean risk and increments of the standard deviation above and below the mean– it was determined that quartiles were an appropriate way to categorize the HCPT results based on our methodology and data. The difference in how to categorize the results may be because of the available HCPT cesspool location data, versus Oosting & Joy's (2013) need to identify a geographic area of risk. HCPT categories are defined by the mathematical quartiles of 25% and 50% with the top 25% highest scoring areas designated with the Priority Level 1 ranking, the next lower 75% to 50% with Priority Level 2, and the bottom 50% as Priority Level 3. The breakpoint categories can be revised based on management strategies, policy needs, or updated research and data.

A cutoff was used to exclude census units with few to no cesspools. Tracts with less than twenty-five cesspools, block groups with less than twenty, and census blocks with less than ten were excluded from the analysis to reduce bias from small sample sizes. They are displayed with a white color. Individual cesspools in these locations were still ranked and results can be visualized in the DOH Input Data application. Additionally, a sensitivity analysis was performed to assess the effect of changing the importance (weights) of the different input data in the overall ranking, and the results are discussed in Appendix B.

Validation Methods

The accuracy of models is typically tested through comparing results to real-world observations. For example, an atmospheric climate model can be adjusted or validated based on rainfall amounts observed throughout the model area. However, the prioritization results produced by the HCPT lack a single observable indicator to compare. Cesspool discharge produces impacts across many sectors such as drinking water aquifers and coastal ecosystems. The impacts on people and the places that are valued manifest in multiple ways that often do not overlap. Therefore, there is no single criteria or tracer dataset that can be used to calibrate elements within the HCPT to determine how important, or not, the factors used actually are. While there is existing precedent from the

previous 2017 prioritization efforts to use documented impacts to drinking water or human health as a component in the former prioritization; **the HCPT authors determined that observations or study-based datasets (e.g. water quality data) are too geographically limited to be included in the prioritization algorithm without leading to significant sampling bias and skewing of the results.**

The HCPT team concluded that validation with the Hawai'i Act 132 sewage study, was the best method to compare results to a statewide physical indicator dataset. Hawai'i Act 132 sought to fill a statewide data gap by funding a study led by Smith et al. (2021) targeted at detecting OSDS wastewater in coastal waters. The study provides the most comprehensive and reliable nearshore nutrient availability and source tracking data of any effort completed to date in the state of Hawai'i. While the geographic extent of this study is vast, limitations relating to its sampling extent and the utility of the tracer datasets used (nearshore algal $\delta^{15}N$ and algal %N measurements), still preclude its application as a driving factor in the prioritization score calculation. However, it does provide the best opportunity to validate how reasonable the HCPT prioritization results are in terms of addressing areas with observed impacts from OSDS derived nitrogen. As of August 2021, the Act 132 study is under review by the CCWG, and provisional results were provided for use in validating this prioritization effort.

The authors would also like to acknowledge the existence of other statewide datasets that relate to possible nutrient or pathogen impacts from OSDS. These include nearshore Enterococcus data collected by the DOH Clean Water Branch Hawai'i Beach Monitoring Program, groundwater nitrate data collected by water system operators and reported to the DOH Safe Drinking Water Branch in compliance with the federal Clean Water Act, and repositories such as National Water Quality Monitoring Council database which includes data from studies conducted by the United States Geological Survey and the United States Environmental Protection Agency. Every effort was made to analyze available data to test relationships with possible impacts from cesspools. These efforts indicated that either the geographic extent of most study-based tracer datasets was too limited, or that the primary drivers of variability in statewide monitoring datasets were not sufficiently driven by OSDS impacts. Coastal Enterococcus data was found to be primarily driven by surface water runoff quality (Strauch et al. 2014; Byappanahalli, Roll & Fujioka, 2012; Byappanahalli et al. n.d.), and groundwater nitrate data on the statewide scale appears to be primarily driven by agricultural influences (Mair and El-Kadi, 2013; Moon, 2021). While OSDS prevalence may be a factor in these datasets, it was far beyond the scope of this work to deconstruct.

Input Data: Functions

This section will describe the data that was incorporated into the tool as well as provide summaries on why and how certain types of data or methods were used to evaluate and create a prioritization scheme. The HCPT currently weights each risk factor equally in the prioritization calculation, with each factor normalized to have a score of zero to one hundred; this process was created through collaborative meetings with DOH and CCWG input.

Threshold-Decay Function

In order to convert scalar data values associated with each risk factor (e.g. the distance in meters to the coast or a stream) to a 0 to 100 prioritization score, customized algorithms were developed. In general, the vector distances or other scalar data geographically derived from cesspool locations was used as a variable in a combination approach that both applies existing regulatory thresholds as well as a more physically based decay function. The decay part of the function approximates the behavior of solute transport through underlying geology via a highly simplified version of the one-dimensional convective-dispersive solute transport equation (Van Genuchten, 1982). This equation describes contaminant concentrations with travel distance through an aquifer (Figure 3). The function is simplified here by excluding the scale-dependent parameters that control the movement and attenuation of individual solutes in aquifers. The simplified function only applies the median value of each risk-factor distribution as a control parameter on the rate of decay with distance from the feature of interest. This method ensures that cesspools just past the threshold values are still deemed to be at higher risk than units that are significantly farther away. For additional information on the threshold-decay function used for calculating priority scores for some risk factors, and for the Python code that executes it, please see the Code Notebook associated with this report.

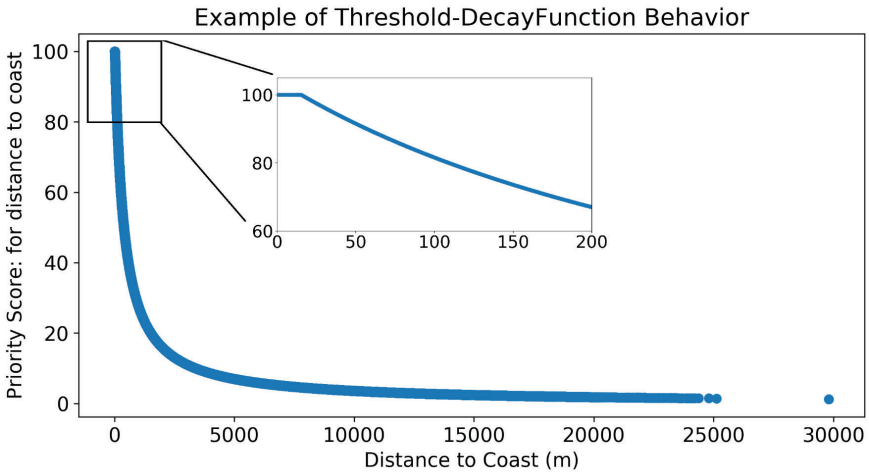


Figure 3: *Plot showing how the threshold decay function converts data from each risk factor (in this case Distance to Coastline in meters) to a 0-100 score. Note the inset showing how the priority score equals 100 for all units within 50 ft (15.24m) from the coast (the state's regulatory threshold), and how the score decays with greater distances from the coast.*

Groundwater Flow Paths

For the HCPT, groundwater flow paths were not considered as an independent risk factor. Instead, they are used to link each cesspool location to a corresponding location along the coastline where the cesspool's effluent is estimated to be discharged. The calculation of flow paths was done by application of island-wide, MODFLOW-based groundwater models provided by DOH and thoroughly documented in Whittier and El-Kadi (2009, 2014). While these groundwater models are the best available models for the entire state, the results are subject to their own assumptions and limitations presented in their respective documentation. Groundwater flow paths originating from model cells containing cesspools were calculated using the MODPATH code within the Groundwater Modeling System (GMS) graphical user interface (Pollock, 2012). Each flow path eventually discharges to the coastline. The flowpath vector traveled from the cesspool-containing cell center to the cell center of the end-cell that intersected the coastline. End cells were defined as square polygons with center points distributed evenly every 250 meters along the coastline of Oʻahu, Maui, and Kauaʻi, and every 500 meters on Hawaiʻi Island. **In theory, a cesspool located on the land surface can be linked directly to the coastline location to which its effluent will eventually discharge after traveling through the aquifer.**

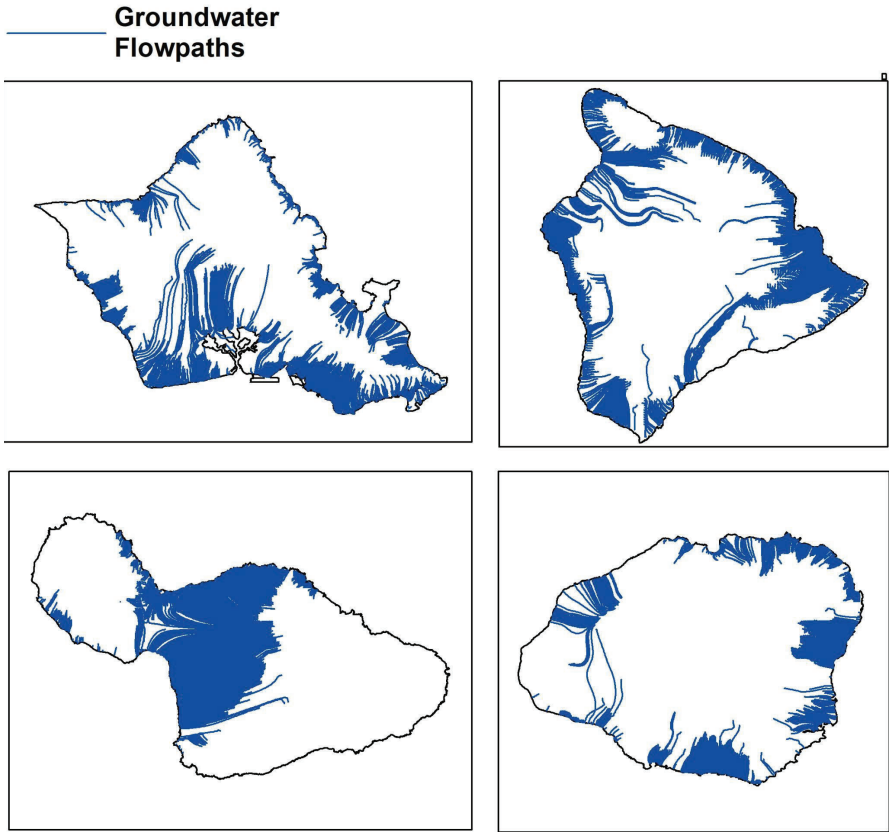


Figure 4. *Example map of four major Hawaiian Islands highlighting groundwater flow paths to the coast.*

Input Data: Risk Factors

Coastline/Distance to Coastline

Cesspools adjacent to the coastline face numerous challenges such as sea level rise, erosion, and shallow depth to groundwater. Studies such as Abaya et al. (2018) have demonstrated that distance to the coast and geology can have dramatic effects on the travel time of wastewater pollution entering the ocean. The HCPT uses a basic geographic distance calculation to the nearest point on a Hawai‘i coastline GIS shapefile to assign a distance to each cesspool in the inventory.

Coastline Prioritization Score Algorithm

For the conversion of distance to coastline to a prioritization score, the threshold-decay function was applied with the maximum risk score (score of 100) assigned to cesspools located closer to the coast than the regulatory threshold of 50 feet or 15.24 m (HAR 11-62).

For cesspool points farther than 50 feet, the score was exponentially reduced with additional distance.

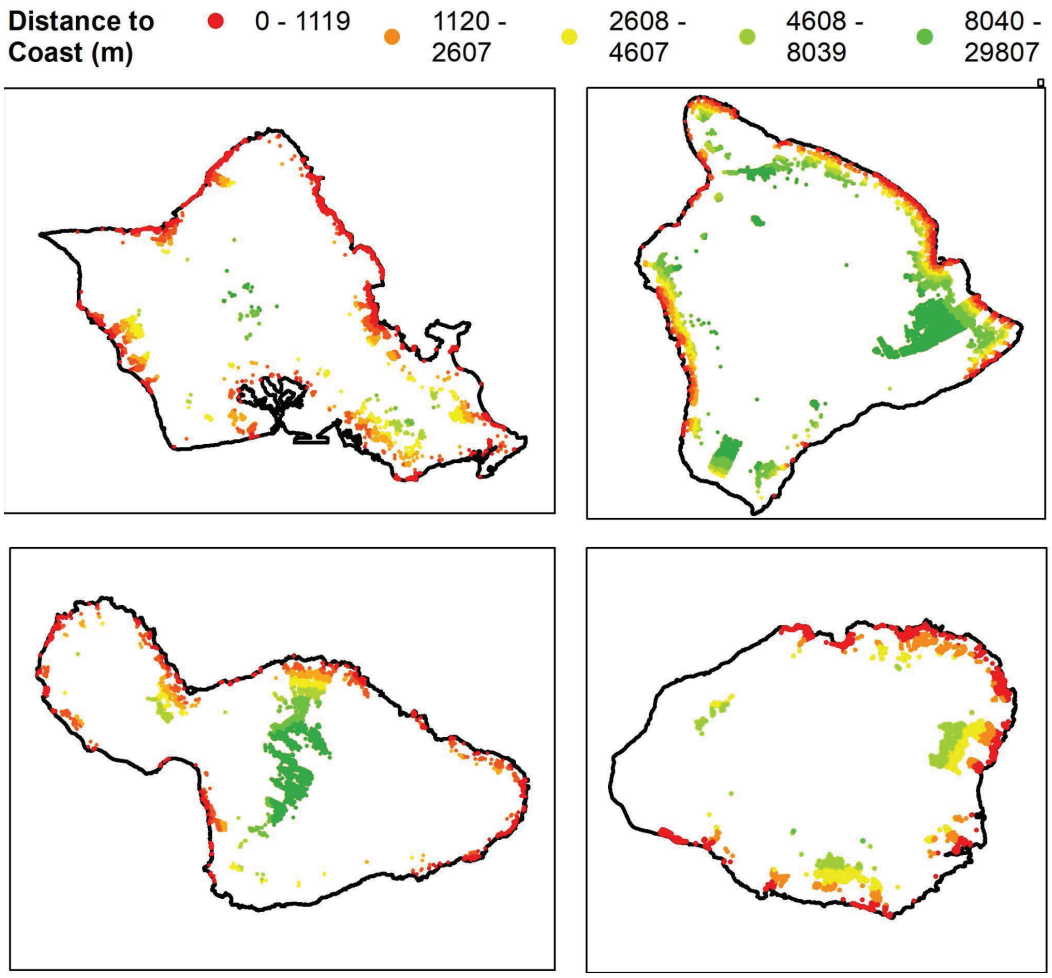


Figure 5. *Example map of four major Hawaiian Islands highlighting cesspool proximity (distance) to the coastline. Red indicates a cesspool is near the coastline, in decreasing order, orange, yellow, and green signify a further distance from the coast.*

Drinking Water Well Locations/Distance to Drinking Water Wells

According to the Environmental Protection Agency (2020), a failing onsite sewage disposal system or cesspool that is located too close to a drinking water well can contaminate the source. Protecting drinking water is especially important in Hawai'i, where much of the state's drinking water comes from underground aquifers, some of which are the sole source (Gingerich and Oki, 2000). Previous studies such as Mair and El-Kadi (2013); Verstraeten et al. (2004); Oluwasola et al. (2017); and Schaider et al. (2016) indicate that the OSDS distance

to a drinking water well is an important factor to ensure a clean and safe drinking water supply. Additionally, Hawai'i Administrative Rules Title 11, Chapter 62 (HAR 11-62) dictates that a potable water source serving public water systems must be a minimum horizontal distance of 1,000 feet (304 meters) from a cesspool. The Hawai'i Wellhead Protection Program (Whittier et al., 2010) uses U.S. EPA (2006) guidance to identify near-wellhead (Zone A) and source-water (Zones B and C) zones that require protection from contaminants. Zone A is delineated through a geographic distance from the wellhead and Zones B and C are delineated through modeled capture zones or aquifer boundaries. Finally, the DOH ranks protecting human health and drinking water as one of its most important duties (Pruder, personal communication July 2, 2021). Therefore, this factor is vital in the HCPT updated prioritization scheme.

To incorporate this type of hazard into the tool, locations of pumping wells were acquired from the state well inventory from the Commission on Water Resources Management (CWRM). Each well is associated with a use code (agricultural, domestic, industrial, irrigation, military, and observation) as well as an identifier for abandoned and unused wells. After analysis, 910 of the 5,286 wells within the CWRM dataset were designated as domestic use, and 534 were designated as municipal, for a total of 1,444 active wells that were considered in the HCPT.

Drinking Water Well Prioritization Score Algorithm

The distance to domestic drinking water wells was assessed separately from the distance to municipal wells, and each cesspool received separate scores for proximity to any well and for intersection with municipal well capture zones as described in the section below. This is because municipal wells serve proportionally larger numbers of people, and domestic wells are often within close proximity to homes using OSDS. Each cesspool unit was assigned the distance between its location and the distance to the nearest domestic well, as well as a separate value for its distance to the nearest municipal well. The threshold value of 56 feet (17 meters) was used for municipal wells based on guidance from the Hawai'i Wellhead Protection Program (EPA, 2006; Whittier et al., 2010), which uses this distance as the Zone-A radius for the near source zone that provides protection against direct introduction of contaminants through and around the well casing. This distance was cut in half to 28 feet (8.5 meters) for domestic wells because of their generally smaller size and proximity to residential units. These threshold distances were applied within the threshold-decay function to calculate separate priority scores at each cesspool point for municipal and for domestic wells.

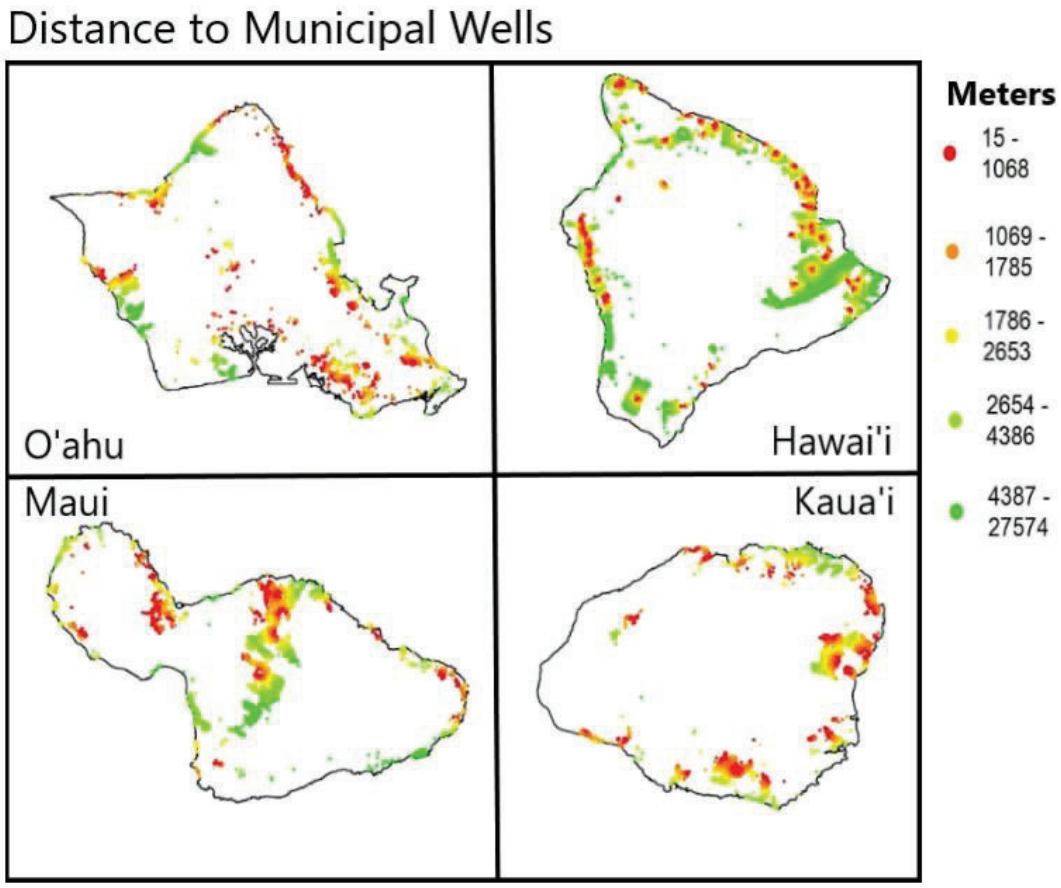


Figure 6. *Example map of four major Hawaiian Islands highlighting cesspool proximity (distance) to a municipal drinking water well. Red indicates a cesspool is near the associated wells, in decreasing order, orange, yellow, and green signify a further distance from a well.*

Well Capture Zones

Knowledge of the location and shape of a well capture zone is a fundamental element of groundwater management (Nagheli, Samani & Barry, 2020). To most accurately convey potential risks to drinking water supplies, the HCPT evaluated if a cesspool was located within a municipal well capture zone. This is largely because cesspool and OSDS effluent have the potential to contaminate drinking water supplies with enteric viruses and other pathogens that can withstand long travel times. Data on capture zone locations was provided by DOH and CWRM.

A capture zone defines the land area from which infiltrated recharge may ultimately contribute to the groundwater produced at a given well. These capture zones were

calculated through reverse particle tracking of flow in a groundwater model using MODPATH code. While the inclusion of a geographic distance factor and assessment of the modeled well capture zones has the potential to be duplicative, it was deemed reasonable considering:

1. The importance of drinking water and high risk of contamination cesspools pose to aquifers, and;
2. The inherent uncertainties of, and relatively low resolutions of available groundwater models in critical regions near pumping wells where groundwater gradients are extremely high.

Therefore, the chosen method considers both risks of contamination from nearby cesspools, even if they are not defined to be within a capture zone, as well as risk from geographically distant cesspools located directly upgradient from wells.

Well Capture Zone Prioritization Score Algorithm

Cesspools that fell within a 2-year travel time capture zone (Zone B) and the 10-year travel time capture zone (Zone C), were identified and scored accordingly. A 2-year travel time has the potential to have contamination reach the water supply more rapidly than a 10-year travel time. Units in the 2-year zone are assigned a numerical score of 100, those in the 10-year zone a numerical score of 50, and all other units received a score of 0.

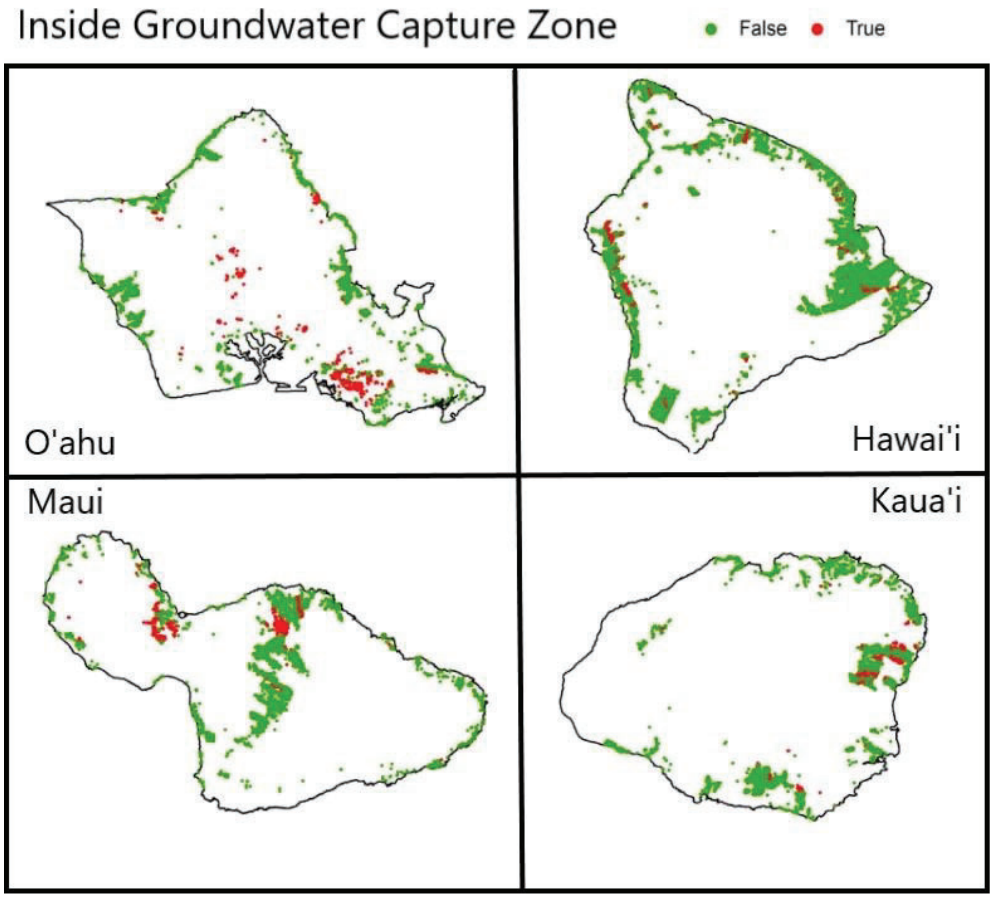


Figure 7. *Example map of four major Hawaiian Islands highlighting if a cesspool is located inside or outside a well capture zone. Red indicates the cesspool is in a capture zone, while green indicates the cesspool is not.*

Soil/Geological Data

Soil is essential for wastewater treatment systems to function properly and generally a hostile environment for bacteria in sewage (Hygnstrom et al. 2011). In typical onsite wastewater treatment fields, soil provides space for biological activity and filters pathogens and chemicals through its physical characteristics (Hygnstrom et al. 2011). Soil particles provide the necessary surface area for biological treatment to occur.

Soil suitability is an important factor around cesspools. Cesspools are substandard systems because they lack a primary treatment tank where non-oxygen demanding bacteria digest some of the waste and solids settle out. Additionally, cesspools do not have an engineered soil space (treatment field) to complete treatment, as would an adequate wastewater

treatment system would. The soil surrounding cesspools may provide limited filtration and space for microbial activity, but this depends on the underlying geology and water holding capacity, along with the types of waste inputs from the home. In general, saturated soil or bedrock is a conduit that transmits pollutants to nearby water bodies. Many risk factors must be taken into account when evaluating how soils and geology influence pollution risk. Regulatory horizontal and vertical setback distances away from OSDS, though important, provide limited protection (Borchardt et al. 2010).

Statewide soil data was extracted from the Natural Resources Conservation Service (NRCS) database as part of the HCPT efforts. The NRCS has developed a methodology for assessing the suitability of soil for siting an OSDS unit based on properties recorded in nationwide soil surveys (NRCS, 2020). The NRCS suitability is based on the eight factors that control the treatment and infiltration of OSDS leachate, as well as the ease of treatment field installation. This method was previously used in Hawai'i's 2017 cesspool prioritization process (Hawai'i State Department of Health: Environmental Management Division, 2017), and its specific use for Hawai'i has been documented in Whittier and El-Kadi (2014). The HCPT modifies the methods used by Whittier and El-Kadi (2014) to assign a single soil-suitability score to each cesspool based on the factors and thresholds defined by NRCS, specifically, these parameters include:

1. **Depth to bedrock**: A measurement from the ground surface to the contact with continuous bedrock or cement pan;
2. **Flood frequency**: The degree to which the soil is subject to flooding or ponding;
3. **Filtering characteristics**: How well the soil filters out particulates and bacteria;
4. **Water infiltration rate**: How well water moves through the soil;
5. **Bottom seepage rate**: How quickly water will move from the lowest soil layer to the bedrock;
6. **Slope:** Measurement of the direction and the steepness of the ground surface. A slope of more than 15% is considered problematic for OSDS installation;
7. **Rock fragmentation:** Measurement of the fraction of rock fragments in the soil. A percentage of 3-inch rock fragments of more than 50% is problematic for OSDS pollution.

Consolidated Soil Prioritization Score Algorithm

To incorporate the seven soil parameters into the HCPT framework, a similar approach used by Whittier and El-Kadi (2014) was followed. The specific approach used thresholds based on the NRCS soil suitability assessment with an independent calculation based on the categorical values provided in Table 1. Specifically, a value for each parameter (except

subsidence) was extracted from the soil-survey GIS polygon features. Then a categorical value (1 to 4) based on the limitation classes below were assigned to each. The parameter values were averaged with Depth to Bedrock, Flooding, Filtering Capacity, and Slow Water Movement each having a weight of 1. Seepage From Bottom Layer, Slope, and Percent Rock Fragments (> 3 inches) each were given a weight of 0.33 in order to score these less important parameters together with a lower weight each. The averaged soil suitability score for each cesspool unit was then scaled through a minimum to maximum scaler to obtain relative values between 0-100.

Described below are the methods used to fill the flood-frequency parameter, which is important in terms of surface transport of contamination from OSDS and cesspools. The flood frequency of many locations is already defined by the NRCS soils database, though about fifty percent of the cesspool points were missing the data from the NRCS database. Therefore, rainfall amounts (from data described in the Rainfall section below) and saturated hydraulic conductivity (known as ksat in the tool) values from the NRCS soil parameters were used to fill in the likelihood of flooding only in those areas where it was not defined by the NRCS database. The following logic was established through consultation with DOH and engineering professionals to fill in the flood frequency values where they were missing.

- If rainfall is above 135 inches and ksat is less than 1.1 = Frequent Flooding
- If rainfall is below 15 inches and ksat is less than 1.1 = Frequent Flooding
- If rainfall is above 135 inches or ksat is less than 1.1 = Occasional Flooding

Table 1. *Limitation class thresholds for soil characteristics as they relate to the appropriateness of siting OSDS in soils with different properties. Where soil parameters are favorable for OSDS development, the limitation classification is slight or none. Where soil parameters are unfavorable for OSDS placement, functioning limitation classifications are moderate to severe. Total subsidence, the amount the soil sinks after treatment field installation, was not considered to be relevant in Hawai'i's young volcanic soils. Table taken directly from Whittier and El-Kadi (2014).*

Soil Property	**Limitation Class**			
	None	***Slight***	***Moderate***	***Severe***
Depth to Bedrock or Cemented Pan (ft)	>6	----	3.3-6	<3.3
Flooding or Ponding	None	Rare	Occasional	Frequent
Filtering Capacity (soil hydraulic conductivity (ft/d)	----	----	----	>12
Slow Water Movement (ft/d)	>12	4-12	1.2-4	<1.2
Soil Suitability Factors – Scored Together				
Seepage From Bottom Layer (ft/d)	>2.8	----	1.1-2.8	<1.1
Total Subsidence (ft)	<=2	----	----	>2
Slope (percent)	<8	----	8-15	>15
Percent Rock Fragments > 3"	<25	----	25-50	>50

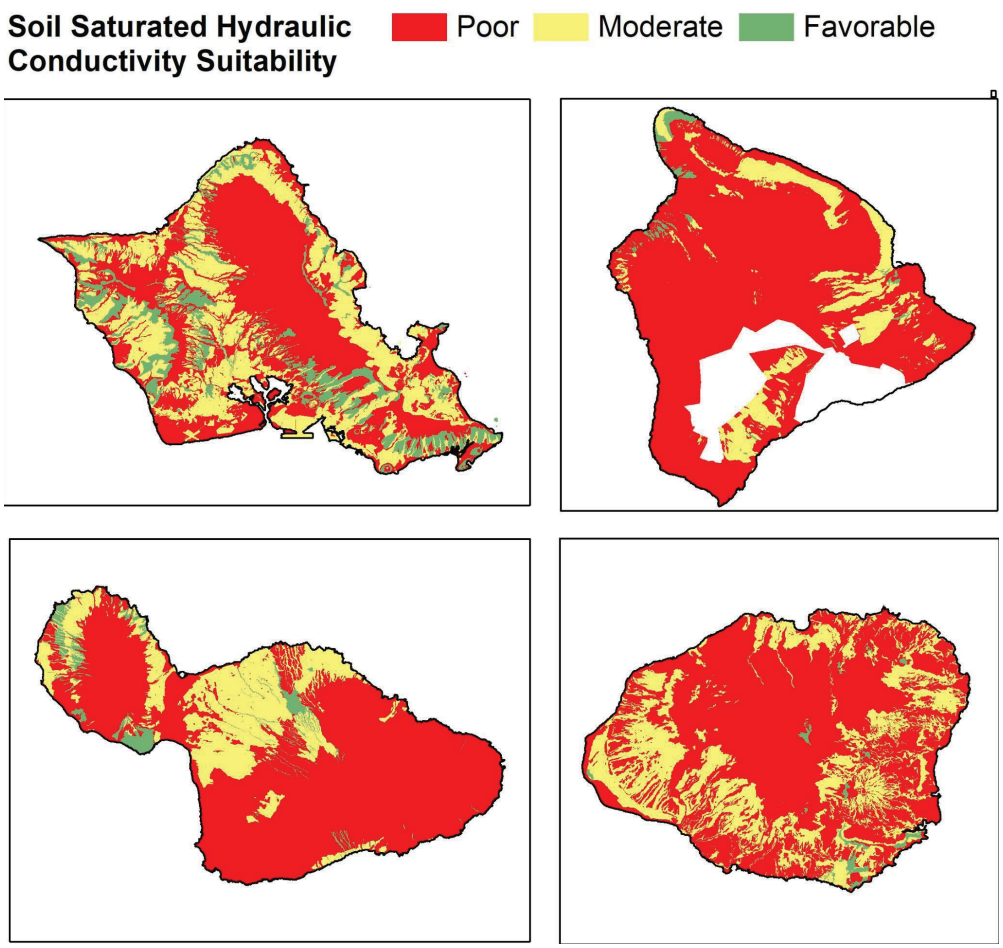


Figure 8. *Example map of the geographic distribution of one of the most important soil properties (hydraulic conductivity) in the soil suitability analysis. The values on this map show where saturated hydraulic conductivity values are favorable in consideration of the parameter values from numbers 3, 4, and 5 in the table above. Red is least favorable, yellow is moderately favorable, and green is most favorable.*

Precipitation (Rainfall)

It was determined through research and consultation with engineers that local rainfall by itself does not directly affect the suitability of OSDS placement. However, once wastewater effluent is in the subsurface aquifer, the amount of effluent compared to the quantity of groundwater recharge controls how diluted the pollution will be and how concentrated and impactful contaminants from each system are upon discharge. The best proxy to estimate groundwater recharge in the Hawaiian Islands is rainfall. The HCPT assumes that areas with high rainfall were considered to be more favorable, or less impacted, by each cesspool. Average annual rainfall datasets were collected from the Hawai'i Climate Atlas (Giambelluca et al. 2013) as statewide grids of annual rainfall totals and rainfall rates were extracted at

each cesspool location.

Rainfall Prioritization Score Algorithm

Because there is no established relationship between the acceptable amount of groundwater recharge (and thus rainfall) to sufficiently dilute effluent from an OSDS unit, the threshold-decay function was applied to determine a relative score for each cesspool, with the threshold value set at 8 inches (0.2m)/year, the lowest value in the rainfall dataset.

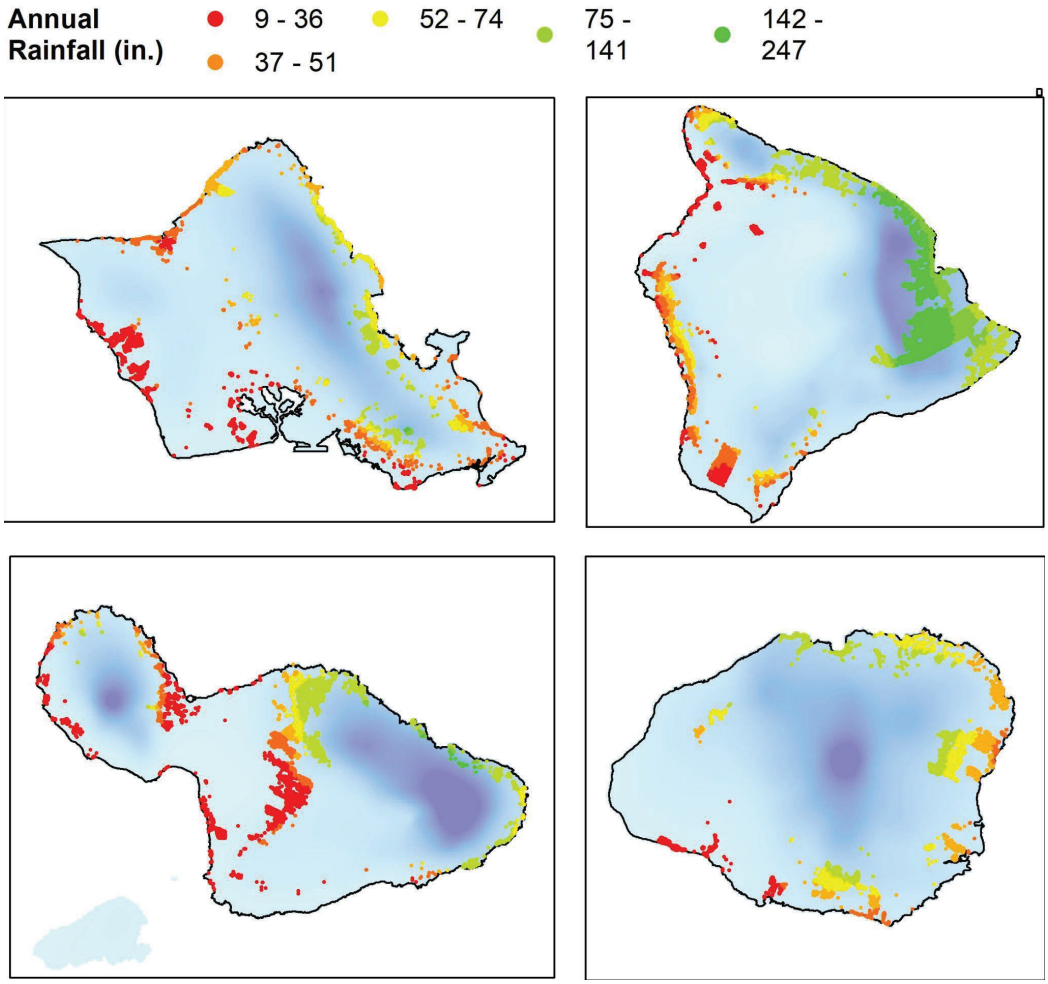


Figure 9. *Example map of the geographic distribution of rainfall amounts as it relates to cesspool impact. Rainfall is used as a proxy for groundwater recharge, and higher recharge rates will dilute the effluent from OSDS, potentially reducing the impact of pollution in areas of higher rainfall. Red locations indicate unfavorable rainfall conditions, with orange, yellow, and green indicating increased favorability, in that order.*

Stream/Wetland Locations & Distance to Streams or Wetlands

The benefits of streams and wetlands are numerous and include trapping floodwaters, recharging groundwater supplies, filtering pollution, and providing habitat for fish and wildlife (EPA, 2017). Studies show that streams and wetlands are vitally important to the health of larger downstream waterways like lakes and oceans (EPA, 2017; McKenzie et al. 2019). The DOH recognizes that wastewater can increase the biologic productivity in streams and nearshore waters, causing problems like eutrophication (Whittier & El-Kadi, 2009). Because of the complexity of environmental processes, it is difficult to quantify specific risk to these systems from wastewater pollution. Instead, we identify hazards through distance to understand the potential risks to these systems. The HCPT uses a basic geographic distance calculation to the nearest stream or wetland by using data from the statewide Hawai'i GIS Portal. The stream's layer is generally representative of perennial flowing waters in the state. Streams were ultimately joined with wetland features, including emergent ponds, to simplify the score. The HCPT assumes that streams and wetlands are equally important even though certain streams or wetlands may be of greater importance based upon location, cultural significance, development, and ecosystem services provided.

Streams and Wetlands Prioritization Score Algorithm

The threshold-decay function was used to calculate priority scores at each cesspool point according to the distance from either a stream or a wetland. The distance of 50 feet (15.24 meters) was used as the threshold based on the regulatory limit in HAR 11-62.

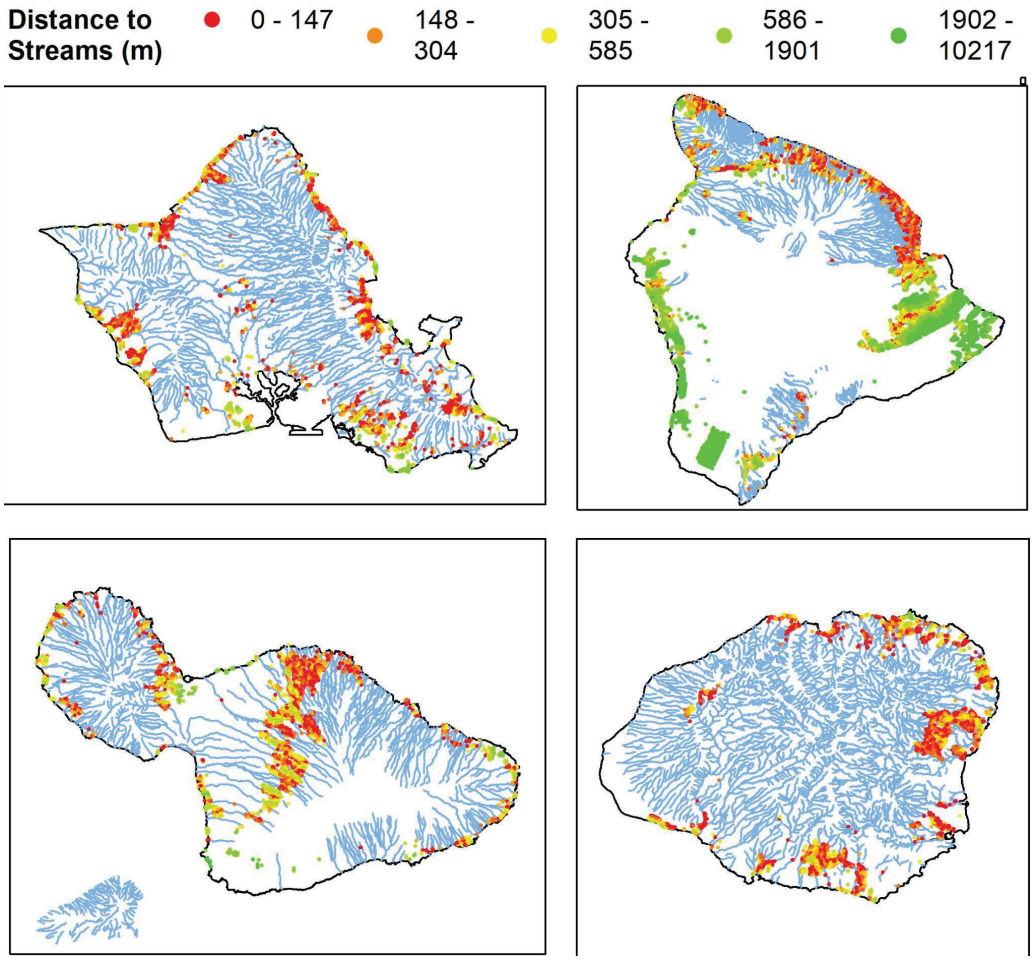


Figure 10. *Example map of the distance from each cesspool point to a nearby stream or wetland. Red locations indicate cesspools near a stream or wetland, with orange, yellow, and green indicating increasing distance to a stream or wetland, in that order.*

Cesspool Density

Density calculation/analysis is subject to bias based on the available landmass and the thresholds set in a calculation. Density is defined as the number of cesspools per unit of land area. Many of the calculations to establish density-dependent risk factors are based upon studies outside of Hawai'i. However, the density of OSDS is a critical variable and has been subject to debate for decades. A 1977 report from the U.S. EPA identified density of OSDS greater than 15.4/km^2 (40/mi^2) could result in groundwater contamination (Flanagan et al. 2019). Density is often a question of both wastewater science and policy decisions.

Though the minimum lot size to install an OSDS in Hawai'i is 10,000sqft, that does not mean that all systems will perform equally, nor that environmental damage will not occur at

the minimum standards. Wastewater systems are inherently site-dependent (geographic, climatic, etc.). Hawai'i has limited land and requiring minimum lot sizes of one acre (as done in places like Suffolk County, NY) is not feasible for future or current development. Calculating the recommended OSDS density for Hawai'i is beyond the scope of this project. However, there are examples of successful development of local density per acre recommendations. Hansen Allen and Luce Engineers Incorporated (2016) identified recommended densities for an area in Utah using local risk analysis, mass balance calculation, and local regulatory management/development review. **The authors recommend the state of Hawai'i conduct such analysis for a more accurate prioritization output and future planning.** However, for this statewide tool, a single density cutoff was used to estimate the impacts across the landscape from cesspools.

To develop the density calculation for the HCPT, the authors investigated current and past literature. Bicki and Brown (1991) conclude that groundwater monitoring and modeling demonstrate a correlation between contamination and septic system density, suggesting a minimum lot size of one-half (0.5) to one (1) acre is needed to prevent groundwater contamination. These recommendations may be true if an area has lower hazards (drinking water aquifer is not a factor/not adjacent to ecologically sensitive areas). Advanced technology may allow smaller lot sizes to meet water quality standards. However, because cesspools have no primary treatment mechanism and have limited/no soil treatment field, the recommended density for OSDS does not neatly apply when evaluating cesspool hazards for priority areas. Previous density calculations in Whittier and El-Kadi (2009) identified an estimated OSDS density that should not exceed 40 units/mi^2 (1 system per 16 acres) based upon EPA reports. The HCPT uses a density calculation of the number of cesspools per acre.

Cesspool Density Prioritization Score Algorithm

To calculate a density hazard score, the threshold-decay function was applied to calculate priority scores at each cesspool point based on the number of cesspools per acre. The threshold value was set at one cesspool per acre, meaning that cesspools in areas with a greater density were assigned a score of 100.

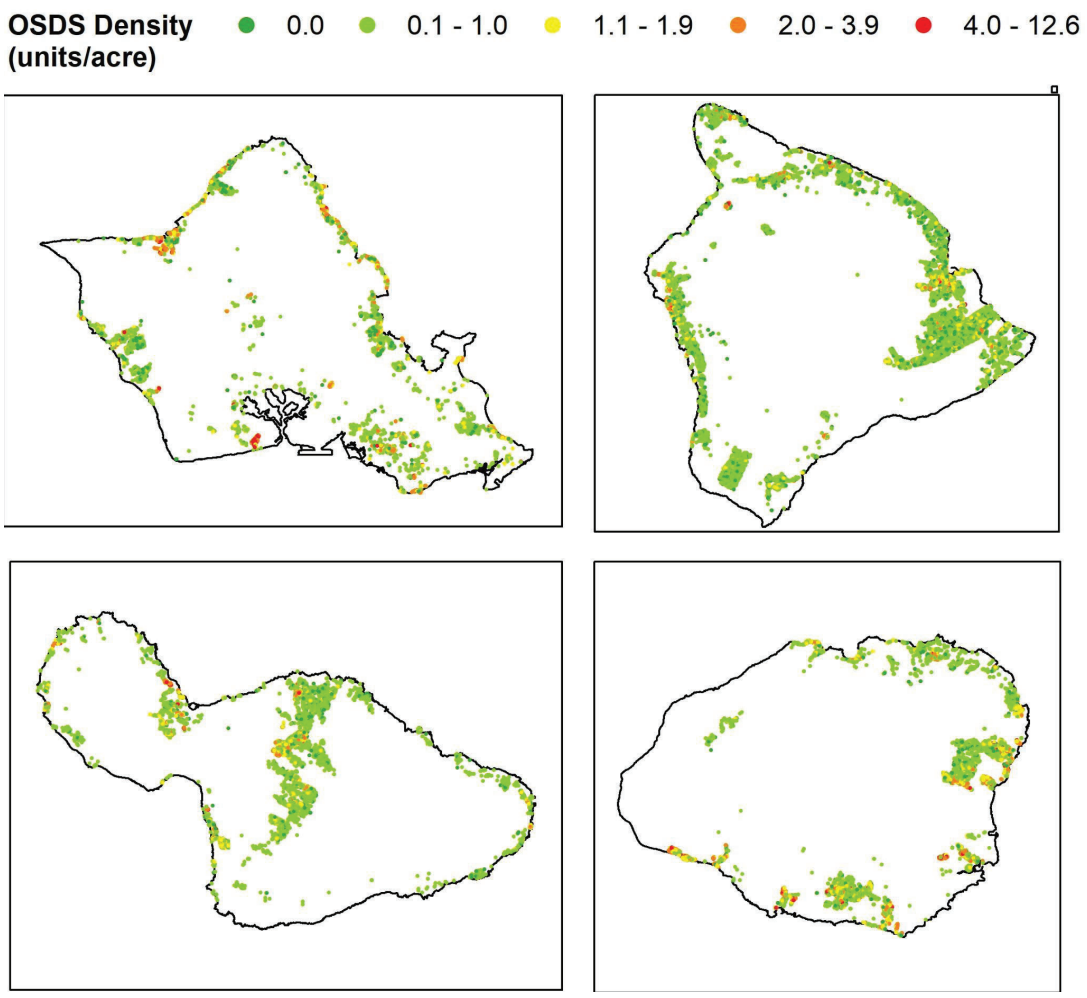


Figure 11. *Example map of cesspool density. Red locations indicate the highest density areas, with orange, yellow, and green indicating lower density per acre, in that order.*

Water Table Elevation (Depth to Groundwater)

Unsaturated soil space is essential for proper wastewater treatment. The unsaturated soil zone (dry area) underlying a cesspool or treatment field is the primary site of subsurface treatment and contaminant reduction. The thickness of the unsaturated zone below a wastewater treatment technology is a limiting factor in the ability of a given system to treat wastewater and limit the transport of contaminants. Recent rises in the groundwater table are already impacting subsurface infrastructure, such as cesspools and sewer lines, in Hawai'i (Habel et al. 2020). Sea level rise considerations are discussed in its respective section.

To obtain an estimate of the depth to groundwater below all cesspools in the state, island-wide groundwater models developed by DOH and documented in Whittier and

El-Kadi (2009; 2014) were evaluated for the HCPT. These models were developed to calculate statewide nutrient transport to the coast. The models have a large spatial scale which imparts low resolutions on their outputs. Regardless, the water table elevation is a key output provided by these models and useful for this exercise. To assess the depth to groundwater, or thickness of the unsaturated zone below each cesspool, the water table elevation at each point was subtracted from the land surface elevation at the cesspool location. Land surface elevations were calculated along the coastline using a statewide high-resolution (<1 meter) LiDAR Digital Elevation Model (DEM) obtained from Hawai'i GIS Online Portal. Where the LiDAR DEM was missing elevation data, it was filled with lower resolution (10 meter) data. Statewide-coverage 10 meter-DEMs are readily available from the UH Coastal Geology Group. The calculated depth to groundwater through the use of the high-confidence land surface elevation data with modeled water table elevations should be considered an estimate, subject to the assumptions and limitations of the groundwater models. Currently, this method contains the best available data for a parameter that is difficult to accurately measure.

Depth to Water Table Prioritization Score Algorithm

To calculate the depth to water table hazard score the threshold-decay function was applied to calculate priority scores based on the calculated thickness of the unsaturated zone beneath each cesspool point. The threshold value was set at 14.4 feet (4.4 meters), which is a regulatory threshold set forth by HAR 11-62. Priority scores exponentially decayed with greater unsaturated zone thickness.

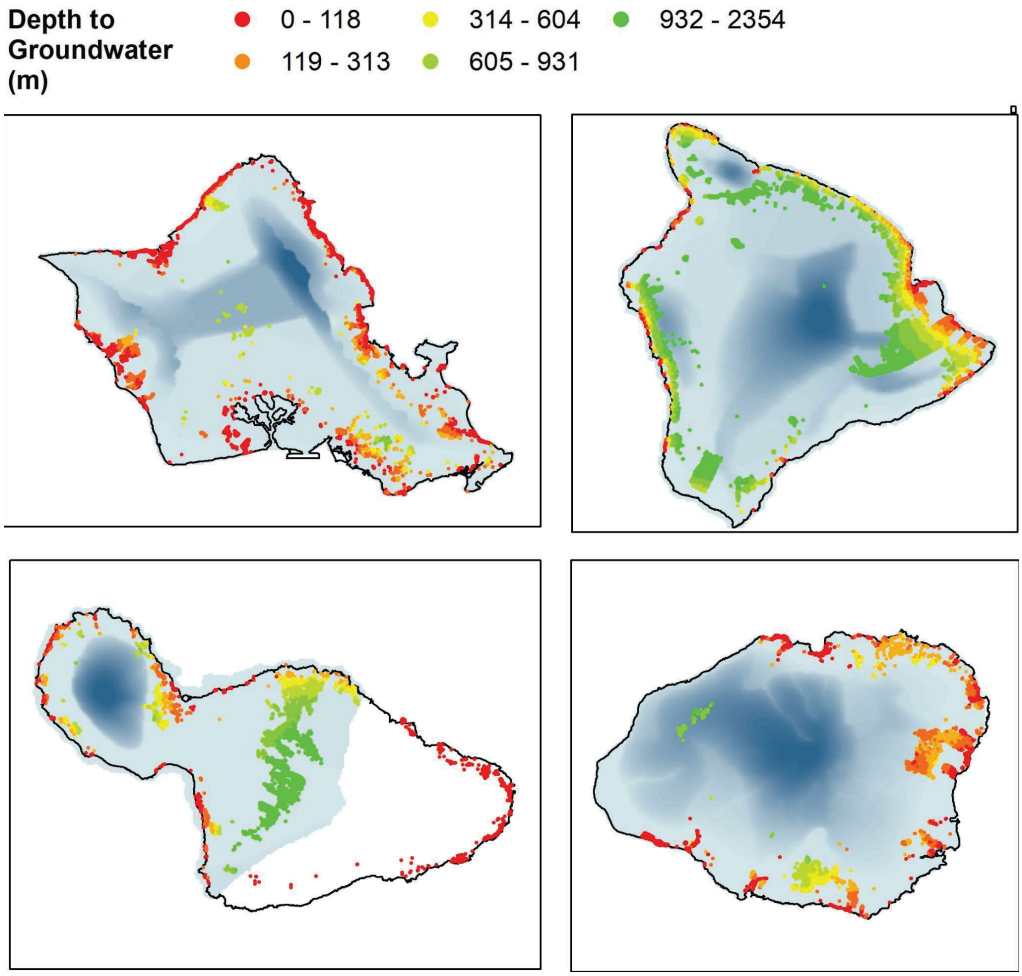


Figure 12. *Example map of the depth to the groundwater table for each cesspool. Red locations indicate the narrowest depth to the groundwater table, with orange, yellow, and green indicating increasing depth, in that order. Dark blue areas indicate an overall deeper depth to groundwater, lighter colors indicate a shallower depth.*

Sea Level-Rise Projections

Sea level rise (SLR) has the potential to impact surface and subsurface infrastructure like cesspools and other types of OSDS through mechanisms such as groundwater inundation and flooding (Cooper et al. 2016; Habel et al. 2020). Habel et al. (2020) provide a framework to understand the hazards cesspools and OSDS pose from SLR-induced flooding in Hawai'i. An OSDS that is flooded cannot function properly and poses a hazard to public safety and human health (National Agricultural Safety Database, N.D.) Because OSDS have life spans between 30-60 years, it is important to plan for future scenarios to ensure proper operation, cost efficiency for the homeowner, and environmental protection (Schneider,

personal communication, July 2, 2021). Thus, SLR projections are an important data point in evaluating cesspool hazards and prioritization.

The available data was based on the methodology/modeling used in the Hawai'i Sea Level Rise Vulnerability and Adaptation Report and the Hawai'i Sea Level Rise Viewer. The products have undergone peer review and publication in the Scientific Reports Journal: Nature. The hazard and vulnerability data and maps provided were based on observational data and computer-based models. According to data layer authors, the data modeling did not account for: (1) existing seawalls or other coastal armoring in the backshore; (2) increasing wave energy across the fringing reef with sea level rise; (3) possible changes in reef accretion and nearshore sediment processes with sea level rise; and (4) possible changes to sediment supply from future shoreline development and engineering, such as construction or removal of coastal armoring or other coastal engineering. This project incorporates sea level rise projection data layers for the years 2030, 2050, and 2100. The 2030 layer depicts coastal flooding using the 0.5 feet (0.15-meters) sea level rise scenario. The 2050 layer depicts coastal flooding using the 1.1 feet (0.33-meters) scenario. The 2100 layer depicts coastal flooding using the 3.2 feet (0.9767-meters) scenario.

Additionally, since cesspools are located underground, the distribution of direct surface flooding does not completely capture the effects of subsurface groundwater inundation, which essentially reduces the unsaturated zone underneath a unit to either nothing or an unacceptable depth, defined as 14.4 feet (4.4 meters) below ground surface based on regulatory standards outlined in HAR 11-62. Therefore, to assess whether a cesspool will be affected by SLR at the dates of calculated projections, both the horizontal extent of surface flooding and the vertical extent of subsurface inundation were considered. Specifically, a cesspool was deemed to be impacted by SLR either if it is located in a surface flooding zone defined by data from the Hawai'i Sea Level Rise Viewer, or if the unsaturated zone below the cesspool as calculated in the Depth to Water Table section is reduced to less than 14.4 feet (4.4 meters) with a given increase in sea level (assuming purely linear hydrodynamic buoyancy of the freshwater lens under an increase in present-day base sea level).

Sea Level-Rise Projection Prioritization Score Algorithm

Cesspool units are assigned the highest priority score (100) if located within the 2030 sea level rise zone with descending ranks if located in the 2050 zone (score of 66) or 2100 zone (score of 33).

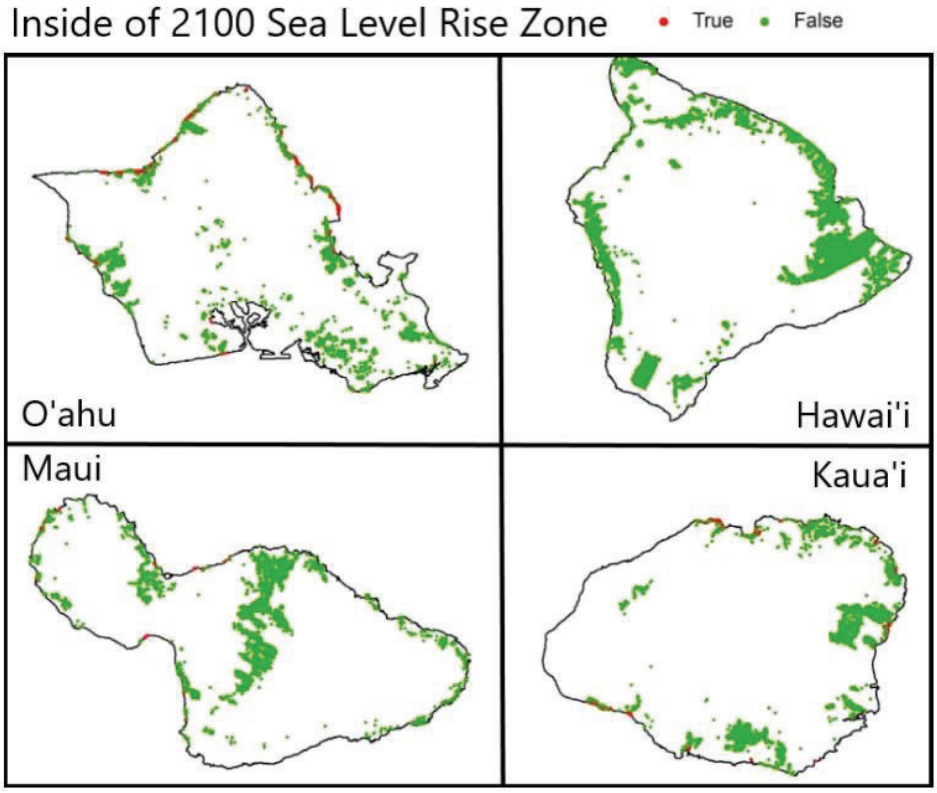


Figure 13. *Example map of four major Hawaiian Islands highlighting areas within the predicted zone of the 2100 SLR scenario, based on the methodology/modeling from the Hawai'i Sea Level Rise Vulnerability and Adaptation Report and the Hawai'i Sea Level Rise Viewer. Red indicates that the cesspool is within the SLR zone, green indicates the cesspool is not within a SLR zone.*

Coral Cover

Coral is essential to the habitat of most tropical reef ecosystems, supporting biological diversity throughout the ocean. However, corals are undergoing rapid change from ocean warming and nearshore human activities (Reef Advisory Group, personal communication, July 20, 2021). Corals provide a host of ecosystem services for societies including coastal erosion protection, fishing, and cultural practices. Recent work by Asner et al. (2020) and others have shown that wastewater pollution from OSDS (namely cesspools) negatively impacts live coral across the main Hawaiian Islands.

To ensure the importance of coral is included in the cesspool conversion prioritization process, the authors worked with the Hawai'i Monitoring and Reporting Collaborative (HIMARC) and the Reef Advisory Group (Jamison Gove, Ph.D., Joey Lecky, Greg Asner, Ph.D.,

Mary Donovan, Ph.D., Tom Oliver, Ph.D., Eric Conklin, Ph.D., and Kim Falinski Ph.D.) to develop a coral reef condition metric specifically for use in this study. The metric was developed by combining two spatially continuous live coral datasets for the four main islands. The first dataset represented intact habitat through current live coral cover, and the second represented baseline coral via historical coral cover data, taken before the 2015 coral bleaching event.

The current live coral information was provided by Arizona State University's Global Airborne Observatory (GAO). GAO used state-of-the-art high-resolution aerial mapping to provide near-continuous information on live coral cover across the main Hawaiian Islands in 2019 (Asner et al., 2020). Historical coral data are provided by HIMARC, which were derived from in-water observations from a broad network of monitoring programs and agencies, including the Division of Aquatic Resources (DAR), spanning the 2004 - 2014 date range (Donovan et al., 2020). The historical coral cover data is representative of reefs before the mass coral mortality event stemming from the 2015 marine heatwave and thereby represents baseline conditions from before the devastating 2015 event that caused widespread coral mortality in several locations.

Coral Prioritization Score Algorithm

The two coral datasets were summarized by median coral cover within zones spanning 0 - 15 meter depth corresponding to 1 km segments of shoreline. These values were then lumped into four categories according to the following percentile breaks:

Table 2. *Table describing the coral prioritization ranking methods through specific percentiles and associated values.*

Rank	Percentile	Value
1	95 - 100	**Highest priority**
2	80 - 95	↓
3	50 - 80	↓
4	0 - 50	**Lowest priority**

Then the two ranked datasets were combined into a single one-through-four ranking where shoreline segments with differing rank values between the two datasets were assigned the higher priority rank of the two, as illustrated below:

GAO Coral (Rank) \ HIMARC Coral (Rank)	1	2	3	4
1	1	1	1	1
2	1	2	2	2
3	1	2	3	3
4	1	2	3	4

Figure 14. *Visualization of how coral ranking datasets were combined to form a single 1-4 ranking scheme.*

To format the categorical ranks into a 0-100 prioritization score, all priority one shoreline segments were given a score of 100, all priority two shoreline segments were given a score of 66, all priority three shoreline segments were given a score of 33, and all priority four shoreline segments given a prioritization score of 0. This data was linked to individual cesspools by connecting individual cesspool points to their coastal discharge locations via the model calculated groundwater flow paths, as described in the Groundwater Flowpaths section above. This allowed a coral cover value to be assigned to each cesspool based on the corals offshore of the part of the coastline to which each cesspool's effluent drains.

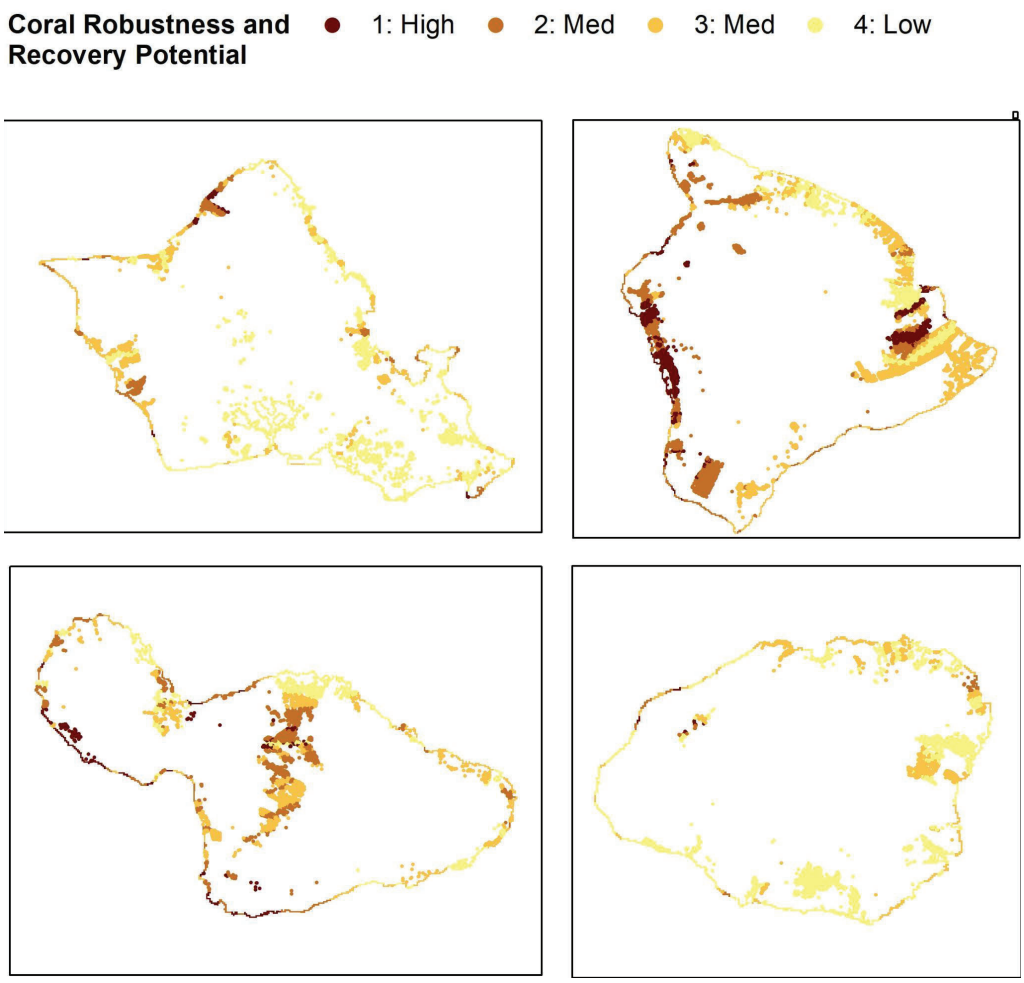


Figure 15. *Example map of four major Hawaiian Islands highlighting areas within the highest current and historical coral cover. Red areas indicate areas with the greatest baseline and current coral cover, while orange and yellow areas indicate areas with lower current or baseline cover.*

Resource Fish Biomass / Recovery Potential

The Resource Fish Biomass layer describes coral reef fish species that make up a substantial proportion of the non-commercial and commercial catch. Therefore, this does not represent total fish biomass on the reef, but the subset of fish biomass that directly supports fishing and feeds local communities. Reef fish biomass has been shown to negatively correlate with effluent from OSDS in the Hawaiian Islands (Donovan et al. 2020 & Foo et al., 2021).

The Reef Advisory Group produced predictive maps of standing resource fish biomass and the theoretical recovery potential of resource fish biomass if effluent from OSDS were

eliminated (Donovan et al., 2020). Recovery potential from reducing OSDS effluent therefore represents the areas with the greatest potential for restoration of fisheries most directly related to cesspool remediation.

Resource Fish Prioritization Score Algorithm

A combined ranking of these two resource fish biomass datasets was derived for the cesspool conversion prioritization. Each of these datasets was summarized by median biomass within zones spanning 0 - 15 meter depth corresponding to 1 km segments of shoreline. These values were then lumped into four categories according to the following percentile breaks:

Table 3. *Table describing the fish prioritization ranking methods through specific percentiles and associated value priority.*

Rank	Percentile	Value
1	95 - 100	Highest priority
2	80 - 95	↓
3	50 - 80	↓
4	0 - 50	Lowest priority

Then the two ranked datasets were combined into a single 1-4 ranking where shoreline segments with differing rank values between the two datasets were assigned the higher priority rank of the two, as illustrated below:

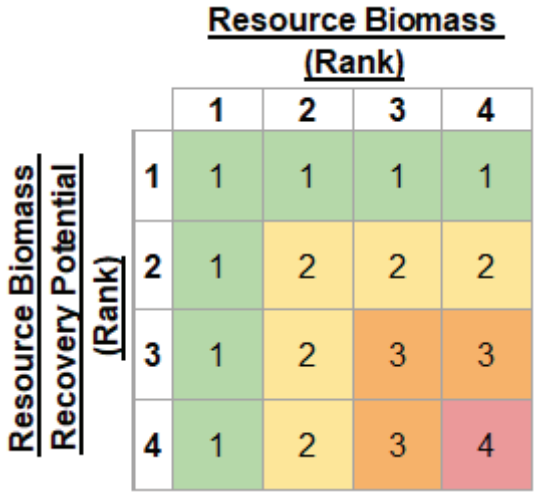


Figure 16. *Visualization of how resource biomass datasets were combined to form a single 1-4 ranking scheme.*

Assignment of priority scores based on categorical ranks was done in the same way as above for corals where all priority number one were given a score of 100, all number two were given a score of 66, all number three given a score of 33, and all number 4 given a prioritization score of 0. This data was linked to individual cesspools by connecting individual cesspool points to their coastal discharge locations via the model calculated groundwater flow paths as described in the Groundwater Flowpaths section above. This allowed a resource fish value to be assigned to each cesspool based on the fish data offshore of the part of the coastline to which each cesspool's effluent drains.

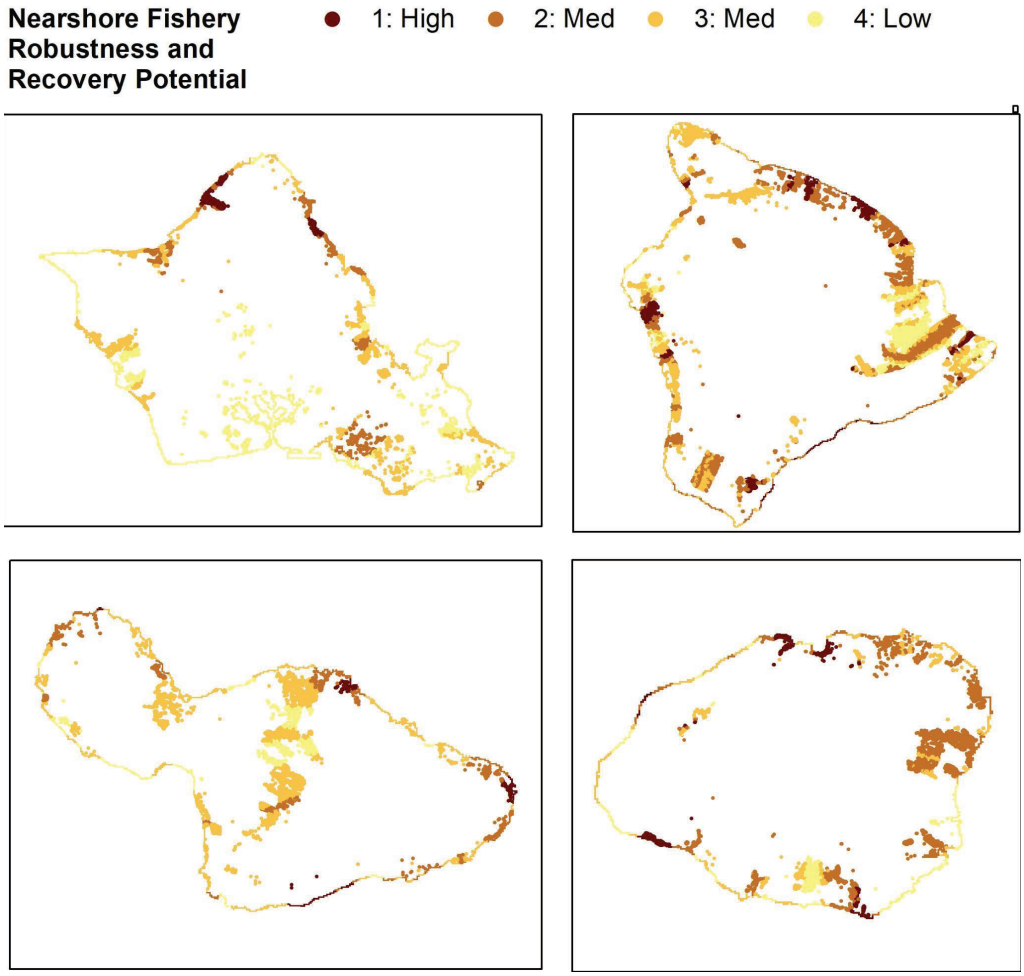


Figure 17. *Example map of four major Hawaiian Islands highlighting areas within the highest fish biomass robustness and recovery potential. Red areas indicate the greatest biomass of resource fishes and the greatest potential to improve biomass through cesspool remediation, while orange and yellow areas indicate a reduced robustness and recovery potential when OSDS effluent is eliminated.*

Coastline Visitation (User-days)

The DOH Wastewater Branches' mission is to protect public health and the environment (Hawai'i State Department of Health: Wastewater Branch, 2021). To best update the previous priority areas, it was essential to develop inputs that incorporate recreational, subsistence, and other human-associated values relating to the usage of the coastal zone into the prioritization scheme. These are a critical driver of prioritization as they are part of both public and environmental health. A widely used method to assess the usage of a geographic location is crowdsourcing information from either cell phone data or social media applications. For the HCPT, the peer-reviewed methodology of Wood et al. (2013) was chosen to calculate the relative visitation rate to areas along the coastline through a proxy of photo-sharing data scraped from the popular website Flickr. These methods are robust and have been widely applied as the core framework of the recreational module of the INVeST Model. The method essentially tracks human visitation along the coastline, and with this data, it is possible to apply the logic that the more visitation to an area, the more important it is, both in terms of public health and protection of ecological value.

The online photo-sharing website, Flickr, offers an application programming interface (API) which is a service that allows users to search photos based on their geotagged locations. The authors developed computer code to assign points every 250 meters along the coastline of O'ahu, Maui, and Kaua'i, and every 500 meters on Hawai'i Island. A search was run for all photos uploaded onto Flickr that fell within 250/500 meters of each point along the coast between the years 2010 and 2020. Photo metadata was then converted to a usable form by calculating the average number of user-days recorded at each location. A user-day is a count of the number of unique users visiting a given site on a given day so that the count would not be biased by users who took large amounts of photos at one location. For example, if a tourist takes any number of photos at any one location and uploads it to Flickr, this is considered one user-day for that location. The data was refined by evaluating the username of the photo owner and date to calculate the user-days for each point.

This data was linked to individual cesspools by connecting individual cesspool points to their coastal discharge locations via the model calculated groundwater flow paths as described in the Groundwater Flowpaths section above. This allowed a coastline user-days value to be assigned to each cesspool based on the visitation experienced by the part of the coastline to which each cesspool's effluent drains.

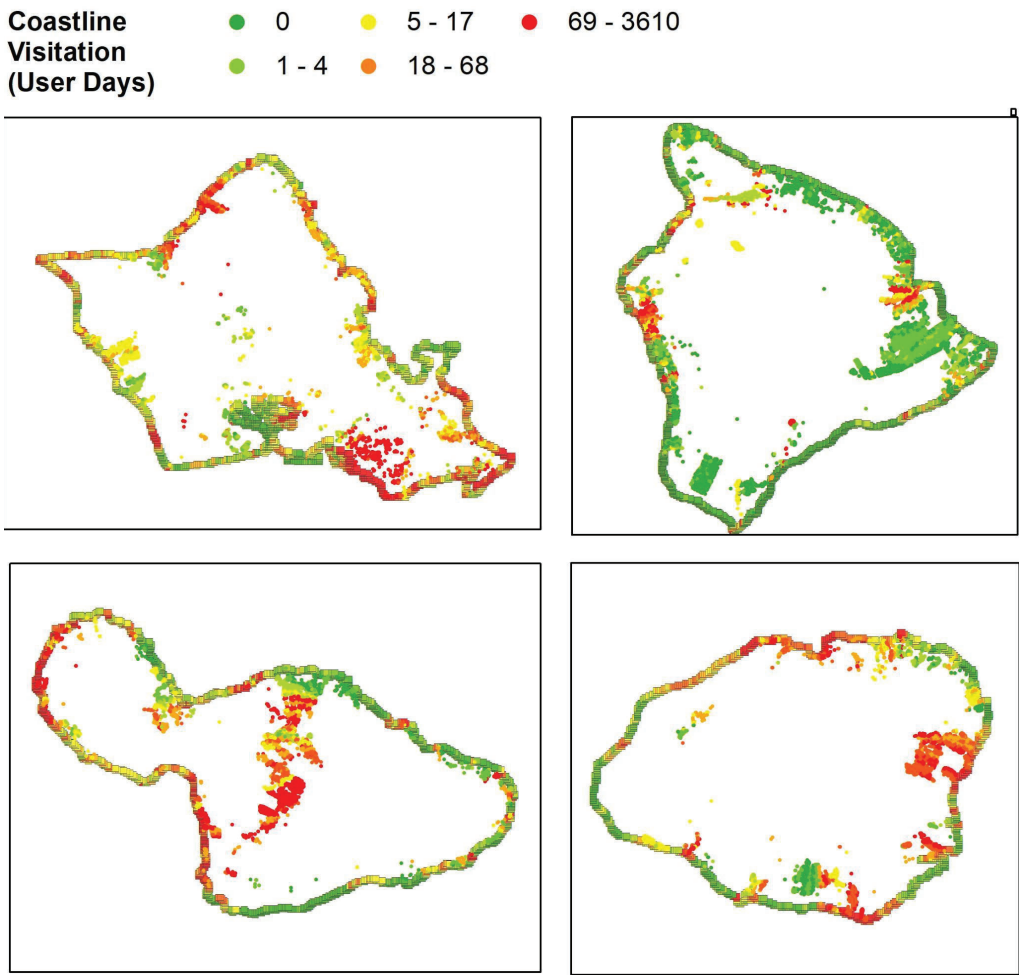


Figure 18. *Example map of four major Hawaiian Islands highlighting areas with the highest coastline usage (units of user-days). Cesspools are colored based on the coastline usage in the area to which their effluent drains, via groundwater flow paths. Red indicates the highest coastline usage, and orange, yellow, and green represent decreasing numbers of user-days.*

Coastline Visitation Prioritization Score Algorithm

Because of the highly skewed distribution of coastline usage (see associated Code Notebook for specifics) the threshold-decay function was applied to calculate priority scores and a carefully chosen threshold was then applied. Specifically, the authors used a trial and error approach to examine how different threshold values produced different numbers of 'hot-spot' areas or locations with high-value visitation characteristics.

The threshold value was chosen by assuming that if one percent of O'ahu's approximately 200,000-250,000 visitors/day are using Flickr (a total of 2,000-2,500 people per day), and that if each visitor only visits one 'location' per day, this should yield 20-25 'hotspot' areas

where those visits are concentrated. By taking the low end of this range, the Flickr data shows that a 'hotspot' or 'top-priority visitation area' should be defined as a location where 100 or more Flickr users visit the site every day. Thus the value of 100 user-days was chosen as the threshold value in the threshold-decay function. Results yielded about nine percent of the total number of cesspools in the state receiving a visitation priority score of 100, with other cesspools receiving scores that exponentially decay with a decrease in the number of user-days at the coastline locations to which their effluent drains.

Lifeguard Tower Location/Swim Beaches

Recreational water quality, both for residents and visitors, is vitally important to the state of Hawai'i. According to Conservation International (2021), about eighty percent of visitors to Hawai'i participate in some type of beach activity, and more than half snorkel or dive. Though access to all beaches is guaranteed by a constitutional right (HRS 115), it is assumed that lifeguarded beaches are favored and more frequented than others. However, each county determines which areas have staffed lifeguard towers, and only a handful of state parks have lifeguard towers. Placement of lifeguard towers may be determined due to the number of incidents responded to at sites, visitation levels, or requests by the state government. Because it is assumed that lifeguarded beaches have a higher in-water activity usage (swimming, surfing, diving, wading) than unguarded beaches, cesspools discharging to these beaches are ranked a higher priority in the assessment. This metric is assessed separately from coastline usage because the prevalence of in-water activities at these sites greatly increases the human-health risks from exposure to contamination from wastewater effluent.

Swimming Beaches Prioritization Score Algorithm

For this study, the authors examined county websites and databases to compile a statewide inventory of lifeguard towers. Any area of coastline within 500 meters on either side of a lifeguard tower was considered to be a swimming beach. A binary value (100 or 0) was assigned to each cesspool depending on if its groundwater flow path terminated at a swimming beach or not. Those cesspools draining to swim beaches received a priority score of 100, whereas those not draining to swim beaches received a score of 0.

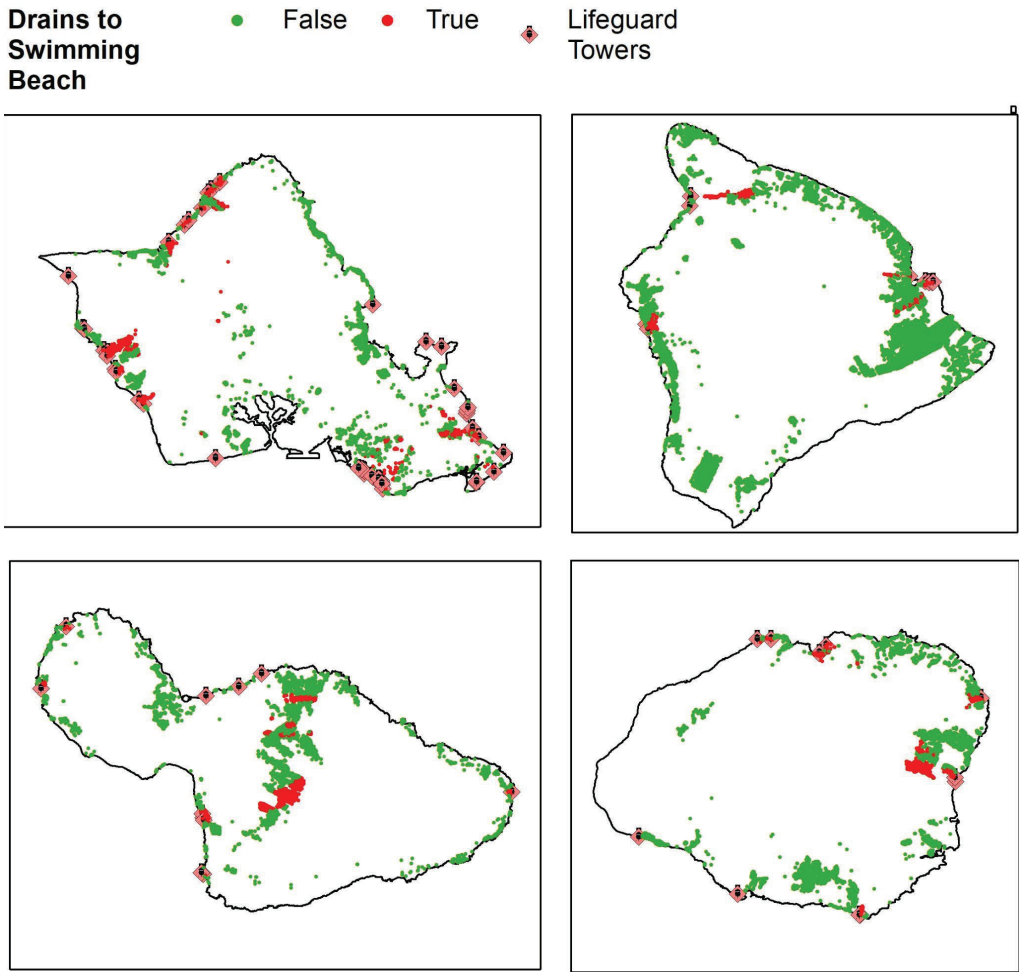


Figure 19. *Example map of four major Hawaiian Islands highlighting each cesspool point as it corresponds to the lifeguarded beach along the coast via groundwater flow path locations. Red dots indicate a cesspool effluent drains near a lifeguard tower, green indicates the cesspool effluent does not drain near a lifeguard tower.*

Coastal Ocean Circulation and Residence Time Proxy

Incorporating coastal geography and specifically the residence time of coastal features such as bays or inlets is an important element to include in the HCPT. However, after reviewing available data and consulting with oceanography experts, it was determined that accurate, statewide data regarding the residence time of coastal waters do not meet the standards and format needed for use in the HCPT. The most feasible way to incorporate an element of ocean circulation was to use wave power as a best-available proxy. This proxy will help determine whether coastal areas are either more exposed or sheltered to ocean currents. In general, this is based on the theory that wave power is correlated with

nearshore water movement, and thus will correspond with factors that control mixing and dispersion of pollution, including that of cesspools.

The authors acknowledge that wave power is highly seasonal in Hawai'i and may vary significantly throughout the year. Coastal residence time is not simply a function of the wave field, but is also controlled by tidal, wind-driven, and larger-scale currents. Furthermore, the latest science doesn't fully understand the time-dependent aspects of wastewater pollution on reefs and the potential impact on coral reef ecosystem function and thus, cannot be used in the HCPT. However, there is a strong policy-based need to include a factor regarding ocean circulation. Therefore, even a proxy dataset provides value to the overall prioritization process and was included at the request of CCWG members.

The HCPT uses a statewide wave power (in KW/m) long-term mean dataset from the years 2000-2013. Although coastal currents and transport are extremely complicated, scale-dependent, and vary widely depending on the timing of measurements, wave energy is generally correlated with the primary drivers of currents such as wind-swell, and rip currents driven by groundswell. Wedding et al., (2018) developed a statewide long-term mean wave power dataset, which was made publicly available through the Ocean Tipping Points Project. This dataset was determined by the authors to be the best available proxy for determining if a coastal area was geographically sheltered versus exposed at the scale examined in this report. Originally, wave power data were developed by the University of Hawai'i at Mānoa School of Ocean and Earth Science and Technology SWAN model (Simulating WAves Nearshore). Hourly 500 meter SWAN model runs of wave power were converted to maximum daily wave power from 1979-2013, and the long-term mean wave power was calculated by taking the average of the maximum daily time series of wave power data from 2000-2013 for each 500 meter grid cell.

Coastal Ocean Circulation / Wave Power Prioritization Score Algorithm

Raster-based (matrix of cells organized into rows and columns) wave power values (in KW/m) were mapped to gridded 250/500 meter cells along the coastline which are related to individual cesspools through groundwater flow paths. To calculate a priority score, the threshold-decay function was applied with the threshold set at the ten percent quartile of the wave power dataset (1.59 KW/m) with the idea that this would capture the top ten percent of most sheltered areas as the highest priority.

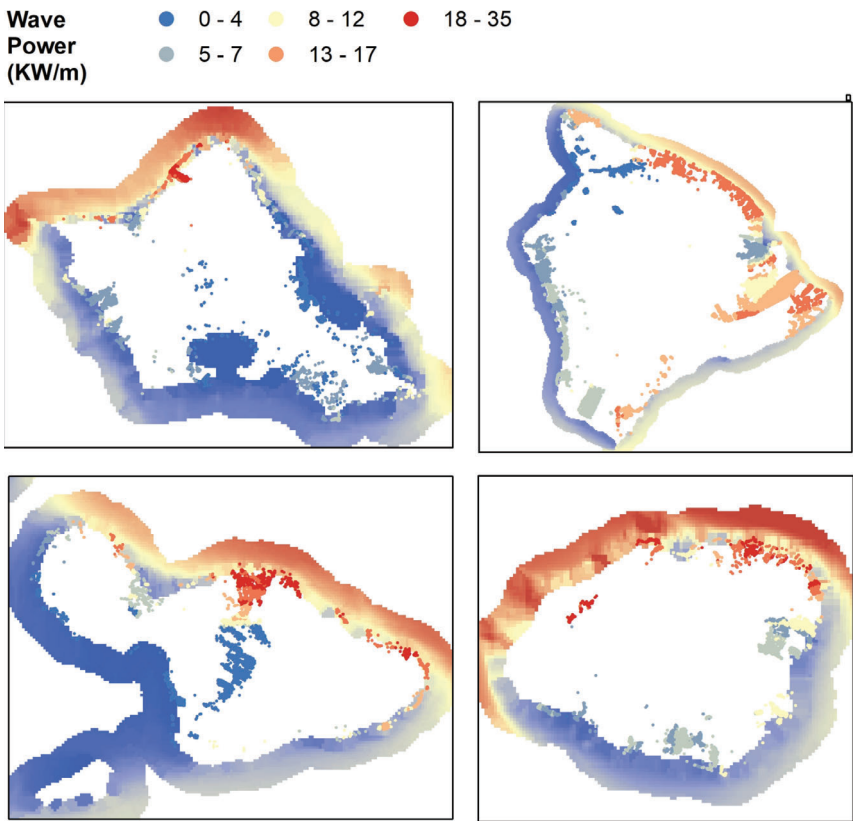


Figure 20. *Example map of four major Hawaiian Islands highlighting wave power mapped to each of the gridded 250/500 meter coastal cells, red indicates greater wave power, blue indicates lower wave power.*

Results and Validation

A major goal in the design of the HCPT was to be able to assess and prioritize every cesspool in the state. To accomplish this goal, the HCPT used a site-based process to evaluate relevant factors that help determine if a cesspool at any given location has a higher or lower potential to cause negative social and environmental impacts. The tool considers credible hazardous outcomes from cesspool contamination through a lumped interdisciplinary approach. The end result is a single prioritization scheme that organizes census-based regions into categories of Priority Level 1, Priority Level 2, and Priority Level 3.

Categories are defined by the mathematical quantiles of 25% and 50% with the top 25% highest scoring areas designated with Priority Level 1, the next lower 75% to 50% with Priority Level 2, and the bottom 50% as Priority Level 3. Figures 21 - 24 provide island-specific maps of the statewide prioritization categories, synthesized by census tracts. Appendix A provides similar maps, but synthesized by census block-group and census block areas. Block-groups provide a higher resolution for ranking at the neighborhood scale, however, the quantity of prioritized block-groups (252) makes this resolution more difficult to manage through a policy lens. Prioritization by census blocks provides ranking at the individual city block level, but results in almost 2,000 individually ranked areas. Tables 4-7 below display a tabular inventory of the census tract prioritization categories and ranks. Appendix B also presents state- and island-wide risk-factor pivot tables that show how final prioritization scores were calculated based on the averaged scores for each of the fifteen Risk Factors.

The four main Hawaiian Islands contain an estimated 82,141 cesspools and have a total of 319 census tracts, although only 103 tracts contained more than 25 cesspools and were categorized within the HCPT.

Statewide Breakdown:
25.2% (26 tracts)**/13,885** cesspools (17%) = **Priority Level 1**
25.2% (26 tracts)**/13,482** cesspools (16%) = **Priority Level 2**
49.5% (51 tracts)**/54,058** cesspools (66%) = **Priority Level 3**

Results: Oʻahu

The island of Oʻahu contains an estimated 7,491 cesspools and has a total of 242 census tracts, although only 34 tracts contained more than 25 cesspools and were categorized within the HCPT.

Oʻahu Breakdown:

38% (13 tracts)**/4,843** cesspools (65%) = **Priority Level 1**

32% (11 tracts)**/1,576** cesspools (21%) = **Priority Level 2**

28% (10 tracts)**/1,072** cesspools (14%) = **Priority Level 3**

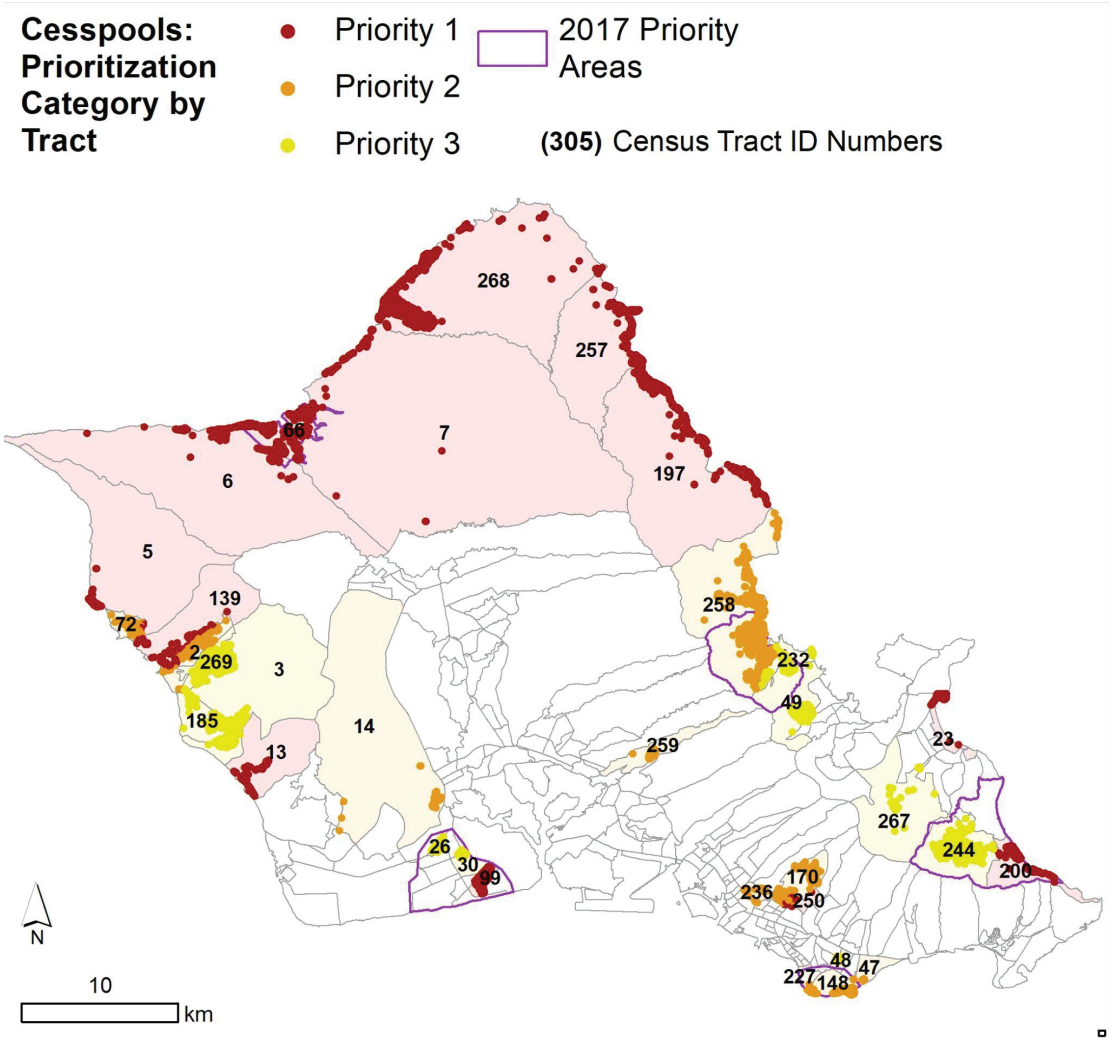


Figure 21: *Oʻahu cesspools (dots) colored by prioritization category, arranged by census tracts. Tracts are shown as lightly colored areas where the tract contains greater than 25 cesspools, and are shown as white areas where the tract contains less than 25 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

Table 4: *Prioritization categories and island-specific ranks for Oʻahu census tracts.*

Tract Name	Tract ID	Cesspool Count	Priority Category	Island-Specific Priority Rank
Haleiwa	66	324	**Priority 1**	1
Waimanalo Beach-Homesteads	200	255	**Priority 1**	2
Hauula-Kaaawa	197	628	**Priority 1**	3
Makua Valley	5	98	**Priority 1**	4
Judd Hillside-Lowrey Avenue	250	78	**Priority 1**	5
Waimea-Kahuku	268	773	**Priority 1**	6
Laie	257	338	**Priority 1**	7
Kawailoa	7	209	**Priority 1**	8
Campbell High School	99	893	**Priority 1**	9
Kaʻena Point	6	847	**Priority 1**	10
Kalaheo Avenue	23	132	**Priority 1**	11
Waianae Kai	139	172	**Priority 1**	12
Nanakuli	13	96	**Priority 1**	13
Kapiolani Park	227	32	**Priority 2**	14
Lualualei-Camp Waianae	2	213	**Priority 2**	15
Makiki Heights	176	55	**Priority 2**	16
Punchbowl	236	39	**Priority 2**	17
Round Top-Tantalus	170	159	**Priority 2**	18
Diamond Head	148	120	**Priority 2**	19
Kahaluu-Waikane	258	670	**Priority 2**	20
Aiea Heights	259	106	**Priority 2**	21
Makaha	72	89	**Priority 2**	22
Kunia West	14	54	**Priority 2**	23
Waialae-Kahala	47	39	**Priority 2**	24
Maili	185	100	**Priority 3**	25
Waimānalo	244	159	**Priority 3**	26
Lualualei Transmitter	3	88	**Priority 3**	27
Lualualei	269	232	**Priority 3**	28
Hawaiʻi Prince Golf Course	30	51	**Priority 3**	29
Ahuimanu	232	99	**Priority 3**	30
Haiku	49	146	**Priority 3**	31
Ewa Gentry	26	94	**Priority 3**	32
Kaimuki	48	65	**Priority 3**	33
Maunawili	267	38	**Priority 3**	34

Results: Maui

The island of Maui contains an estimated 11,038 cesspools and has a total of 31 census tracts, although only 23 tracts contained more than 25 cesspools and were categorized within the HCPT.

Maui Breakdown:

30% (7 tracts)**/924** cesspools (21%) = **Priority Level 1**

22% (5 tracts)**/3,148** cesspools (43%) = **Priority Level 2**

48% (11 tracts)**/6,971** cesspools (36%) = **Priority Level 3**

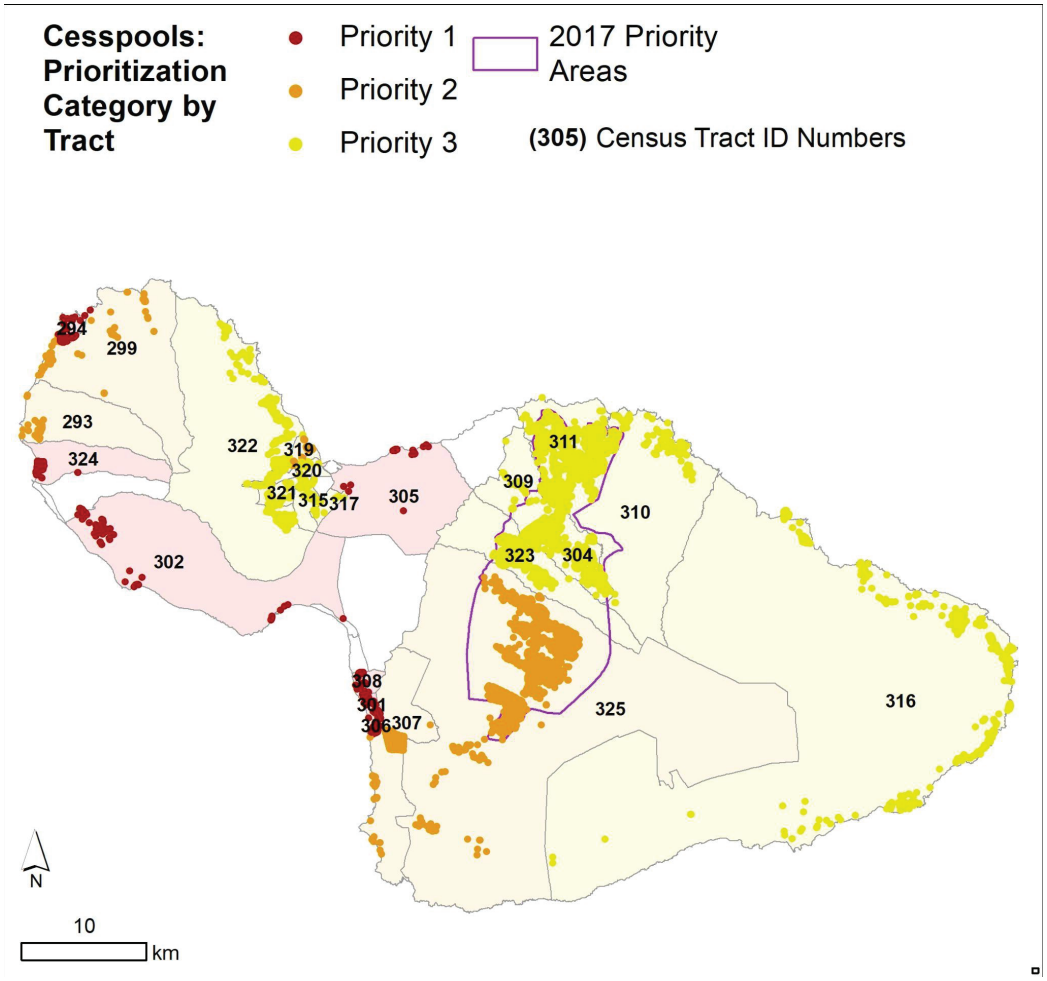


Figure 22: *Maui cesspools (dots) colored by prioritization category, arranged by census tracts. Tracts are shown as lightly colored areas where the tract contains greater than 25 cesspools, and are shown as white areas where the tract contains less than 25 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

Table 5: *Prioritization categories and island-specific ranks for Maui census tracts.*

Tract Name	Tract ID	Cesspool Count	Priority Category	Island-Specific Priority Rank
Halama	308	84	**Priority 1**	1
Kamaole	301	134	**Priority 1**	2
Kahoma	324	280	**Priority 1**	3
Keawakapu	306	90	**Priority 1**	4
Kapalua	294	223	**Priority 1**	5
Launiupoko	302	78	**Priority 1**	6
Spreckelsville	305	35	**Priority 1**	7
Wailea	307	659	**Priority 2**	8
Kula	325	2268	**Priority 2**	9
Honokahua	299	85	**Priority 2**	10
Honokowai	293	62	**Priority 2**	11
North Wailuku	319	69	**Priority 2**	12
Waihee-Waikapu	322	590	**Priority 3**	13
West Kahului	315	60	**Priority 3**	14
Hali'imaile	309	1146	**Priority 3**	15
Hana	316	537	**Priority 3**	16
Southeast Kahului	317	31	**Priority 3**	17
South Wailuku	321	281	**Priority 3**	18
Pukalani	323	1492	**Priority 3**	19
East Central Wailuku	320	64	**Priority 3**	20
Makawao	304	891	**Priority 3**	21
Ha'iku	311	1413	**Priority 3**	22
Huelo	310	466	**Priority 3**	23

Results: Hawai‘i Island

Hawai‘i Island contains an estimated 48,596 cesspools and has a total of 33 census tracts. All 33 tracts contained more than 25 cesspools and were categorized within the HCPT.

Hawai‘i Island Breakdown:

9% (3 tracts)/**5,119** cesspools (11%) = **Priority Level 1**

15% (5 tracts)/**2,619** cesspools (5%) = **Priority Level 2**

76% (25 tracts)/**40,858** cesspools (84%) = **Priority Level 3**

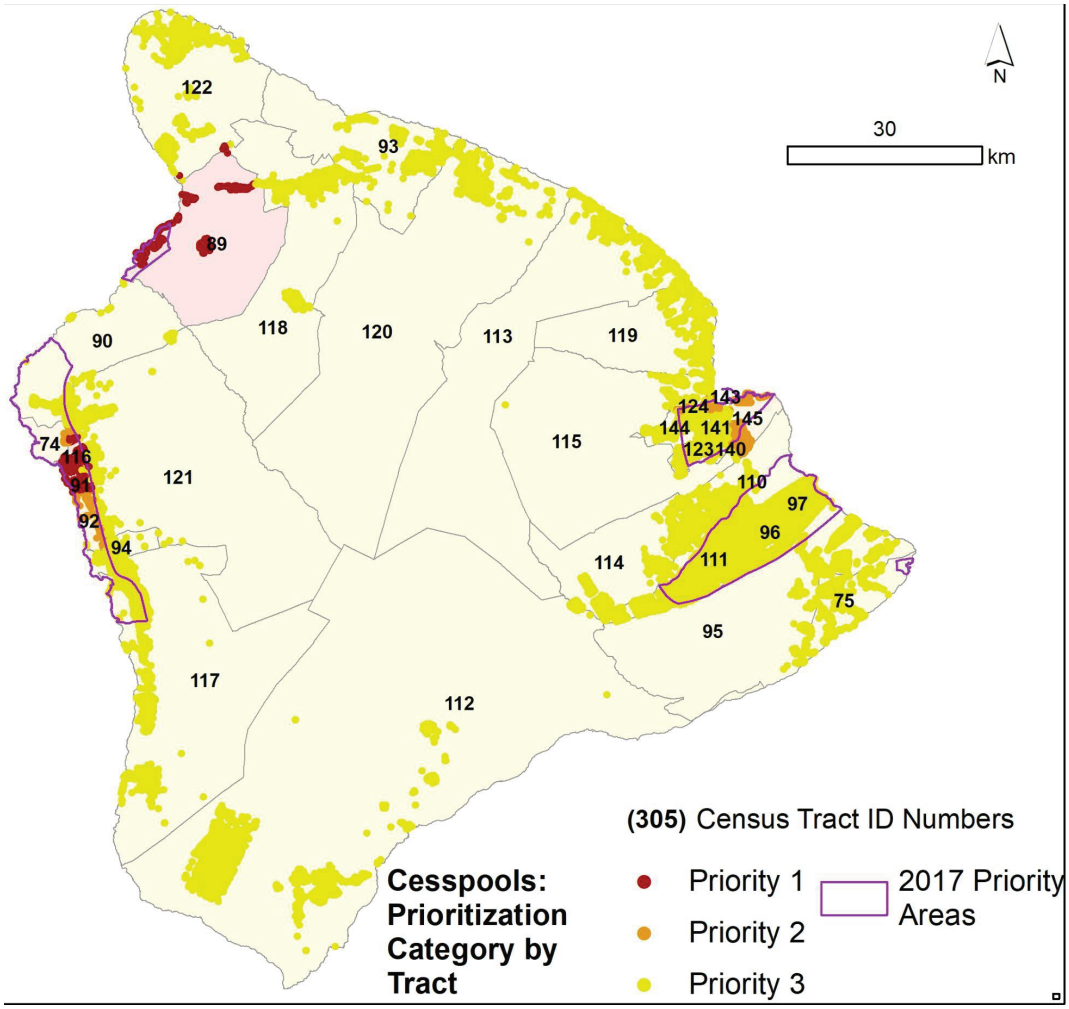


Figure 23: *Hawai‘i Island cesspools (dots) colored by prioritization category, arranged by census tracts. Tracts are shown as lightly colored areas where the tract contains greater than 25 cesspools, and are shown as white areas where the tract contains less than 25 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

Table 6: *Prioritization categories and island-specific ranks for Hawai'i Island census tracts.*

Tract Name	Tract ID	Cesspool Count	Priority Category	Island-Specific Priority Rank
Holualoa	91	1761	**Priority 1**	1
Kailua	116	1334	**Priority 1**	2
Kawaihae-Waikoloa	89	2024	**Priority 1**	3
Kaumalumalu-Keahou	92	654	**Priority 2**	4
Hilo	142	151	**Priority 2**	5
Hilo	145	934	**Priority 2**	6
Kealakehe	74	530	**Priority 2**	7
Hilo	143	350	**Priority 2**	8
Hualalai	121	1141	**Priority 3**	9
Hilo	141	549	**Priority 3**	10
Waimea-Puu Anahulu	118	2375	**Priority 3**	11
Hilo	140	1582	**Priority 3**	12
Konawaena	94	1059	**Priority 3**	13
South Kona	117	1999	**Priority 3**	14
Kalaoa	90	1916	**Priority 3**	15
Hilo	123	1510	**Priority 3**	16
Hilo	115	670	**Priority 3**	17
Pauka'a-Wailea	119	963	**Priority 3**	18
Hilo	125	1608	**Priority 3**	19
North Hilo	113	855	**Priority 3**	20
Hilo	124	1828	**Priority 3**	21
North Kohala	122	2131	**Priority 3**	22
Hawaiian Paradise Park	97	4187	**Priority 3**	23
Hilo	144	1192	**Priority 3**	24
Pahoa	95	2137	**Priority 3**	25
Honoka'a-Kukuihaele	93	1329	**Priority 3**	26
Ka'u	112	2481	**Priority 3**	27
Kea'au	110	1515	**Priority 3**	28
Pa'auhau-Pa'auilo	120	971	**Priority 3**	29
Kalapana-Kapoho	75	1175	**Priority 3**	30
Orchidland-Ainaloa	96	1663	**Priority 3**	31
Volcano-Mt. View	114	1371	**Priority 3**	32
Upper Puna (Puna Mauka)	111	2651	**Priority 3**	33

Results: Kauaʻi

The island of Kauaʻi contains an estimated 14,300 cesspools and has a total of 13 census tracts. All 13 tracts contained more than 25 cesspools and were categorized within the HCPT.

Kauaʻi Breakdown:

23% (3 tracts)**/2,999** cesspools (8%) = **Priority Level 1**

38% (5 tracts)**/6,144** cesspools (29%) = **Priority Level 2**

38% (5 tracts)**/5,157** cesspools (63%) = **Priority Level 3**

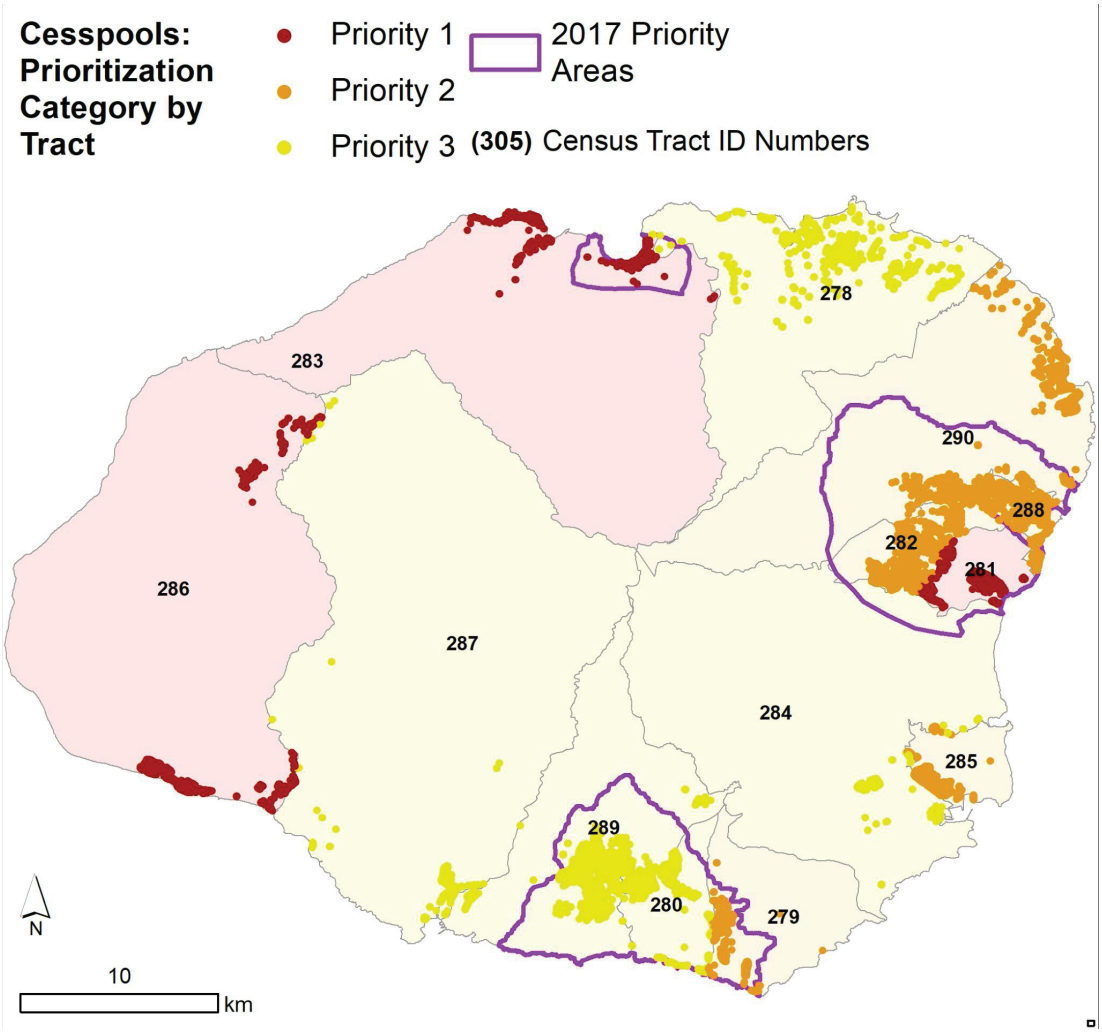


Figure 24: *Kauaʻi cesspools (dots) colored by prioritization category, arranged by census tracts. Tracts are shown as lightly colored areas where the tract contains greater than 25 cesspools, and are shown as white areas where the tract contains less than 25 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

Table 7: *Prioritization categories and island-specific ranks for Kaua'i census tracts.*

Tract Name	Tract ID	Cesspool Count	Priority Category	Island-Specific Priority Rank
Ha'ena-Hanalei	283	554	**Priority 1**	1
Kekaha-Waimea	286	1210	**Priority 1**	2
Wailua Homesteads	281	1235	**Priority 1**	3
Wailua Houselots	282	1616	**Priority 2**	4
Koloa-Po'ipu	279	671	**Priority 2**	5
Kapa'a	288	2276	**Priority 2**	6
Lihu'e	285	601	**Priority 2**	7
Anahola	290	980	**Priority 2**	8
Puhi-Hanama'ulu	284	362	**Priority 3**	9
Omao-Kukui'ula	280	916	**Priority 3**	10
Kaumakani-Hanapepe	287	457	**Priority 3**	11
Princeville-Kilauea	278	1233	**Priority 3**	12
Eleele-Kalaheo	289	2189	**Priority 3**	13

Validation of Results

Hawai'i Act 132 funded a study led by Smith et al. (2021) to detect OSDS pollution in coastal waters. The study titled, the State-Wide Assessment of Wastewater Pollution Intrusion Into Coastal Regions of the Hawaiian Islands, used the $\delta^{15}N$ values of algal tissue collected in the nearshore environment to determine where nitrogen from wastewater was chronically present within the coastal water column. The study represents the most comprehensive and geographically widespread assessment of nearshore nitrogen source tracing in the state. The authors determined its value is most appropriately applied to a qualitative validation of the prioritization results. Though Smith et al. (2021) provides the best validation dataset available, it should be remembered that the geographic scale and physical drivers of the dataset have significant differences from the statewide, multi-factor extent of the HCPT.

Smith et al. (2021) were able to sample across approximately 50 km of coastline. However, this is still only a small percentage of the state's 1,600 km of coastline. These algal sampling results are extremely high resolution, showing high variability between sites within

hundreds of meters of each other. This exemplifies the complexity and spatial variability of water chemistry and OSDS impacts across large and complicated ecosystems. Nonetheless, generalizations can be made. Act 132 study results were formatted to be comparable to the HCPT results by averaging algal sample site $\delta^{15}N$ values into sample 'swath' averages, which represent swaths of coastline roughly 2 km in length. These were categorized by Smith et al. into:

1. Areas dominated by wastewater nitrogen ($\delta^{15}N$ values > 6‰);
2. Areas with mixed inputs of nitrogen ($\delta^{15}N$ values > 4‰ and < 6‰), and;
3. Areas with limited detection of wastewater N ($\delta^{15}N$ values < 4‰), based on breakpoints listed here.

$\delta^{15}N$ can inform us of the amount of bioavailable nitrogen from different sources. However, it is not necessarily representative of the level of nitrogen flux. Additionally, the $\delta^{15}N$ indicator is subject to limitations, most importantly mixing of nitrogen from other sources, especially agriculture which reduces the clarity of the wastewater nitrogen signature. This tracer only provides information related to coastal water nitrogen chemistry in the immediate sampling location, whereas the HCPT includes multiple other factors, including value-based considerations, that are not related to nitrogen flux. Therefore, algal data results cannot, and should not, fully explain the HCPT categorization results. However, the qualitative comparison remains a useful and thought-provoking exercise.

Table 8 provides a qualitative assessment of how prioritization categories from the HCPT match with the Smith et al. (2021) wastewater impact categories based on the geographic proximity of cesspools and known nitrogen transport factors such as groundwater flow paths and coastal water movement. Overall, the results of this validation indicate 25 of 33 swaths (≈75%) have HCPT prioritization and wastewater impact categories that match reasonably well. Whereas, eight swaths (≈25%) have differing categorizations. Explanations for a number of these outliers are provided in Smith et al. (2021). There are many limitations to comparing very different types of data. Differences in results should be expected. Figure 25 provides a map view of cesspool prioritization categories, aggregated by census blocks alongside the wastewater impact categories of algal sampling swaths produced by Smith et al. (2021).

Table 8: *Qualitative validation results comparison between HCPT prioritization categories and Smith et al. (2021) wastewater impact categories. Wastewater impact categories are based on observed algal $\delta^{15}N$ values averaged across 2 km nearshore swaths and are compared to the HCPT calculated categories of proximal cesspools.*

Swath	Average Algal $\delta^{15}N$ value (‰)	Wastewater Impact Category	HCPT Prioritization of Nearby Cesspools	Matching	Comments for non-matching areas
HPP, Puna	2.12	Limited	3	yes	--
Hamakua Coast	3.17	Limited	3	yes	--
Holualoa, Kona	4.9	Mixed	1/2	yes	--
Kailapa, S.Kohala	4.14	Mixed	3/2/1	yes	--
Keaukaha, Hilo	3.48	Limited	3/1	no	Flow paths may not intersect
Mahaiula, Kona	2.4	Limited	3/None	yes	--
Mauna Lani, Kohala	4.33	Mixed	1	yes	--
NELHA,Kailua-Kona	4.22	Mixed	3	no	Large numbers of upslope CP
Puako, S. Kohala	6.48	Dominated	1	yes	--
Wailoa River, Hilo	4.98	Mixed	3/2/1	yes	--
Kapaa	5.86	Mixed	3/2/1	yes	--
Nawiliwili	8.11	Dominated	2	yes	--
Waiohai	8.44	Dominated	1/2	yes	--
Paia	3.2	Limited	3/None	yes	--
Kihei North	1.91	Limited	3/None	yes	--
Kihei South	5.11	Mixed	1/2	yes	--
Lahaina Control	2.21	Limited	No CP	yes	--
North Shore Control	1.9	Limited	1	no	Few cesspools, high water currents.
South Maui Control	2.58	Limited	3/None	yes	--
Waiehu	6.88	Dominated	3	no	Wetland denitrification
Waihee Control	1.71	Limited	3	yes	--
Wailea	6.36	Dominated	1/2	yes	--
Wailea South	4.81	Mixed	2	yes	--
Diamond Head	5.96	Mixed	2	yes	--
Hauula	9.23	Dominated	1	yes	--
Kaaawa	10.3	Dominated	1	yes	--
Kalaeloa	5.37	Mixed	1/None	unclear	Other sources, undocumented OSDS?
Makua	2.29	Limited	3	yes	--
Mokapu	2.89	Limited	1	no	Unclear, complex geology?
Sunset Beach	3.67	Limited	1	no	Unclear, complex currents?
Waialua	9.81	Dominated	1	yes	--
Waianae	5.43	Mixed	2	yes	--
Wailupe	6.09	Dominated	No CP	no	Other, undocumented OSDS?

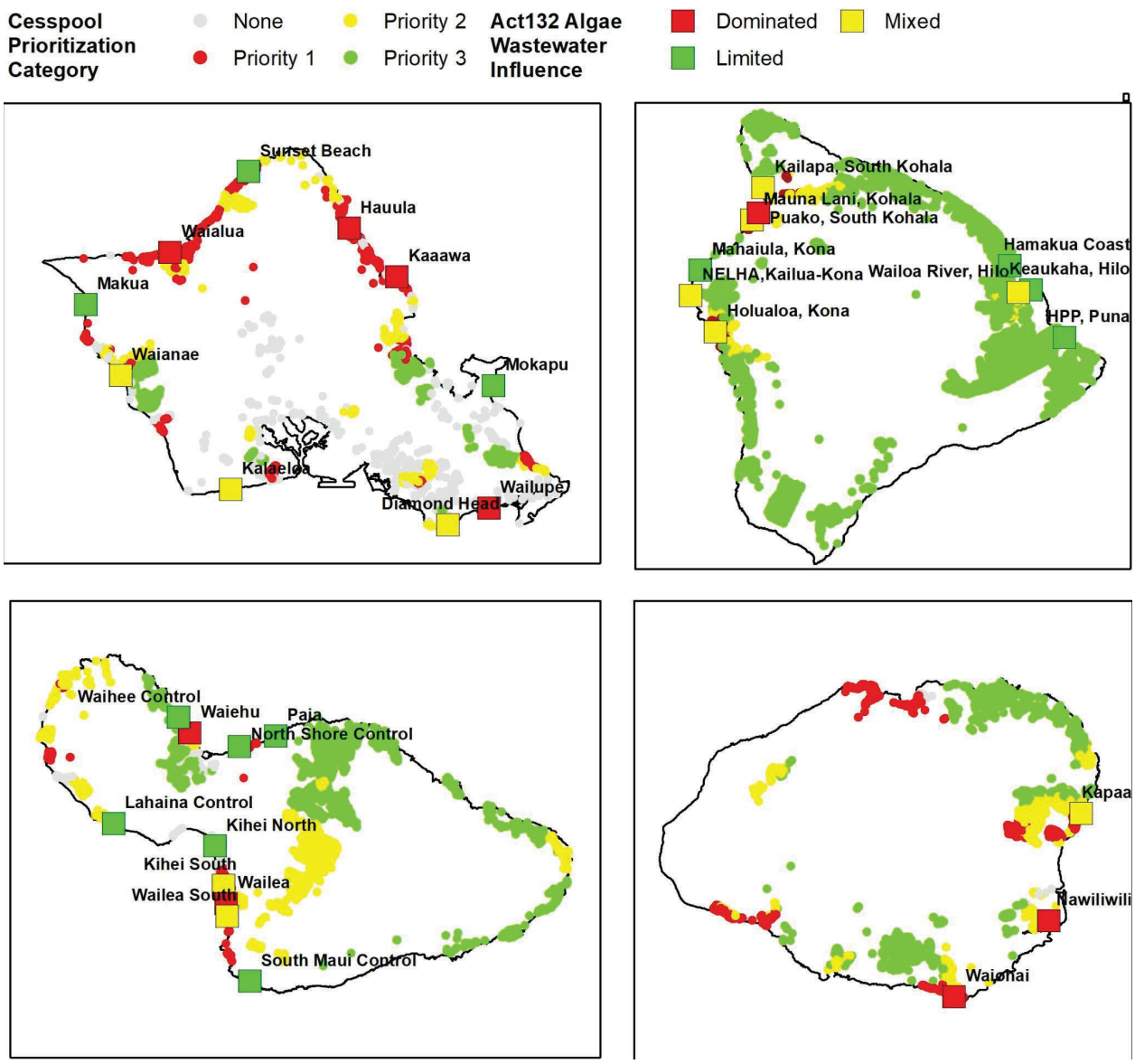


Figure 25: *Cesspool locations (circles) color coded by HCPT prioritization categories and aggregated by census blocks alongside algal sampling swaths (squares) from Smith et al. (2021) color coded by observed wastewater impact categories.*

Sensitivity Analysis of Priorities

Each factor used in the HCPT interacts with the environment in various ways and has different levels of importance to stakeholders and the community. For example, ocean conservation organizations may heavily prioritize coral reef protection, whereas the Board of Water Supply may prioritize impacts to drinking water wells more heavily. Unfortunately, it is impossible to weigh the factors proportionally to meet the demands of all stakeholders. Yet, it is acknowledged that each factor isn't equal in terms of its potential hazard and impact on the environment or human health. Because DOH is tasked with protecting human health and the environment, the tool includes factors that relate to these outcomes (i.e. distance to drinking water wells). A sensitivity analysis was performed to understand how weighting different factors may or may not change the score results. The process is an important way to test the robustness of the method and the types of factors chosen. If the weight of one factor disrupted the overall results disproportionately, it could compromise the structure of the tool. The sensitivity analysis was conducted using three scenarios where different weights were assigned to each risk factor, based on a hypothetical conceptual model of how different priorities might be expressed through adjustment of weights to different factors based upon the DOH mission and need.

The three weighting scenarios that were developed include:

1. **All inputs equally weighted:** Base scenario to which all others are compared.
2. **Human health priority:** Drinking water and human recreation are prioritized.
3. **Ecological health priority:** Ecosystem services and wildlife are prioritized.

It is recognized that some overlap exists between the scenarios, for example, factors that support ecological health often also benefit human health. Every effort was made to thoughtfully categorize the scenarios. Though imperfect, this method allows comparison for use and lends validity to future policy development. Ideally, the science in this tool would be straightforward enough for 'evidence-based policymaking.' However, with that, there is a level of pragmatism needed and an ability to combine scientific evidence with governance principles to translate the complex scientific principles into simple explanations for decision-making (Cairney & Oliver, 2017). The authors recognize the balance needed between robustness of the scientific methodology and the ability to make informed decisions to overcome problems.

Overall, it is the authors' opinions that using an equal weight method is feasible and acceptable for this exercise at this time. Sensitivity testing suggested that there may be

about a six to seven percent uncertainty in the final ranks of the census tracts if different risk factors are weighted reasonably, as was done with these three scenarios. Individual census tracts can change more, warranting further exercises to determine appropriate weighting. Specifically, through this type of test, the authors found that the rank of individual census tracts (when tracts are ordered by priority score) has a standard deviation of 6.2 ranks when the ecological health scenario is compared to the base scenario, and 6.3 ranks when the human health scenario is compared to the base scenario. Essentially, the further this deviation is from zero, the less the scenarios match or agree. Complete results and specifics about the sensitivity testing are provided in Appendix B.

Conclusion/Next Steps

The current report and the HCPT expand on the previous efforts to provide a sound, quantitative, up-to-date hazard assessment of geographic areas at risk from cesspool pollution. The hazard categories provide a framework to prioritize cesspool conversions by the CCWG. The HCPT uses the best available data and method, developed in consultation with local experts and DOH associates, to prioritize cesspools in the allotted time frame of the contract and CCWG needs. Though the prioritization process is inherently contextual, every effort has been made to create an objective evaluation of cesspool hazards in an equitable and fact-based methodology. The HCPT should be used in consultation with a suite of iterative decision-making strategies.

The HCPT is a dynamic data tool that can support additional analysis of cesspool conversion strategies and policies. Because additional data can be layered onto the prioritization results, there are numerous possibilities to explore interdisciplinary connections between cesspool conversion and social factors such as household income, language spoken, or internet connectivity. By analyzing various data types with priority conversion areas, outreach and education methods can become highly specialized and targeted to have the greatest impacts, saving money, time, and human resources.

Because the HCPT relies on accurate cesspool numbers and locations, future database refinement is warranted and recommended, including some level of ground-truthing. This will ensure that the HCPT results are accurate, but also allow DOH to track maintenance and upgrades more efficiently and effectively. The identified hazard areas can also inform future permit requirements and prioritization plans, including mandating larger lot sizes for future development, increased setback distances to the coast, and requiring advanced technologies where appropriate. County offices may wish to use the tool for future planning of subdivisions to avoid carrying capacity issues on the land, such as poor soil or

proximity to sensitive habitat or drinking water. Watershed or conservation organizations may find value in understanding areas most at risk from cesspool pollution and use the data for educational or management strategies. Finally, the HCPT can also identify areas where maintenance and inspection of OSDS will be critical to preserving water quality.

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References

Abaya, L. M., Wiegner, T. N., Colbert, S. L., Beets, J. P., Carlson, K. M., Kramer, K. L., Most, R., & Couch, C. S. (2018). A multi-indicator approach for identifying shoreline sewage pollution hotspots adjacent to coral reefs. Marine Pollution Bulletin, 129(1), 70–80. https://doi.org/10.1016/j.marpolbul.2018.02.005

Anderson, T.R., Fletcher, C.H., Barbee, M.M., Frazer, L.N., & Romine, B. (2015). Doubling of Coastal Erosion Under Rising Sea Level by Mid-Century in Hawai'i, Natural Hazards, doi:10.1007/s11069-015-1698-6.

Anderson, T.R., Fletcher, C.H., Barbee, M.M., Romine, B., Lemmo, S., & Delevaux, J.M.S. (2018). Modeling multiple sea level rise stresses reveals up to twice the land at risk compared to strictly passive flooding methods, Scientific Reports, 8:14484, DOI: 10.1038/s41598-018-32658-x.

Arnade, L. J. (1999). Seasonal Correlation of Well Contamination and Septic Tank Distance. Ground Water, 37(6), 920.

Asner, G.P., Vaughn, N.R., Heckler, J., Knapp, D.E., Balzotti, C., Shafron, E., Martin, R.E., Neilson, B.J., & Gove, J.M. (2020). Large-scale mapping of live corals to guide reef conservation. Proceedings of the National Academy of Sciences, 117(52), 33711–33718. https://doi.org/10.1073/pnas.2017628117

Bicki, J.T., & Brown, R.B. (1991). On-site sewage disposal: the influence of system density on water quality. Journal of Environmental Health 53:39–42. On-Site Sewage Disposal: The influence of system density on water quality on JSTOR

Borchardt, M.A., Bradbury, K.R., Alexander, E.C., Kolberg, R.J., Alexander, S.C., Archer, J.R., Braatz, L.A., Forest, B.M., Green, J.A., & Spencer, S.K. (2010). Norovirus outbreak caused by a new septic system in a Dolomite Aquifer. *Ground Water*, 49(1), 85–97. https://doi.org/10.1111/j.1745-6584.2010.00686.x

Brown, R.B., & Bicki, T.J. (1997). Notes in Soil Science: On-Site Sewage Disposal - Influence Of System Densities On Water Quality. Institute Of Food And Agricultural Sciences. University Of Florida Cooperative Extension Service. Retrieved from: Septic Density (purdue.edu)

Byappanahalli M.N., Nevers M.B., Korajkic A., Staley Z.R. & Harwood V.J. (n.d.). *Enterococci in the environment*. Microbiology and molecular biology reviews : MMBR. Retrieved September 23, 2021, from https://pubmed.ncbi.nlm.nih.gov/23204362/.

Byappanahalli, M.N., Roll, B.M., & Fujioka, R.S. (2012). Evidence for occurence, persistence, and growth potential of Escherichia coli and Enterococci In Hawaii's soil environments. *Microbes and Environments*, 27(2), 164–170. https://doi.org/10.1264/jsme2.me11305

Cairney, P., & Oliver, K. (2017). Evidence-based policymaking is not like evidence-based medicine, so how far should you go to bridge the divide between evidence and policy? *Health Research Policy and Systems*, 15(1). https://doi.org/10.1186/s12961-017-0192-x

Canadian Centre for Occupational Health and Safety. (2021). Hazard and Risk. Retrieved from: https://www.ccohs.ca/oshanswers/hsprograms/hazard_risk.html

Conservation International. (2021). Hawai'i, ho'i i ke kai momona: Return to an abundant ocean. Retrieved from: Hawai'i (conservation.org)

Cooper, J. A., Loomis, G. W., & Amador, J. A. (2016). Hell and High Water: Diminished Septic System Performance in Coastal Regions Due to Climate Change. PLOS ONE, 11(9). https://doi.org/10.1371/journal.pone.0162104

Donovan, M.K., Counsell, C.W.W., Lecky, J., & Donahue, M.J. (2020). Estimating indicators and reference points in support of effectively managing nearshore marine resources in Hawai'i. Report by Hawai'i Monitoring and Reporting Collaborative.

Environmental Protection Agency. (2020). Septic Systems and Drinking Water. EPA. https://www.epa.gov/septic/septic-systems-and-drinking-water.

Flanagan, K., Dixon, B., Rivenbark, T., & Griffin, D. (2019). An integrative Gis approach to analyzing the impacts of septic systems on the coast of Florida, USA. *Physical Geography*, 41(5), 407–432. https://doi.org/10.1080/02723646.2019.1671297

Foo, S. A., Walsh, W. J., Lecky, J., Marcoux, S., & Asner, G. P. (2020). Impacts of pollution, fishing pressure, and reef rugosity on resource fish biomass in West Hawai'i. Ecological Applications, 31(1). https://doi.org/10.1002/eap.2213

Giambelluca, T.W., Q. Chen, A.G. Frazier, J.P. Price, Y.-L. Chen, P.-S. Chu, J.K. Eischeid, and D.M. Delparte. (2013). Online Rainfall Atlas of Hawai'i. Bull. Amer. Meteor. Soc. 94, 313-316, doi: 10.1175/BAMS-D-11-00228.1.

Gingerich, Stephen B. & Oki, Delwyn S. (2000). Ground Water in Hawai'i: U.S. Geological Survey, Fact Sheet 126-00, 6 p. Retrieved from Ground Water in Hawaii (usgs.gov)

Habel, S., Fletcher, C.H., Rotzoll, K., & El-Kadi, A.I. (2017). Development of a model to simulate groundwater inundation induced by sea level rise and high tides in Honolulu, Hawai'i. Water Research, 114, 122-134. doi:10.1016/j.watres.2017.02.035

Habel, S., Fletcher, C.H., Anderson, T.R., & Thompson, P.R. (2020). Sea Level Rise Induced Multi-Mechanism Flooding and Contribution to Urban Infrastructure Failure. Scientific Reports, 10(1). https://doi.org/10.1038/s41598-020-60762-4

Hansen Allen & Luce Engineers, Inc. (2016). Tooele County Septic System Density Study. Retrieved from: Microsoft Word - Tooele County - Septic Density Study - FINAL.docx (tooelehealth.org)

Hawai'i Administrative Rules (HAR) 11-62 (Appendix D)

Hawai'i State Department of Health: Environmental Management Division. (2017). Report to the Twenty-Ninth Legislature State of Hawai'i 2018 Regular Session: Relating to Cesspools and Prioritization for Replacement. Retrieved from Microsoft Word - Re-Redrafted Cesspool Report - Final Draft_rev4 (hawaii.gov)

Hawai'i State Department of Health: Wastewater Branch. 2021. Wastewater Branch: Mission Statement. Retrieved from Wastewater Branch (hawaii.gov)

Hygnstrom, J., Skipton, S., Woldt, W. (2011). Residential Onsite Wastewater Treatment: The Role of Soil. University of Nebraska-Lincoln Extension. Retrieved from g1468.pdf (unl.edu)

Kappel, C.V., K.A. Selkoe, and Ocean Tipping Points (OTP). 2017. Wave Power Long-term Mean, 2000-2013 - Hawai'i. Distributed by the Pacific Islands Ocean Observing System (PacIOOS). http://pacioos.org/metadata/hi_otp_all_wave_avg.html.

Kinsley, C.B., Joy, D., Campbell, A., Feniak, D., Branson, D., Albert, T., Saurio, J. (2004.). A risk assessment model for Onsite systems applied to the city of Ottawa, Canada. On-Site Wastewater Treatment X, 21-24. https://doi.org/10.13031/2013.15759

Mair, A., & El-Kadi, A.I. (2013). Logistic regression modeling to assess groundwater vulnerability to contamination in Hawai'i, USA. Journal of Contaminant Hydrology, 153:1-23.

McKenzie, T., Dulai, H., & Chang, J. (2019). Parallels between stream and coastal water quality associated with groundwater discharge. PLOS ONE, 14(10). https://doi.org/10.1371/journal.pone.0224513

Moon, Q. (2021) Determining Potential Causes of Elevated Nitrate Levels in O'ahu's Drinking Water with Geospatial Analysis. Poster presented at the UH Manoa 2021 Spring Undergraduate Showcase, April 30, 2021.

Nagheli, S., Samani, N., & Barry, D.A. (2020). Multi-well capture zones in strip-shaped aquifers. PLOS ONE, 15(3). https://doi.org/10.1371/journal.pone.0229767

National Ag Safety Database. (N.D.) University of Wisconsin-Extension. Flooded Private Sewage Systems: Safety, Sanitation And Clean-Up Concerns. Retrieved from NASD - Flooded Private Sewage Systems: Safety, Sanitation And Clean-Up Concerns (nasdonline.org)

Natural Resources Conservation Service (NRCS). 2020. NRCS Soils Online Database. Retrieved from https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=nrcs142p2_053627

Oluwasola, E.I., Okunade, O.A., & Adesina, K. (2017). Impact of the Proximity of Septic Tanks on the Bacteriological Quality of Well Water from Private Households in Ado Ekiti, Nigeria. Impact of the Proximity of Septic Tanks on the Bacteriological Quality of Well Water from Private House-holds in Ado Ekiti, Nigeria (sciencedomain.org)

Oosting, A. (2011). Development of a risk assessment tool for developing prioritized management strategies for on-site systems. M.A. Sc., University of Guelph, 2010.

Oosting, A., & Joy, D. (2013). A GIS-Based model to assess the risk of on-site wastewater Systems impacting groundwater and surface water resources. *Canadian Water Resources Journal / Revue Canadienne Des Ressources Hydriques*, 36(3), 229–246. https://doi.org/10.4296/cwrj3603882

Pollock, D.W. (2012). User guide for MODPATH version 6: a particle tracking model for MODFLOW (p. 58). US: US Department of the Interior, US Geological Survey.

Robertson, W.D., Cherry, J.A., & Sudicky, E.A. (1991). Ground-water contamination from two small septic systems on sand aquifers: Ground Water, 29(1), p. 82–92.

Schaider, L. A., Rudel, R. A., Ackerman, J. M., Dunagan, S. C., & Brody, J. G. (2014). Pharmaceuticals, perfluorosurfactants, and other organic wastewater compounds in public drinking water wells in a shallow sand and gravel aquifer. Science of The Total Environment, 468-469, 384–393. https://doi.org/10.1016/j.scitotenv.2013.08.067

Schaider, L.A., Ackerman, J.M. & Rudel, R.A. (2016). Septic systems as sources of organic wastewater compounds in domestic drinking water wells in a shallow sand and gravel aquifer. Science of The Total Environment, 547, p. 470-481. Septic systems as sources of organic wastewater compounds in domestic drinking water wells in a shallow sand and gravel aquifer - ScienceDirect

Smith, C.M., Whittier, R.B. Amato, D.W., Dialer, M.L., Colbert, S., Shuler, C.K., Altman-Kurosaki, N.T., Vasconcellos, S., Markel, A.C., & Ornelas, B. (2021, In Press). State-Wide Assessment of Wastewater Pollution Intrusion Into Coastal Regions of the Hawaiian Islands. Report Prepared for the Hawai'i State Legislature, Hawai'i State Department of Health, & the Cesspool Conversion Working Group.

Sowah, R.A., Habteselassie, M.Y., Radcliffe, D.E., Bauske, E., & Risse, M. (2017). Isolating the impact of septic systems on fecal pollution in streams of suburban watersheds in Georgia, United States. Water Research, 108, 330–338. https://doi.org/10.1016/j.watres.2016.11.007

Strauch, A.M., Mackenzie, R.A., Bruland, G.L., Tingley, R., & Giardina, C.P. (2014). Climate change and land use drivers of fecal bacteria in TROPICAL Hawaiian rivers. *Journal of Environmental Quality*, 43(4), 1475–1483. https://doi.org/10.2134/jeq2014.01.0025

U.S. Census Bureau. (2021). Data. Census.gov. https://www.census.gov/data.html.

U.S. Census Bureau. (N.D). Census Tract and Block Numbering Areas. Chapter 10. Retrieved from: Ch10GARM.pdf (census.gov)

United States Environmental Protection Agency (EPA). (2006) State source water assessment and protection programs guidance. US EPA, Washington, DC. http://cfpub.epa.gov/safewater/sourcewater/sourcewater.cfm?action=Assessments. 28 Jan 2007

United States Environmental Protection Agency (EPA). (2017). Clean Water Rule: Streams and Wetlands Matter. Retrieved from Clean Water Rule: Streams and Wetlands Matter | Clean Water Rule | US EPA

Wedding, L. M., Lecky, J., Gove, J. M., Walecka, H.R., Donovan, M. K. (2018). Advancing the integration of spatial data to map human and natural drivers on coral reefs. PLOS ONE 13(3): e0189792. https://doi.org/10.1371/journal.pone.0189792.

Whittier, R., Rotzoll, K., Dhal, S., El-Kadi, A.I., Ray, C., & Chang, D. (2010). Groundwater source assessment program for the state of Hawai'i, USA: Methodology and example

application, J. Hydrogeology, 18: 711–723.

Whittier, R. and El-Kadi, A.I. (2009). Human and Environmental Risk Ranking of Onsite Sewage Disposal Systems. Hawai'i Department of Health. Retrieved from: Microsoft Word - OSDS_Report_Final-Draft.doc (hawaii.gov)

Whittier, R. and El-Kadi, A.I. (2014). Human and Environmental Risk Ranking of Onsite Sewage Disposal Systems for the Hawaiian Islands of Kauai, Molokai, Maui, and Hawaii. Hawai'i Department of Health. Retrieved from: https://scholarspace.manoa.hawaii.edu/bitstream/10125/50771/1/2014%20-%20OSDS%20-%20Hawaii-Kauai-Maui-Molokai.pdf

Wood, S.A., Guerry, A.D., Silver, J.M., Lacayo, M. (2013). Using social media to quantify nature-based tourism and recreation. Scientific Reports 3: 2976. Retrieved from https://www.nature.com/articles/srep02976

Van Genuchten, M. T. (1982). Analytical solutions of the one-dimensional convective-dispersive solute transport equation (No. 1661). US Department of Agriculture, Agricultural Research Service.

Verstraeten, I.M., Fetterman, G.S., Sonja S.K., Meyer, M.T., & Bullen T.D. (2004). Is Septic Waste Affecting Drinking Water From Shallow Domestic Wells Along the Platte River in Eastern Nebraska? USGS. fs07203l.pdf (usgs.gov)

Yates, M.V. (1985). Septic Tank Density and Ground-Water Contamination. Groundwater. 23(5),p. 586-591. Septic Tank Density and Ground-Water Contamination - Yates - 1985 - Groundwater - Wiley Online Library (hawaii.edu)

Appendix A: Additional Results

Additional Figures and tables are provided below.

Additional Results: O'ahu

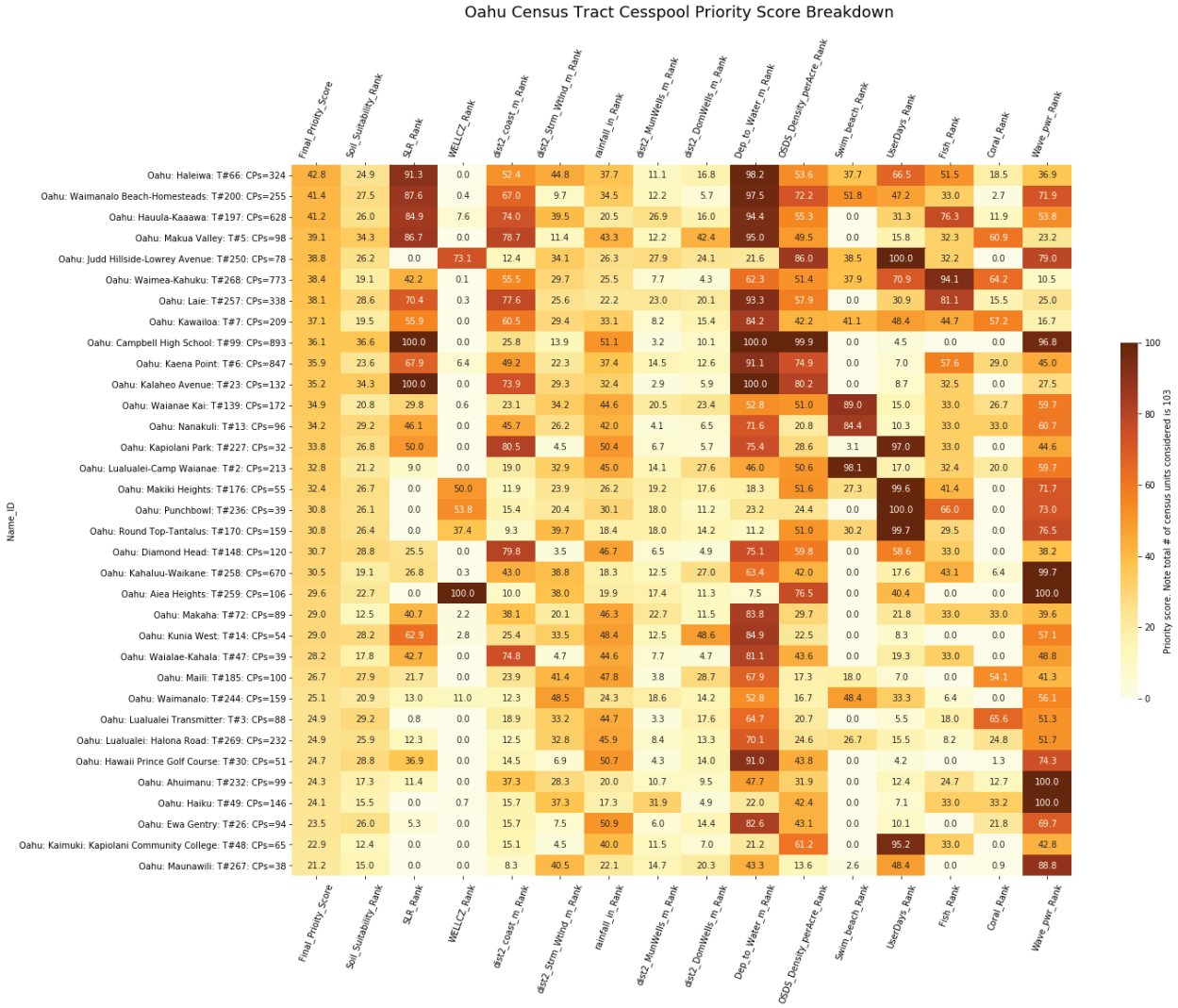


Figure A1: *Pivot table showing census-tract based priority scores, (leftmost column) and individual risk factor scores, which were averaged to calculate the overall priority score of each census tract for O'ahu.*

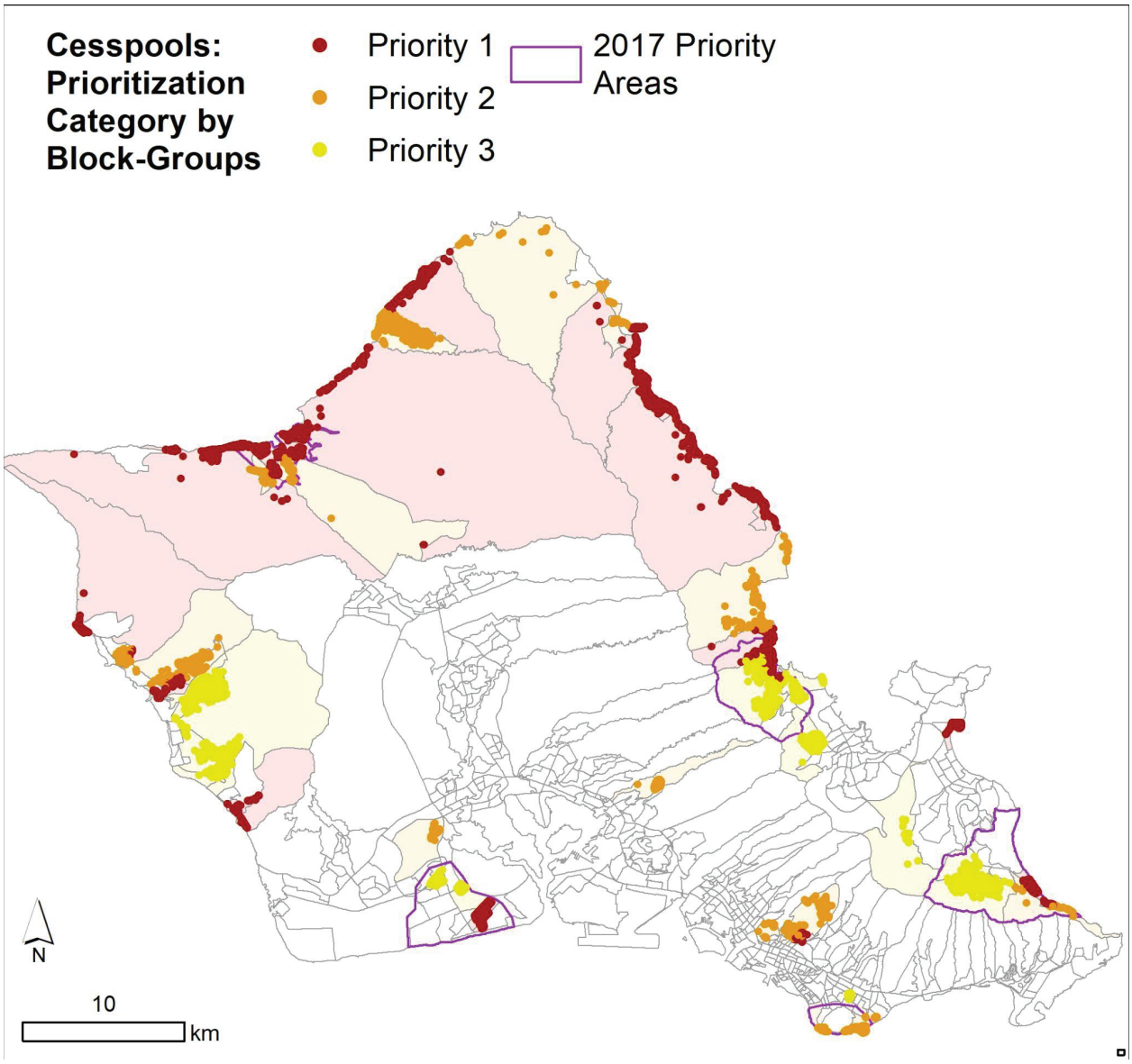


Figure A2: *Oʻahu cesspools (dots) colored by prioritization category, arranged by census block-groups. Block-groups are shown as lightly colored areas where the block-group contains >20 cesspools. White areas signify the block-group contains <20 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

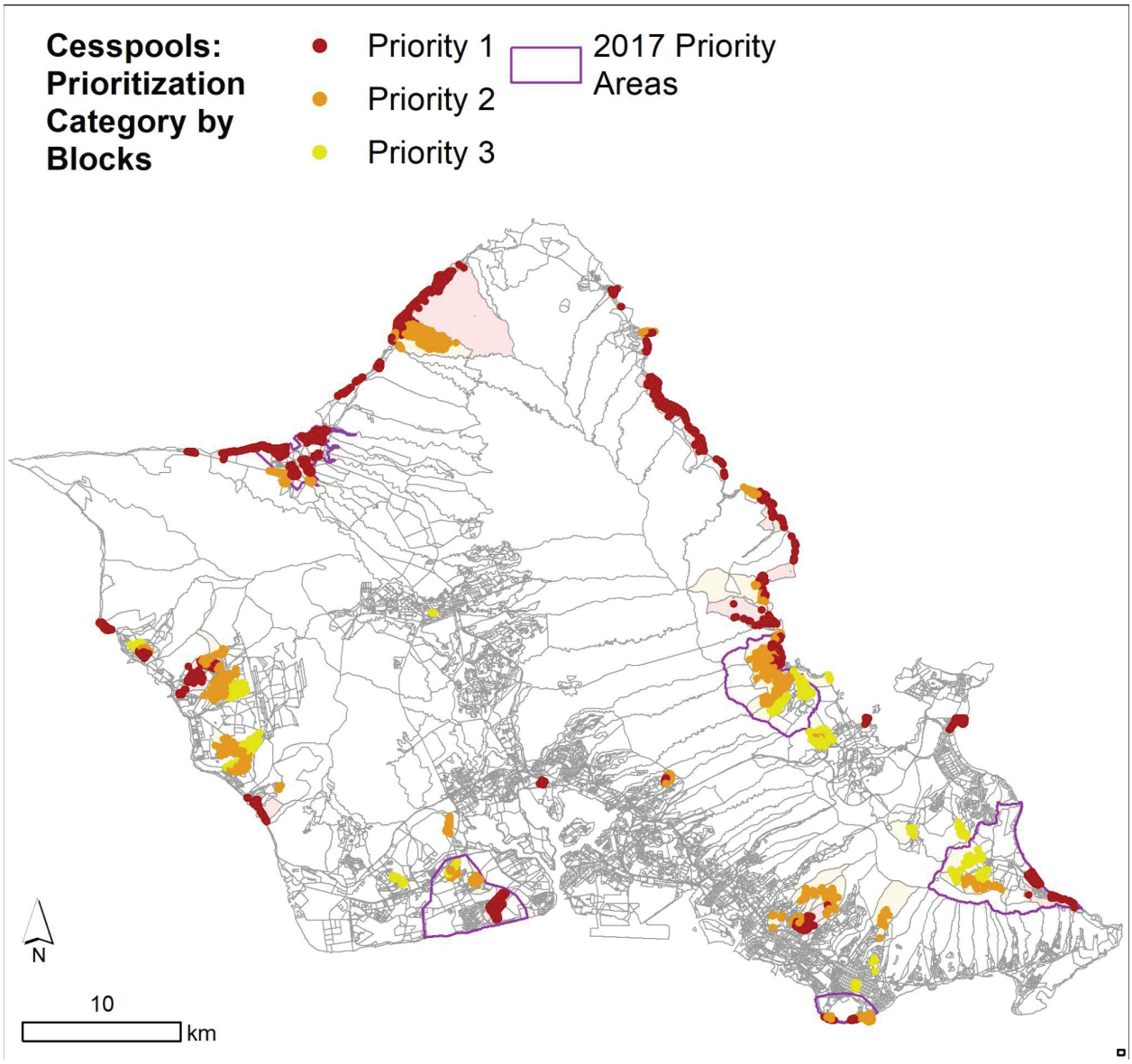


Figure A3: *O'ahu cesspools (dots) colored by prioritization category, arranged by census blocks. Blocks are shown as lightly colored areas where the block contains >10 cesspools. White areas signify the block contains <10 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

Additional Results: Maui

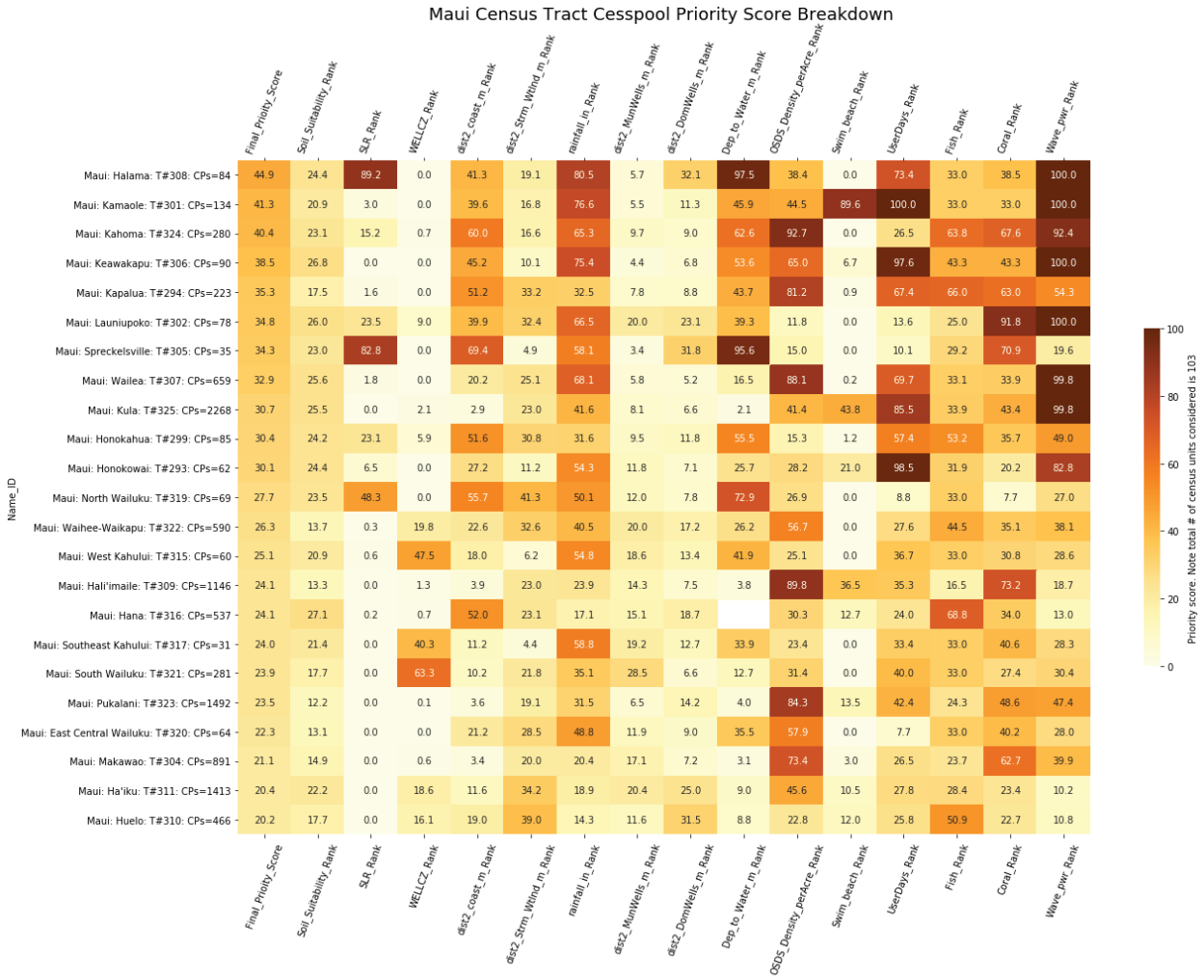


Figure A4: *Pivot table showing census-tract based priority scores, (leftmost column) and individual risk factor scores, which were averaged to calculate the overall priority score of each census tract for Maui.*

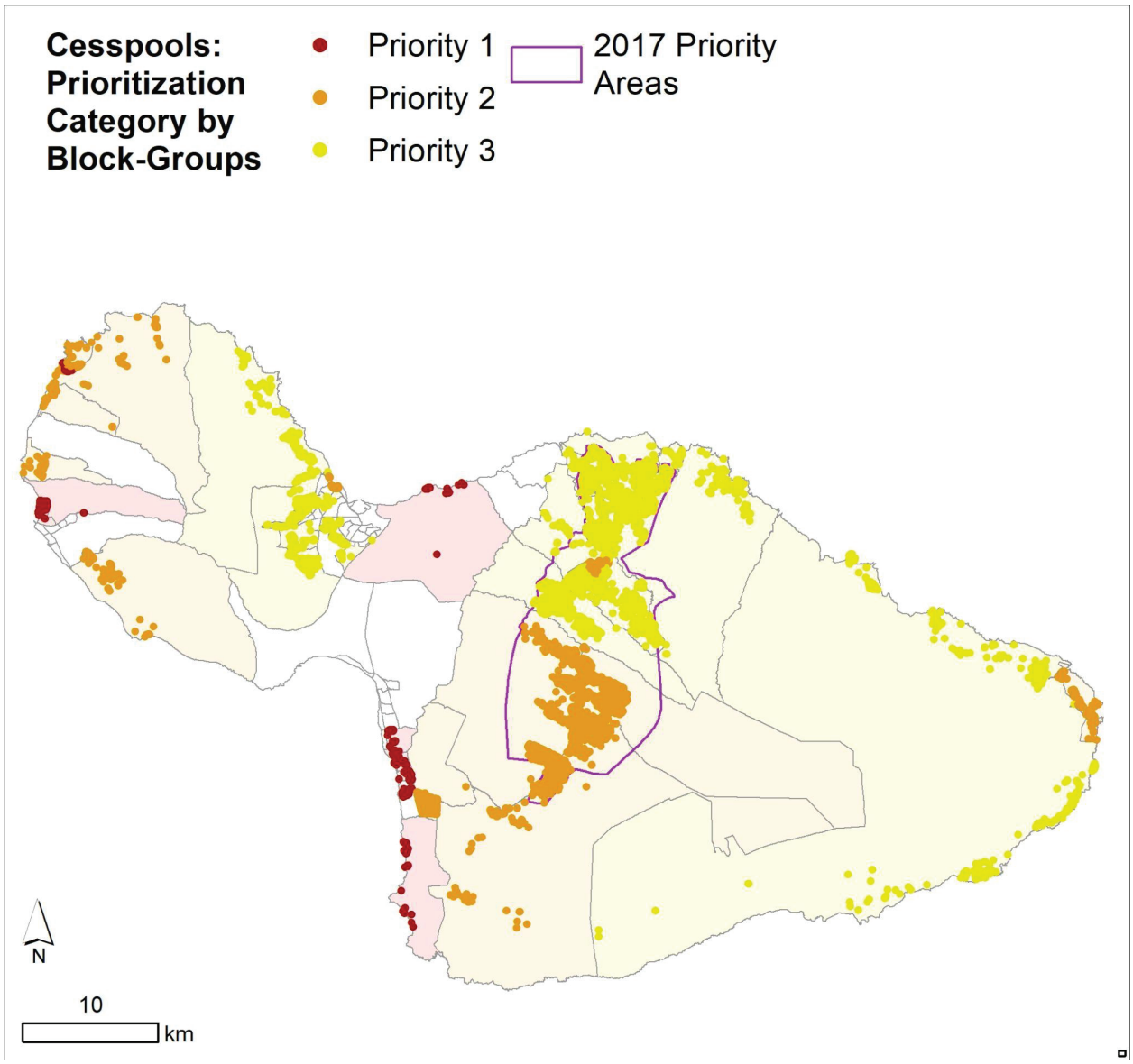


Figure A5: *Maui cesspools (dots) colored by prioritization category, arranged by census block-groups. Block-groups are shown as lightly colored areas where the block-group contains >20 cesspools. White areas signify the block-group contains <20 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

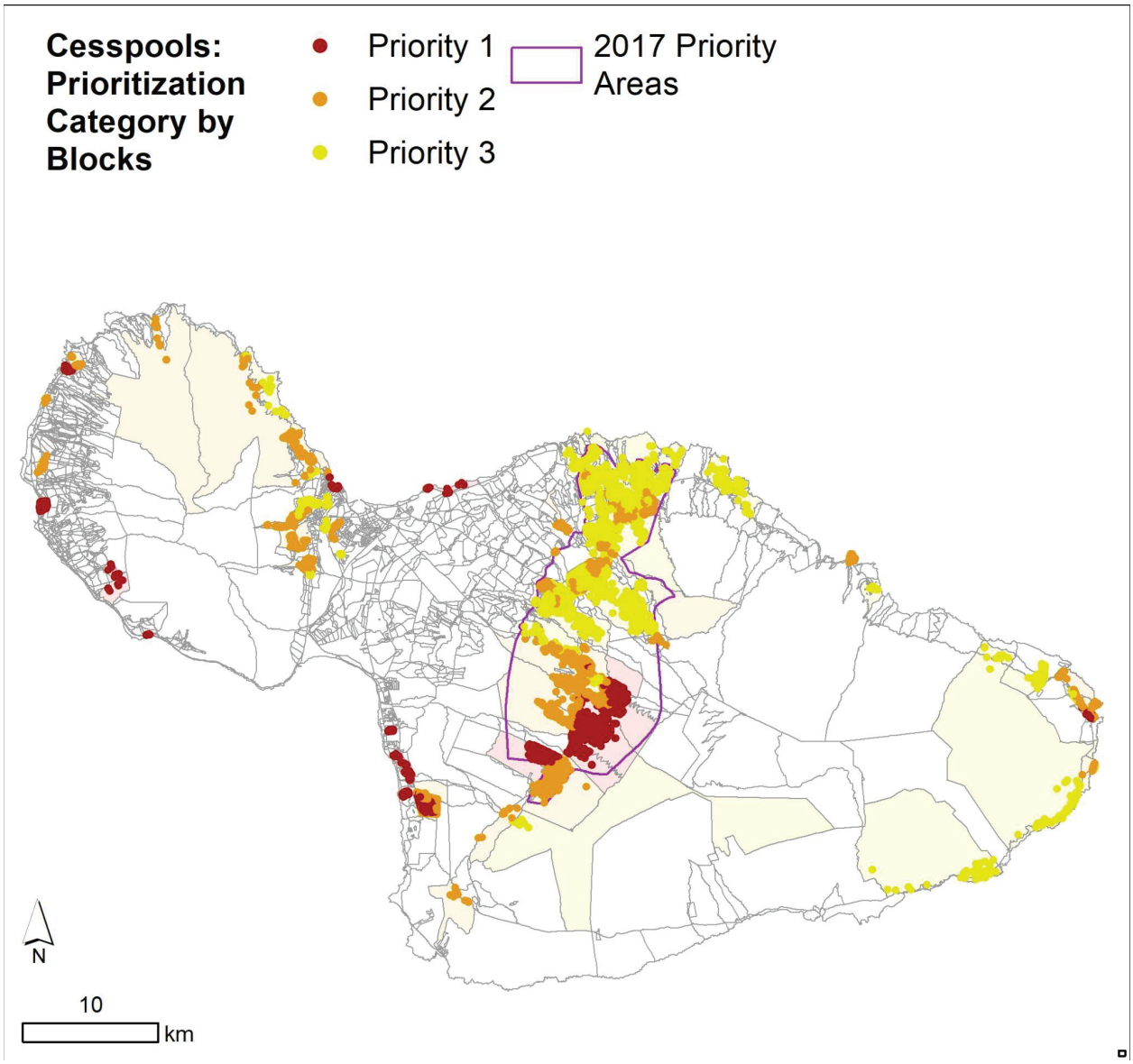


Figure A6: *Maui cesspools (dots) colored by prioritization category, arranged by census blocks. Blocks are shown as lightly colored areas where the block contains >10 cesspools. White areas signify the block contains <10 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

Additional Results: Hawai‘i Island

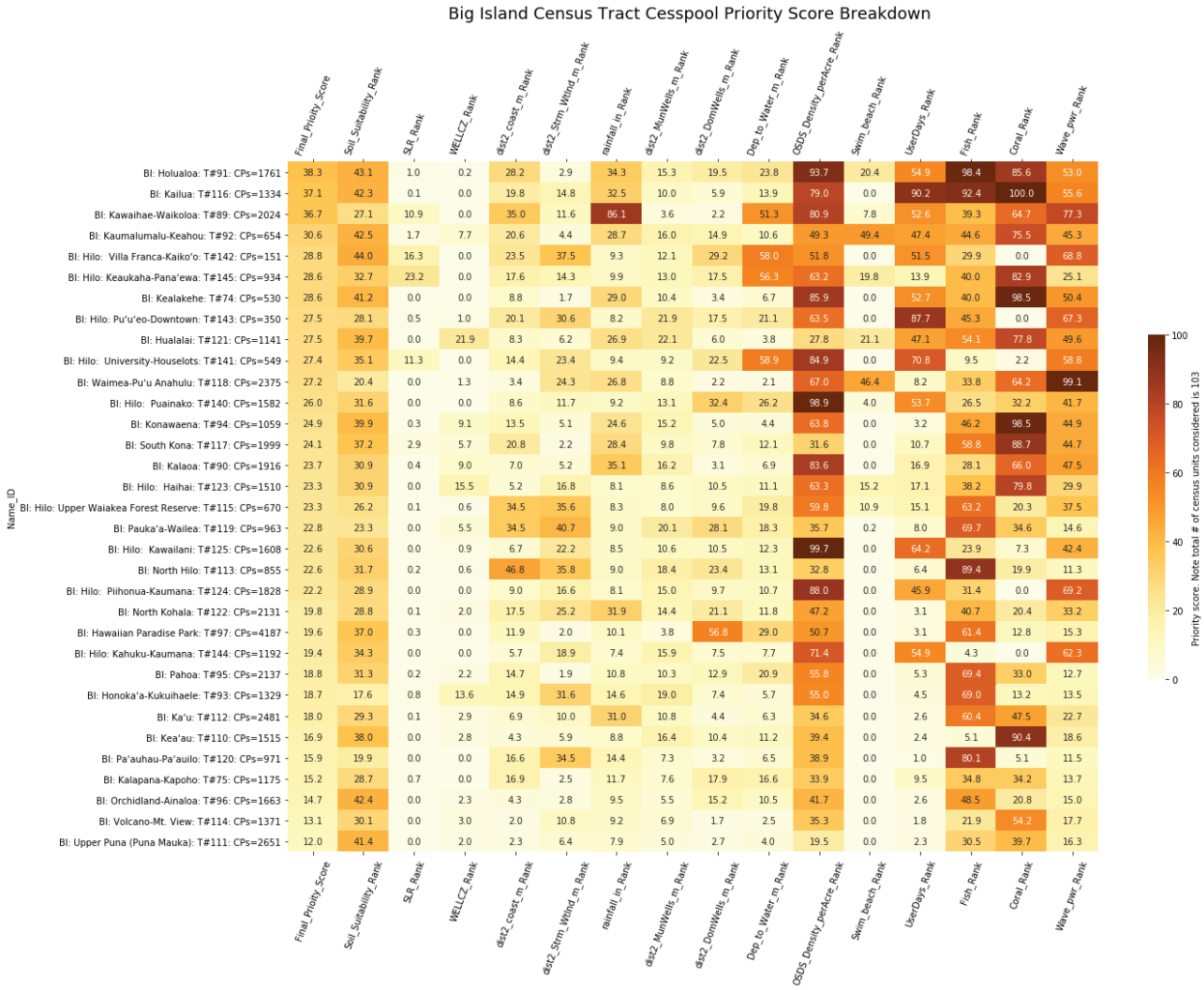


Figure A7: *Pivot table showing census-tract based priority scores, (leftmost column) and individual risk factor scores, which were averaged to calculate the overall priority score of each census tract for Hawai‘i Island.*

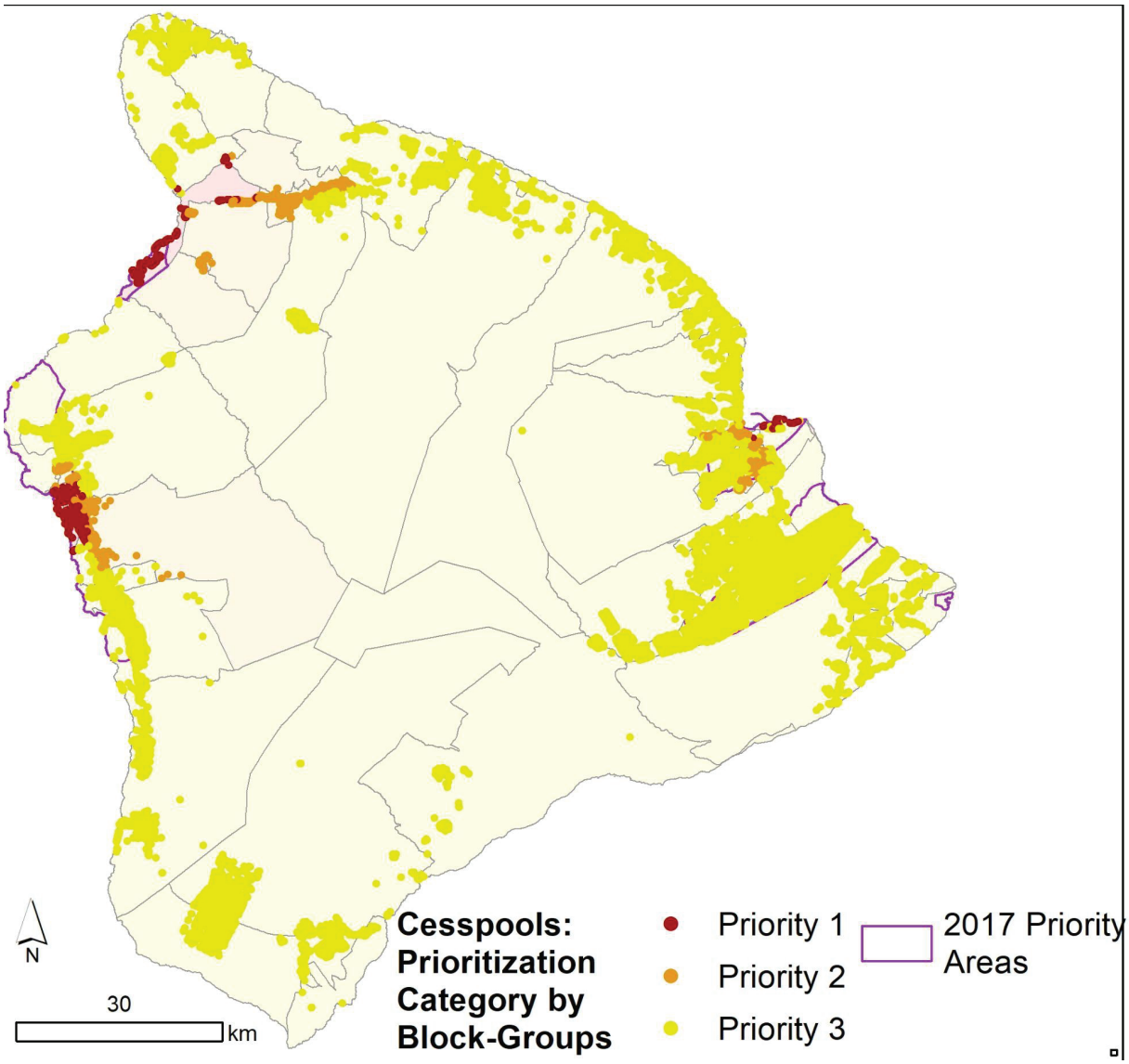


Figure A8: *Hawai'i Island cesspools (dots) colored by prioritization category, arranged by census block-groups. Block-groups are shown as lightly colored areas where the block-group contains >20 cesspools. White areas signify the block-group contains <20 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

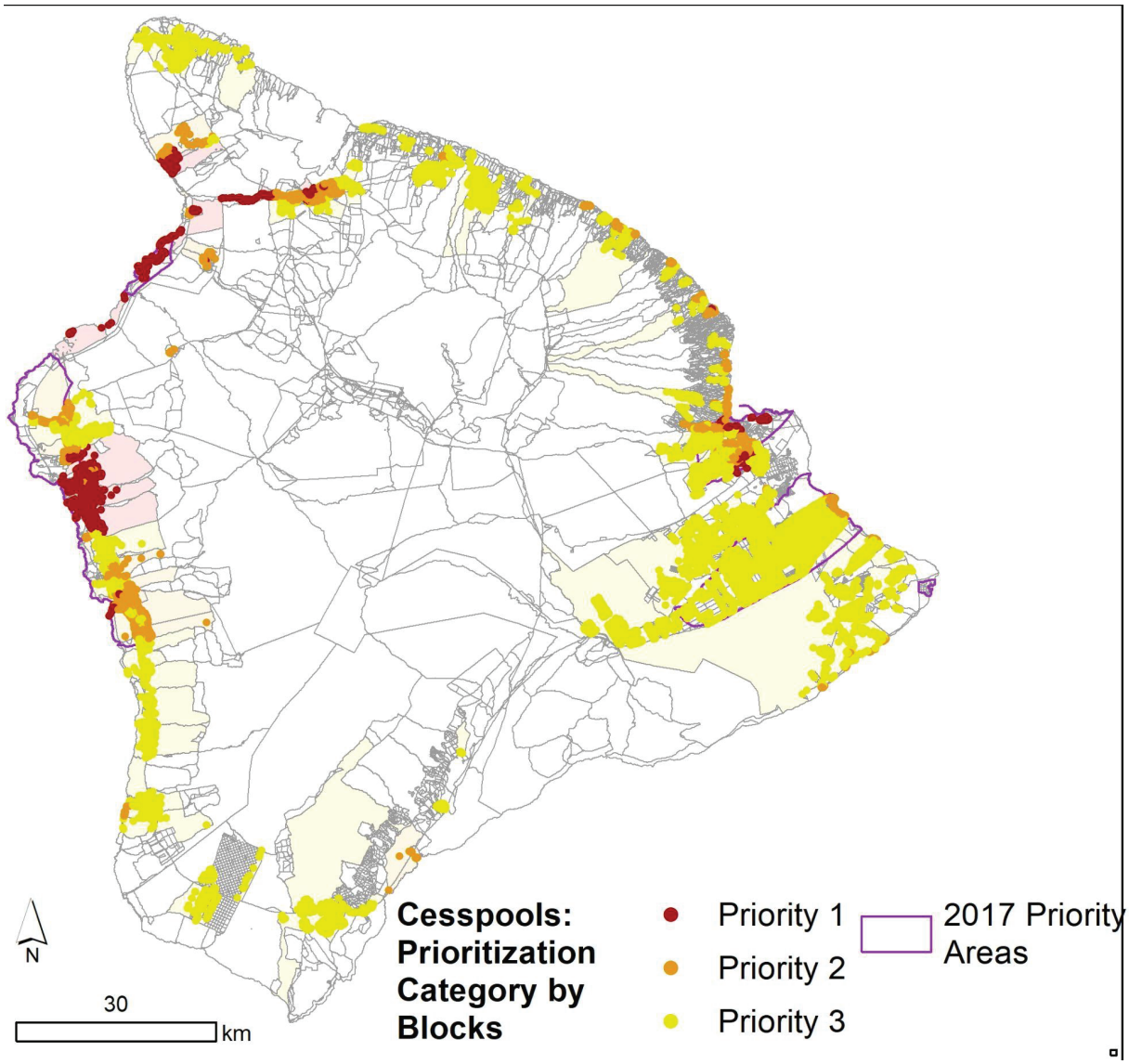


Figure A9: *Hawai'i Island cesspools (dots) colored by prioritization category, arranged by census blocks. Blocks are shown as lightly colored areas where the block contains >10 cesspools. White areas signify the block contains <10 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

Additional Results: Kauaʻi

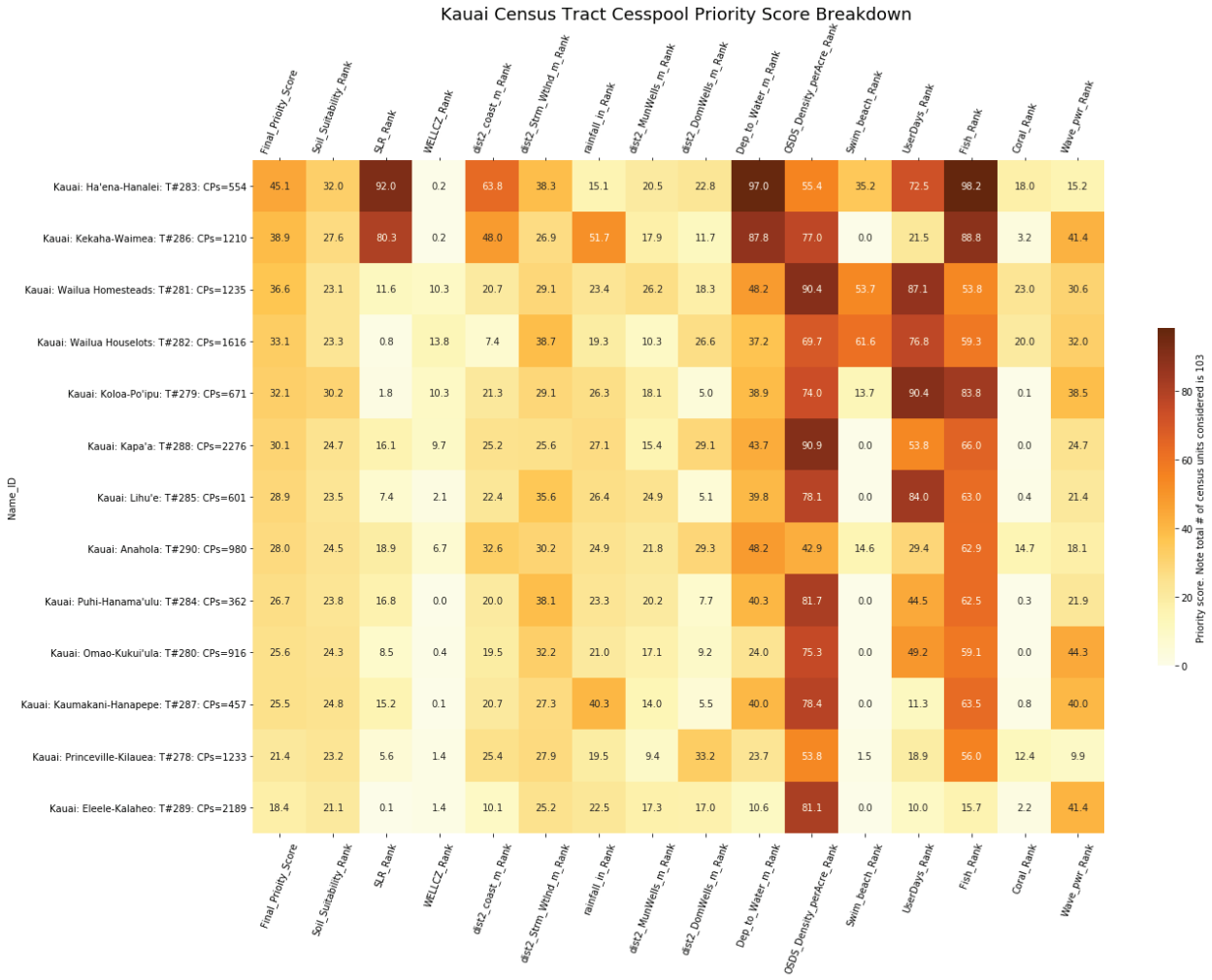


Figure A10: *Pivot table showing census-tract based priority scores, (leftmost column) and individual risk factor scores, which were averaged to calculate the overall priority score of each census tract for Kauaʻi.*

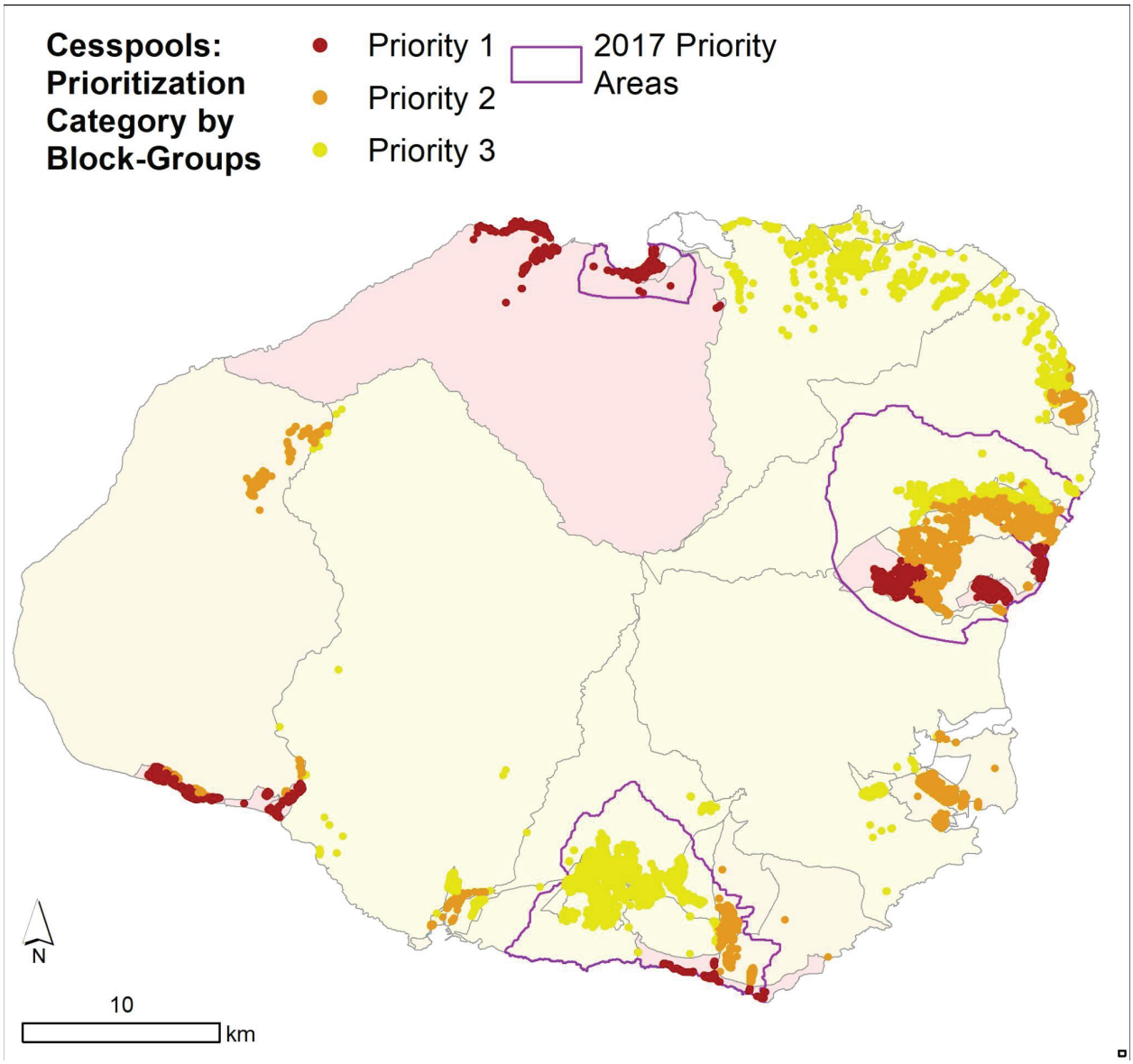


Figure A11: *Kaua'i cesspools (dots) colored by prioritization category, arranged by census block-groups. Block-groups are shown as lightly colored areas where the block-group contains >20 cesspools. White areas signify the block-group contains <20 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

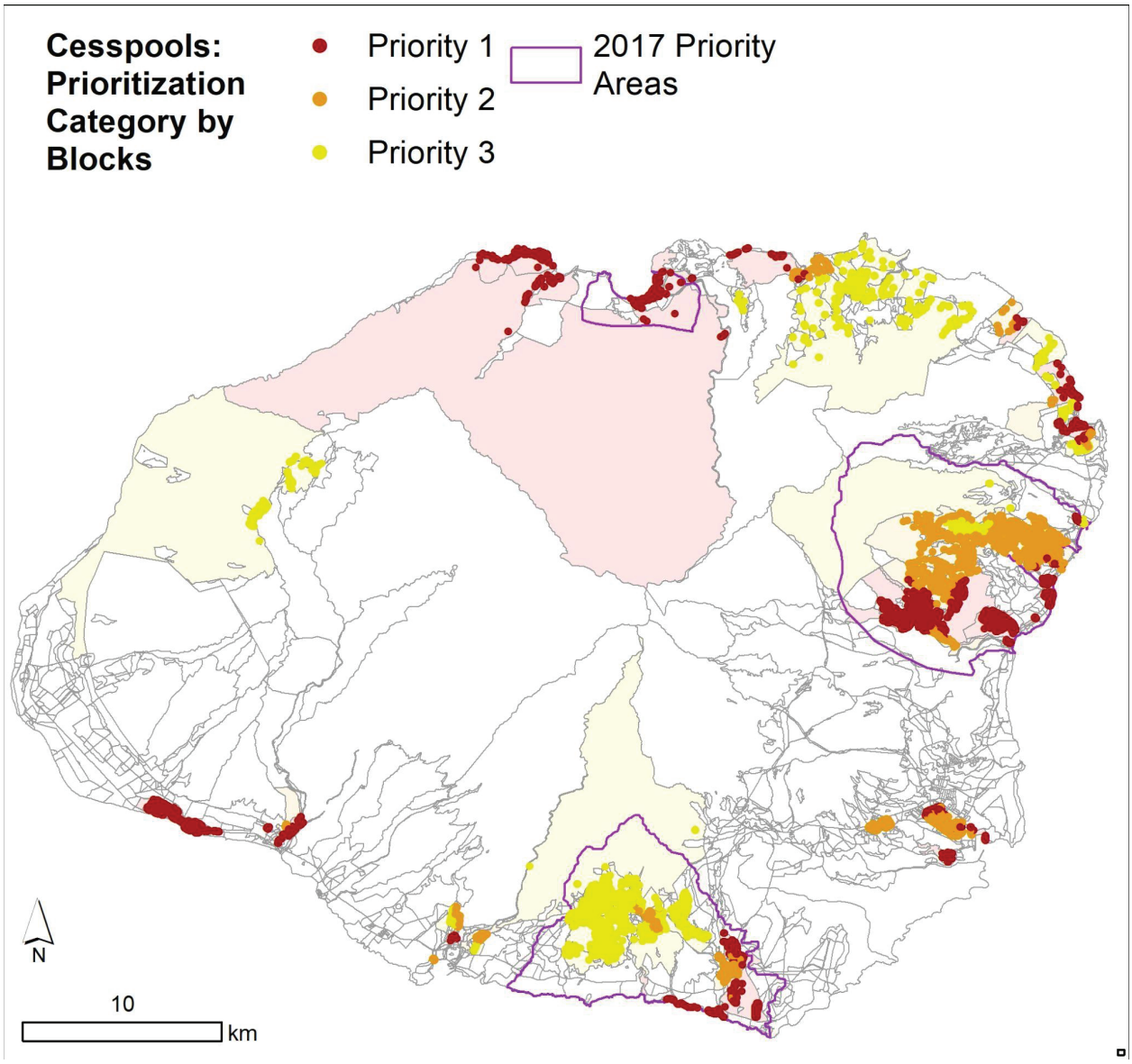


Figure A12: *Kaua'i cesspools (dots) colored by prioritization category, arranged by census blocks. Blocks are shown as lightly colored areas where the block contains >10 cesspools. White areas signify the block contains <10 cesspools (not assessed by the HCPT). Purple boundary indicates previous 2017 priority upgrade areas.*

Additional Results: Statewide

Figure A13 (full page) below provides a pivot table consisting of all 103 census tracts.

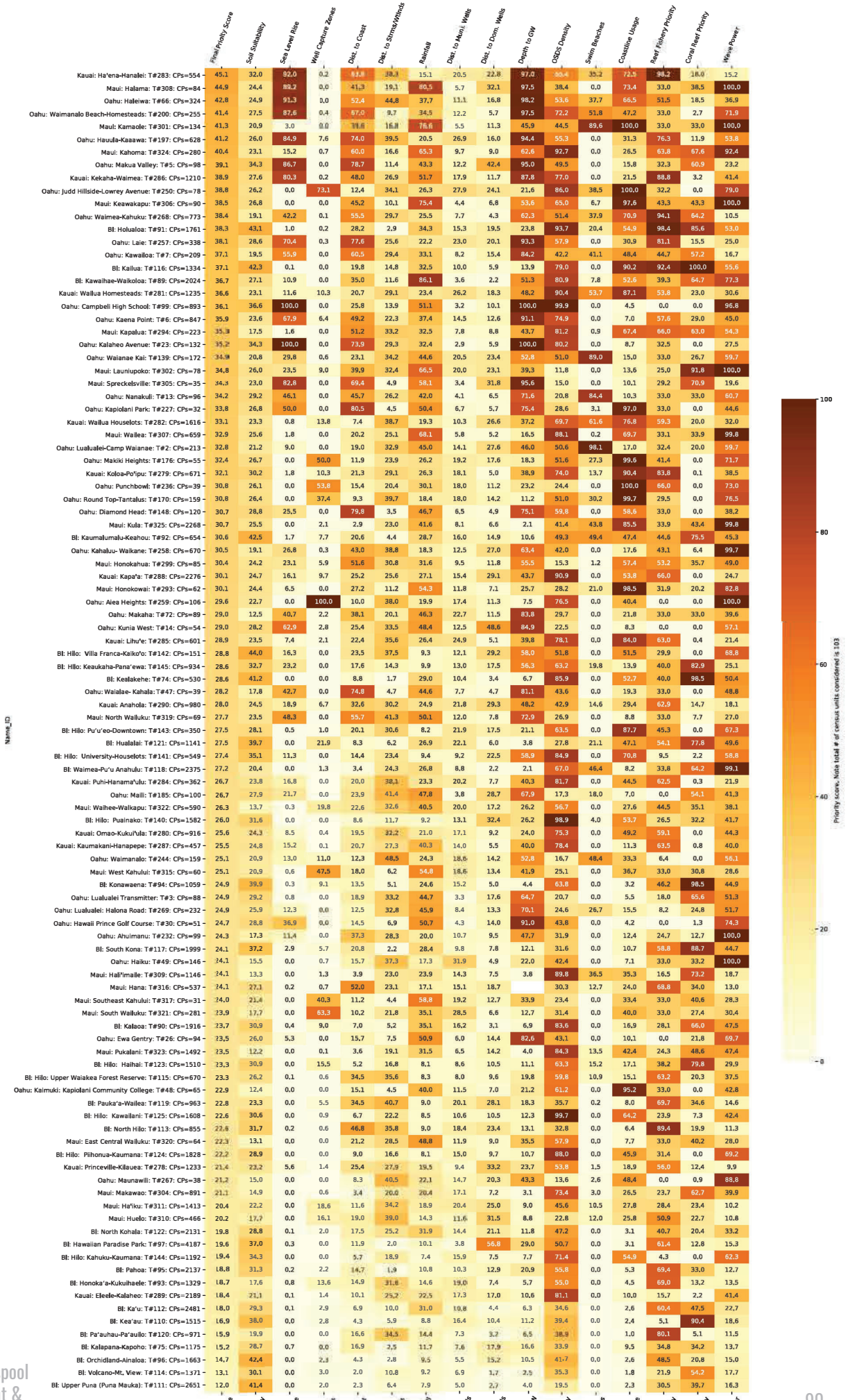

Final Priority Score
Soil Suitability
Sea Level Rise
Well Capture Zones
Dist. to Coast
Dist. to StrmsWtnds
Rainfall
Dist. to Muni. Wells
Dist. to Dom. Wells
Depth to GW
OSDS Density
Swim Beaches
Coastline Usage
Reef Fishery Priority
Coral Reef Priority
Wave Power
Name_ID
Kauai: Ha'ena-Hanalei: T#283: CPs=554 45.1 32.0 92.0 0.2 11.8 38.3 15.1 20.5 22.8 97.0 35.4 35.2 72.5 38.2 18.0 15.2
Maui: Halama: T#308: CPs=84 44.9 24.4 88.2 0.0 41.3 19.1 80.5 5.7 32.1 97.5 38.4 0.0 73.4 33.0 38.5 100.0
Oahu: Haleiwa: T#66: CPs=324 42.8 24.9 91.3 0.0 52.4 44.8 37.7 11.1 16.8 98.2 53.6 37.7 66.5 51.5 18.5 36.9
Oahu: Waimanalo Beach-Homesteads: T#200: CPs=255 41.4 27.5 87.6 0.4 67.0 9.7 34.5 12.2 5.7 97.5 72.2 51.8 47.2 33.0 2.7 71.9
Maui: Kamaole: T#301: CPs=134 41.3 20.9 3.0 0.0 11.6 16.1 76.6 5.5 11.3 45.9 44.5 89.6 100.0 33.0 33.0 100.0
Oahu: Hauula-Kaaawa: T#197: CPs=628 41.2 26.0 84.9 7.6 74.0 39.5 20.5 26.9 16.0 94.4 55.3 0.0 31.3 76.3 11.9 53.8
Maui: Kahoma: T#324: CPs=280 40.4 23.1 15.2 0.7 60.0 16.6 65.3 9.7 9.0 62.6 92.7 0.0 26.5 63.8 67.6 92.4
Oahu: Makua Valley: T#5: CPs=98 39.1 34.3 86.7 0.0 78.7 11.4 43.3 12.2 42.4 95.0 49.5 0.0 15.8 32.3 60.9 23.2
Kauai: Kekaha-Waimea: T#286: CPs=1210 38.9 27.6 80.3 0.2 48.0 26.9 51.7 17.9 11.7 87.8 77.0 0.0 21.5 88.8 3.2 41.4
Oahu: Judd Hillside-Lowrey Avenue: T#250: CPs=78 38.8 26.2 0.0 73.1 12.4 34.1 26.3 27.9 24.1 21.6 86.0 38.5 100.0 32.2 0.0 79.0
Maui: Keawakapu: T#306: CPs=90 38.5 26.8 0.0 0.0 45.2 10.1 75.4 4.4 6.8 53.6 65.0 6.7 97.6 43.3 43.3 100.0
Oahu: Waimea-Kahuku: T#268: CPs=773 38.4 19.1 42.2 0.1 55.5 29.7 25.5 7.7 4.3 62.3 51.4 37.9 70.9 94.1 64.2 10.5
BI: Holualoa: T#91: CPs=1761 38.3 43.1 1.0 0.2 28.2 2.9 34.3 15.3 19.5 23.8 93.7 20.4 54.9 98.4 85.6 53.0
Oahu: Laie: T#257: CPs=338 38.1 28.6 70.4 0.3 77.6 25.6 22.2 23.0 20.1 93.3 57.9 0.0 30.9 81.1 15.5 25.0
Oahu: Kawailoa: T#7: CPs=209 37.1 19.5 55.9 0.0 60.5 29.4 33.1 8.2 15.4 84.2 42.2 41.1 48.4 44.7 57.2 16.7
BI: Kailua: T#116: CPs=1334 37.1 42.3 0.1 0.0 19.8 14.8 32.5 10.0 5.9 13.9 79.0 0.0 90.2 92.4 100.0 55.6
BI: Kawaihae-Waikoloa: T#89: CPs=2024 36.7 27.1 10.9 0.0 35.0 11.6 86.1 3.6 2.2 51.3 80.9 7.8 52.6 39.3 64.7 77.3
Kauai: Wailua Homesteads: T#281: CPs=1235 36.6 23.1 11.6 10.3 20.7 29.1 23.4 26.2 18.3 48.2 90.4 53.7 87.1 53.8 23.0 30.6
Oahu: Campbell High School: T#99: CPs=893 36.1 36.6 100.0 0.0 25.8 13.9 51.1 3.2 10.1 100.0 99.9 0.0 4.5 0.0 0.0 96.8
Oahu: Kaena Point: T#6: CPs=847 35.9 23.6 67.9 6.4 49.2 22.3 37.4 14.5 12.6 91.1 74.9 0.0 7.0 57.6 29.0 45.0
Maui: Kapalua: T#294: CPs=223 35.3 17.5 1.6 0.0 51.2 33.2 32.5 7.8 8.8 43.7 81.2 0.9 67.4 66.0 63.0 54.3
Oahu: Kalaheo Avenue: T#23: CPs=132 35.2 34.3 100.0 0.0 73.9 29.3 32.4 2.9 5.9 100.0 80.2 0.0 8.7 32.5 0.0 27.5
Oahu: Waianae Kai: T#139: CPs=172 34.9 20.8 29.8 0.6 23.1 34.2 44.6 20.5 23.4 52.8 51.0 89.0 15.0 33.0 26.7 59.7
Maui: Launiupoko: T#302: CPs=78 34.8 26.0 23.5 9.0 39.9 32.4 66.5 20.0 23.1 39.3 11.8 0.0 13.6 25.0 91.8 100.0
Maui: Spreckelsville: T#305: CPs=35 34.3 23.0 82.8 0.0 69.4 4.9 58.1 3.4 31.8 95.6 15.0 0.0 10.1 29.2 70.9 19.6
Oahu: Nanakuli: T#13: CPs=96 34.2 29.2 46.1 0.0 45.7 26.2 42.0 4.1 6.5 71.6 20.8 84.4 10.3 33.0 33.0 60.7
Oahu: Kapiolani Park: T#227: CPs=32 33.8 26.8 50.0 0.0 80.5 4.5 50.4 6.7 5.7 75.4 28.6 3.1 97.0 33.0 0.0 44.6
Kauai: Wailua Houselots: T#282: CPs=1616 33.1 23.3 0.8 13.8 7.4 38.7 19.3 10.3 26.6 37.2 69.7 61.6 76.8 59.3 20.0 32.0
Maui: Wailea: T#307: CPs=659 32.9 25.6 1.8 0.0 20.2 25.1 68.1 5.8 5.2 16.5 88.1 0.2 69.7 33.1 33.9 99.8
Oahu: Lualualei-Camp Waianae: T#2: CPs=213 32.8 21.2 9.0 0.0 19.0 32.9 45.0 14.1 27.6 46.0 50.6 98.1 17.0 32.4 20.0 59.7
Oahu: Makiki Heights: T#176: CPs=55 32.4 26.7 0.0 50.0 11.9 23.9 26.2 19.2 17.6 18.3 51.6 27.3 99.6 41.4 0.0 71.7
Kauai: Koloa-Po'ipu: T#279: CPs=671 32.1 30.2 1.8 10.3 21.3 29.1 26.3 18.1 5.0 38.9 74.0 13.7 90.4 83.8 0.1 38.5
Oahu: Punchbowl: T#236: CPs=39 30.8 26.1 0.0 53.8 15.4 20.4 30.1 18.0 11.2 23.2 24.4 0.0 100.0 66.0 0.0 73.0
Oahu: Round Top-Tantalus: T#170: CPs=159 30.8 26.4 0.0 37.4 9.3 39.7 18.4 18.0 14.2 11.2 51.0 30.2 99.7 29.5 0.0 76.5
Oahu: Diamond Head: T#148: CPs=120 30.7 28.8 25.5 0.0 79.8 3.5 46.7 6.5 4.9 75.1 59.8 0.0 58.6 33.0 0.0 38.2
Maui: Kula: T#325: CPs=2268 30.7 25.5 0.0 2.1 2.9 23.0 41.6 8.1 6.6 2.1 41.4 43.8 85.5 33.9 43.4 99.8
BI: Kaumalumalu-Keahou: T#92: CPs=654 30.6 42.5 1.7 7.7 20.6 4.4 28.7 16.0 14.9 10.6 49.3 49.4 47.4 44.6 75.5 45.3
Oahu: Kahaluu- Waikane: T#258: CPs=670 30.5 19.1 26.8 0.3 43.0 38.8 18.3 12.5 27.0 63.4 42.0 0.0 17.6 43.1 6.4 99.7
Maui: Honokahua: T#299: CPs=85 30.4 24.2 23.1 5.9 51.6 30.8 31.6 9.5 11.8 55.5 15.3 1.2 57.4 53.2 35.7 49.0
Kauai: Kapa'a: T#288: CPs=2276 30.1 24.7 16.1 9.7 25.2 25.6 27.1 15.4 29.1 43.7 90.9 0.0 53.8 66.0 0.0 24.7
Maui: Honokowai: T#293: CPs=62 30.1 24.4 6.5 0.0 27.2 11.2 54.3 11.8 7.1 25.7 28.2 21.0 98.5 31.9 20.2 82.8
Oahu: Aiea Heights: T#259: CPs=106 29.6 22.7 0.0 100.0 10.0 38.0 19.9 17.4 11.3 7.5 76.5 0.0 40.4 0.0 0.0 100.0
Oahu: Makaha: T#72: CPs=89 29.0 12.5 40.7 2.2 38.1 20.1 46.3 22.7 11.5 83.8 29.7 0.0 21.8 33.0 33.0 39.6
Oahu: Kunia West: T#14: CPs=54 29.0 28.2 62.9 2.8 25.4 33.5 48.4 12.5 48.6 84.9 22.5 0.0 8.3 0.0 0.0 57.1
Kauai: Lihu'e: T#285: CPs=601 28.9 23.5 7.4 2.1 22.4 35.6 26.4 24.9 5.1 39.8 78.1 0.0 84.0 63.0 0.4 21.4
BI: Hilo: Villa Franca-Kaiko'o: T#142: CPs=151 28.8 44.0 16.3 0.0 23.5 37.5 9.3 12.1 29.2 58.0 51.8 0.0 51.5 29.9 0.0 68.8
BI: Hilo: Keaukaha-Pana'ewa: T#145: CPs=934 28.6 32.7 23.2 0.0 17.6 14.3 9.9 13.0 17.5 56.3 63.2 19.8 13.9 40.0 82.9 25.1
BI: Kealakehe: T#74: CPs=530 28.6 41.2 0.0 0.0 8.8 1.7 29.0 10.4 3.4 6.7 85.9 0.0 52.7 40.0 98.5 50.4
Oahu: Waialae- Kahala: T#47: CPs=39 28.2 17.8 42.7 0.0 74.8 4.7 44.6 7.7 4.7 81.1 43.6 0.0 19.3 33.0 0.0 48.8
Kauai: Anahola: T#290: CPs=980 28.0 24.5 18.9 6.7 32.6 30.2 24.9 21.8 29.3 48.2 42.9 14.6 29.4 62.9 14.7 18.1
Maui: North Wailuku: T#319: CPs=69 27.7 23.5 48.3 0.0 55.7 41.3 50.1 12.0 7.8 72.9 26.9 0.0 8.8 33.0 7.7 27.0
BI: Hilo: Pu'u'eo-Downtown: T#143: CPs=350 27.5 28.1 0.5 1.0 20.1 30.6 8.2 21.9 17.5 21.1 63.5 0.0 87.7 45.3 0.0 67.3
BI: Hualalai: T#121: CPs=1141 27.5 39.7 0.0 21.9 8.3 6.2 26.9 22.1 6.0 3.8 27.8 21.1 47.1 54.1 77.8 49.6
BI: Hilo: University-Houselots: T#141: CPs=549 27.4 35.1 11.3 0.0 14.4 23.4 9.4 9.2 22.5 58.9 84.9 0.0 70.8 9.5 2.2 58.8
BI: Waimea-Pu'u Anahulu: T#118: CPs=2375 27.2 20.4 0.0 1.3 3.4 24.3 26.8 8.8 2.2 2.1 67.0 46.4 8.2 33.8 64.2 99.1
Kauai: Puhi-Hanama'ulu: T#284: CPs=362 26.7 23.8 16.8 0.0 20.0 38.1 23.3 20.2 7.7 40.3 81.7 0.0 44.5 62.5 0.3 21.9
Oahu: Maili: T#185: CPs=100 26.7 27.9 21.7 0.0 23.9 41.4 47.8 3.8 28.7 67.9 17.3 18.0 7.0 0.0 54.1 41.3
Maui: Waihee-Waikapu: T#322: CPs=590 26.3 13.7 0.3 19.8 22.6 32.6 40.5 20.0 17.2 26.2 56.7 0.0 27.6 44.5 35.1 38.1
BI: Hilo: Puainako: T#140: CPs=1582 26.0 31.6 0.0 0.0 8.6 11.7 9.2 13.1 32.4 26.2 98.9 4.0 53.7 26.5 32.2 41.7
Kauai: Omao-Kukui'ula: T#280: CPs=916 25.6 24.3 8.5 0.4 19.5 32.2 21.0 17.1 9.2 24.0 75.3 0.0 49.2 59.1 0.0 44.3
Kauai: Kaumakani-Hanapepe: T#287: CPs=457 25.5 24.8 15.2 0.1 20.7 27.3 40.3 14.0 5.5 40.0 78.4 0.0 11.3 63.5 0.8 40.0
Oahu: Waimanalo: T#244: CPs=159 25.1 20.9 13.0 11.0 12.3 48.5 24.3 18.6 14.2 52.8 16.7 48.4 33.3 6.4 0.0 56.1
Maui: West Kahului: T#315: CPs=60 25.1 20.9 0.6 47.5 18.0 6.2 54.8 18.6 13.4 41.9 25.1 0.0 36.7 33.0 30.8 28.6
BI: Konawaena: T#94: CPs=1059 24.9 39.9 0.3 9.1 13.5 5.1 24.6 15.2 5.0 4.4 63.8 0.0 3.2 46.2 98.5 44.9
Oahu: Lualualei Transmitter: T#3: CPs=88 24.9 29.2 0.8 0.0 18.9 33.2 44.7 3.3 17.6 64.7 20.7 0.0 5.5 18.0 65.6 51.3
Oahu: Lualualei: Halona Road: T#269: CPs=232 24.9 25.9 12.3 0.0 12.5 32.8 45.9 8.4 13.3 70.1 24.6 26.7 15.5 8.2 24.8 51.7
Oahu: Hawaii Prince Golf Course: T#30: CPs=51 24.7 28.8 36.9 0.0 14.5 6.9 50.7 4.3 14.0 91.0 43.8 0.0 4.2 0.0 1.3 74.3
Oahu: Ahuimanu: T#232: CPs=99 24.3 17.3 11.4 0.0 37.3 28.3 20.0 10.7 9.5 47.7 31.9 0.0 12.4 24.7 12.7 100.0
BI: South Kona: T#117: CPs=1999 24.1 37.2 2.9 5.7 20.8 2.2 28.4 9.8 7.8 12.1 31.6 0.0 10.7 58.8 88.7 44.7
Oahu: Haiku: T#49: CPs=146 24.1 15.5 0.0 0.7 15.7 37.3 17.3 31.9 4.9 22.0 42.4 0.0 7.1 33.0 33.2 100.0
Maui: Hali'imaile: T#309: CPs=1146 24.1 13.3 0.0 1.3 3.9 23.0 23.9 14.3 7.5 3.8 89.8 36.5 35.3 16.5 73.2 18.7
Maui: Hana: T#316: CPs=537 24.1 27.1 0.2 0.7 52.0 23.1 17.1 15.1 18.7 30.3 12.7 24.0 68.8 34.0 13.0
Maui: Southeast Kahului: T#317: CPs=31 24.0 21.4 0.0 40.3 11.2 4.4 58.8 19.2 12.7 33.9 23.4 0.0 33.4 33.0 40.6 28.3
Maui: South Wailuku: T#321: CPs=281 23.9 17.7 0.0 63.3 10.2 21.8 35.1 28.5 6.6 12.7 31.4 0.0 40.0 33.0 27.4 30.4
BI: Kalaoa: T#90: CPs=1916 23.7 30.9 0.4 9.0 7.0 5.2 35.1 16.2 3.1 6.9 83.6 0.0 16.9 28.1 66.0 47.5
Oahu: Ewa Gentry: T#26: CPs=94 23.5 26.0 5.3 0.0 15.7 7.5 50.9 6.0 14.4 82.6 43.1 0.0 10.1 0.0 21.8 69.7
Maui: Pukalani: T#323: CPs=1492 23.5 12.2 0.0 0.1 3.6 19.1 31.5 6.5 14.2 4.0 84.3 13.5 42.4 24.3 48.6 47.4
BI: Hilo: Haihai: T#123: CPs=1510 23.3 30.9 0.0 15.5 5.2 16.8 8.1 8.6 10.5 11.1 63.3 15.2 17.1 38.2 79.8 29.9
BI: Hilo: Upper Waiakea Forest Reserve: T#115: CPs=670 23.3 26.2 0.1 0.6 34.5 35.6 8.3 8.0 9.6 19.8 59.8 10.9 15.1 63.2 20.3 37.5
Oahu: Kaimuki: Kapiolani Community College: T#48: CPs=65 22.9 12.4 0.0 0.0 15.1 4.5 40.0 11.5 7.0 21.2 61.2 0.0 95.2 33.0 0.0 42.8
BI: Pauka'a-Wailea: T#119: CPs=963 22.8 23.3 0.0 5.5 34.5 40.7 9.0 20.1 28.1 18.3 35.7 0.2 8.0 69.7 34.6 14.6
BI: Hilo: Kawailani: T#125: CPs=1608 22.6 30.6 0.0 0.9 6.7 22.2 8.5 10.6 10.5 12.3 99.7 0.0 64.2 23.9 7.3 42.4
BI: North Hilo: T#113: CPs=855 22.6 31.7 0.2 0.6 46.8 35.8 9.0 18.4 23.4 13.1 32.8 0.0 6.4 89.4 19.9 11.3
Maui: East Central Wailuku: T#320: CPs=64 22.3 13.1 0.0 0.0 21.2 28.5 48.8 11.9 9.0 35.5 57.9 0.0 7.7 33.0 40.2 28.0
BI: Hilo: Piihonua-Kaumana: T#124: CPs=1828 22.2 28.9 0.0 0.0 9.0 16.6 8.1 15.0 9.7 10.7 88.0 0.0 45.9 31.4 0.0 69.2
Kauai: Princeville-Kilauea: T#278: CPs=1233 21.4 23.2 5.6 1.4 25.4 27.9 19.5 9.4 33.2 23.7 53.8 1.5 18.9 56.0 12.4 9.9
Oahu: Maunawili: T#267: CPs=38 21.2 15.0 0.0 0.0 8.3 40.5 22.1 14.7 20.3 43.3 13.6 2.6 48.4 0.0 0.9 88.8
Maui: Makawao: T#304: CPs=891 21.1 14.9 0.0 0.6 3.4 20.0 20.4 17.1 7.2 3.1 73.4 3.0 26.5 23.7 62.7 39.9
Maui: Ha'iku: T#311: CPs=1413 20.4 22.2 0.0 18.6 11.6 34.2 18.9 20.4 25.0 9.0 45.6 10.5 27.8 28.4 23.4 10.2
Maui: Huelo: T#310: CPs=466 20.2 17.7 0.0 16.1 19.0 39.0 14.3 11.6 31.5 8.8 22.8 12.0 25.8 50.9 22.7 10.8
BI: North Kohala: T#122: CPs=2131 19.8 28.8 0.1 2.0 17.5 25.2 31.9 14.4 21.1 11.8 47.2 0.0 3.1 40.7 20.4 33.2
BI: Hawaiian Paradise Park: T#97: CPs=4187 19.6 37.0 0.3 0.0 11.9 2.0 10.1 3.8 56.8 29.0 50.7 0.0 3.1 61.4 12.8 15.3
BI: Hilo: Kahuku-Kaumana: T#144: CPs=1192 19.4 34.3 0.0 0.0 5.7 18.9 7.4 15.9 7.5 7.7 71.4 0.0 54.9 4.3 0.0 62.3
BI: Pahoa: T#95: CPs=2137 18.8 31.3 0.2 2.2 14.7 1.9 10.8 10.3 12.9 20.9 55.8 0.0 5.3 69.4 33.0 12.7
BI: Honoka'a-Kukuihaele: T#93: CPs=1329 18.7 17.6 0.8 13.6 14.9 31.8 14.6 19.0 7.4 5.7 55.0 0.0 4.5 69.0 13.2 13.5
Kauai: Eleele-Kalaheo: T#289: CPs=2189 18.4 21.1 0.1 1.4 10.1 25.2 22.5 17.3 17.0 10.6 81.1 0.0 10.0 15.7 2.2 41.4
BI: Ka'u: T#112: CPs=2481 18.0 29.3 0.1 2.9 6.9 10.0 31.0 10.8 4.4 6.3 34.6 0.0 2.6 60.4 47.5 22.7
BI: Kea'au: T#110: CPs=1515 16.9 38.0 0.0 2.8 4.3 5.9 8.8 16.4 10.4 11.2 39.4 0.0 2.4 5.1 90.4 18.6
BI: Pa'auhau-Pa'auilo: T#120: CPs=971 15.9 19.9 0.0 0.0 16.6 34.5 14.4 7.3 3.2 6.5 38.9 0.0 1.0 80.1 5.1 11.5
BI: Kalapana-Kapoho: T#75: CPs=1175 15.2 28.7 0.7 0.0 16.9 2.5 11.7 7.6 17.9 16.6 33.9 0.0 9.5 34.8 34.2 13.7
BI: Orchidland-Ainaloa: T#96: CPs=1663 14.7 42.4 0.0 2.3 4.3 2.8 9.5 5.5 15.2 10.5 41.7 0.0 2.6 48.5 20.8 15.0
BI: Volcano-Mt. View: T#114: CPs=1371 13.1 30.1 0.0 3.0 2.0 10.8 9.2 6.9 1.7 2.5 35.3 0.0 1.8 21.9 54.2 17.7
BI: Upper Puna (Puna Mauka): T#111: CPs=2651 12.0 41.4 0.0 2.0 2.3 6.4 7.9 5.0 2.7 4.0 19.5 0.0 2.3 30.5 39.7 16.3
Priority score. Note total # of census units considered is 103
100
80
60
40
20
0

Figure A13. *Pivot table showing statewide census-tract based priority scores, (leftmost column) and individual risk factor scores, which were averaged to calculate the overall priority score of each census tract.*

Comparative Analysis with 2017 Priority Areas

To indicate where new priority areas from this work overlap with 2017 priority areas, additional information was appended to the prioritization by adding a + sign and differing darker color categories (Fig. A14). This overlap was defined as an area with greater than 50% of its cesspools falling within a 2017 priority zone. The comparative analysis for all Priority Categories is defined for each census unit as:

1. Priority Level 1 (+): The top 25% of the Census Unit Priority Scores that also have 50% or more of their cesspool units falling within a 2017 priority zone.
2. Priority Level 1: The top 25% of the Census Unit Priority Scores that do not have 50% or more of their cesspool units falling within a 2017 priority zone.
3. Priority Level 2 (+): The middle 25% (50%-25%) of the Census Unit Priority Scores that also have 50% or more of their cesspool units falling within a 2017 priority zone.
4. Priority Level 2: The middle 40% (50%-25%) of the Census Unit Priority Scores that do not have 50% or more of their cesspool units falling within a 2017 priority zone.
5. Priority Level 3 (+): The bottom 50% of the Census Unit Priority Scores that do have 50% or more of their cesspool units falling within a 2017 priority zone.
6. Priority Level 3: The bottom 50% of the Census Unit Priority Scores that do have 50% or more of their cesspool units falling within a 2017 priority zone.

While these categories are not used in the primary results, the tool does make them available should they be useful for future prioritization or management purposes.

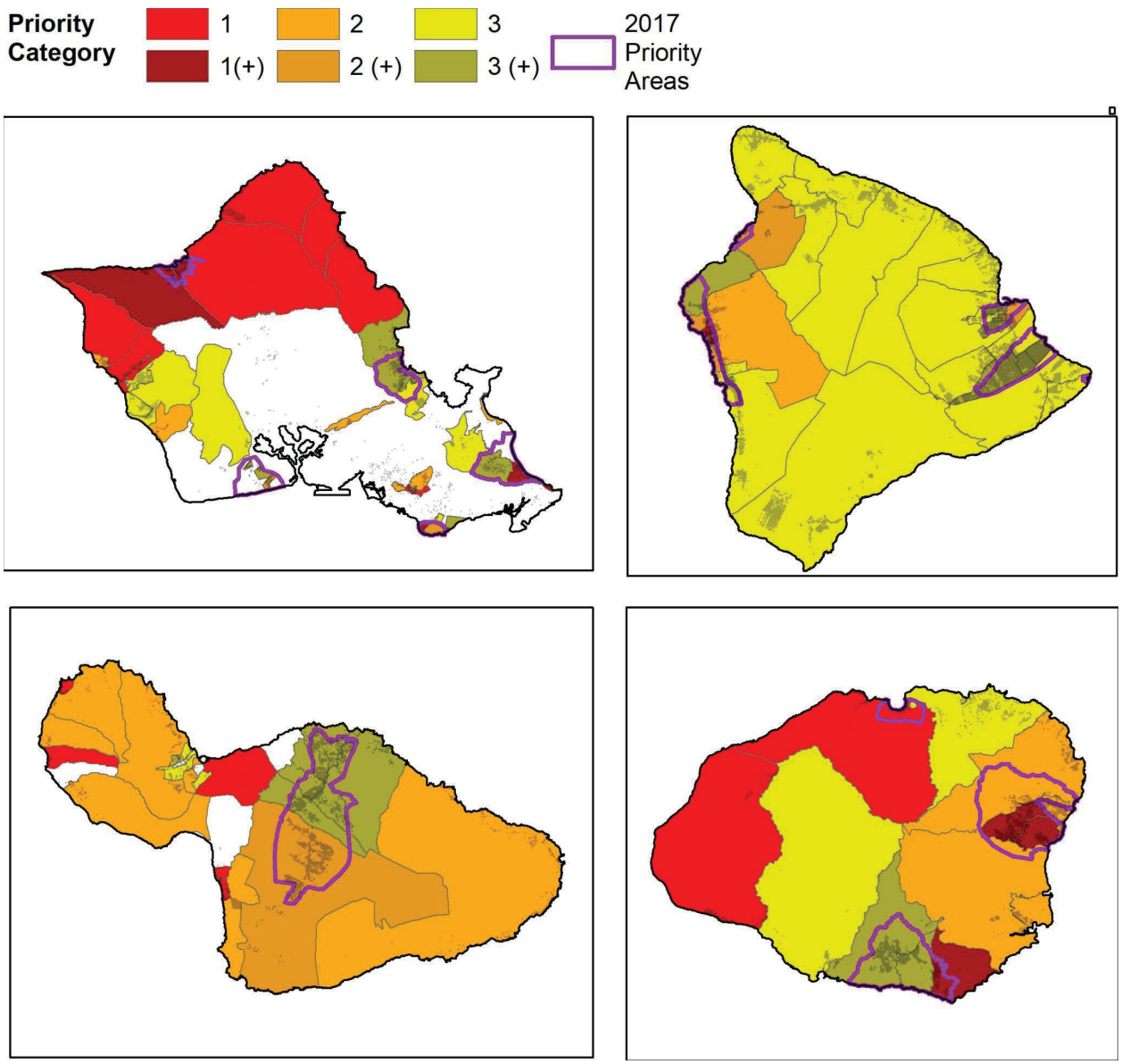


Figure A14: *Statewide prioritization at the census tract level showing added data from comparative analysis with 2017 Priority Areas. This data is for informational purposes and not used in the final results of the HCPT.*

Appendix B

Sensitivity Analysis of Priorities

The final Census Unit Aggregated Prioritization Score is derived from a simple average of all of the risk-factor (Input Section) prioritization scores that go into the analysis. This method of calculation rests on the implicit assumption that each factor is just as important as all of the other factors. However, in reality, each factor likely has a different degree of importance to different stakeholders, based on their overall objectives. While the HCPT provides the ability to apply weights to each factor in order to change the relative importance of each, the actual determination of appropriate weights is no simple matter. This is complicated by the fact that there is not a single end goal for cesspool upgrades. For example, optimizing the prioritization for human health factors (e.g. reducing contamination to drinking water wells or reducing pathogens at beaches) may sacrifice benefits to ecological systems such as coral and fish. Negative effects from cesspools manifest through multiple different hazard outcomes, including but not limited to drinking water quality degradation, coastal water quality impacts, human exposures to pathogens, and discharge of contaminants of emerging concern. The HCPT considers all of these hazard outcomes through a lumped approach. In reality, all of these outcomes are interconnected as human health is ultimately dependent on maintaining healthy ecosystems.

To explore how assigning different degrees of importance to different factors may skew outcomes of statewide prioritization, a sensitivity analysis was conducted. The sensitivity analysis compared three different scenarios where different weights were assigned to each risk factor, based on a hypothetical conceptual model of how different priorities might be expressed through the adjustment of weights to different factors.

Table B1 presents the different weights used to generate results for the sensitivity testing. It should be noted that weights applied in these scenarios are to be considered as examples only and do not constitute an actual prioritization process.

Table B1. *Example sensitivity testing scenario weights.*

Risk Factor	Base Scenario	Ecological Scenario	Human Health Scenario
Distance to Coastline (m)	1	3	1
Distance to Streams+Wetlands (m)	1	3	1
Distance to Municipal Wells (m)	1	1	4
Distance to Domestic Wells (m)	1	1	2
Well capture zones	1	1	3
Depth to Groundwater (m)	1	2	2
Cesspool Density (Units per Acre)	1	2	2
Sea Level Rise	1	2	2
Soil Suitability	1	2	2
Rainfall (in.)	1	1	1
Coastline Usage	1	1	3
Coral Reef Priority	1	4	1
Reef Fishery Priority	1	2	1
Swimming Beaches	1	1	3
Ocean Circulation(wave energy)	1	3	2

Figure B1 below shows the sensitivity test results graphically, whereas each census tract is represented by a row, labeled by the tract name, ID number, and the number of cesspools on the inventory falling within its borders. Each column is the final priority rank (where tracts are ranked based on their final priority scores) of the tract within each sensitivity test scenario. The heatmap is sorted by the base scenario rank with the most impacted tracts at the top of the figure. Note the figure is broken into two halves to fit the page.

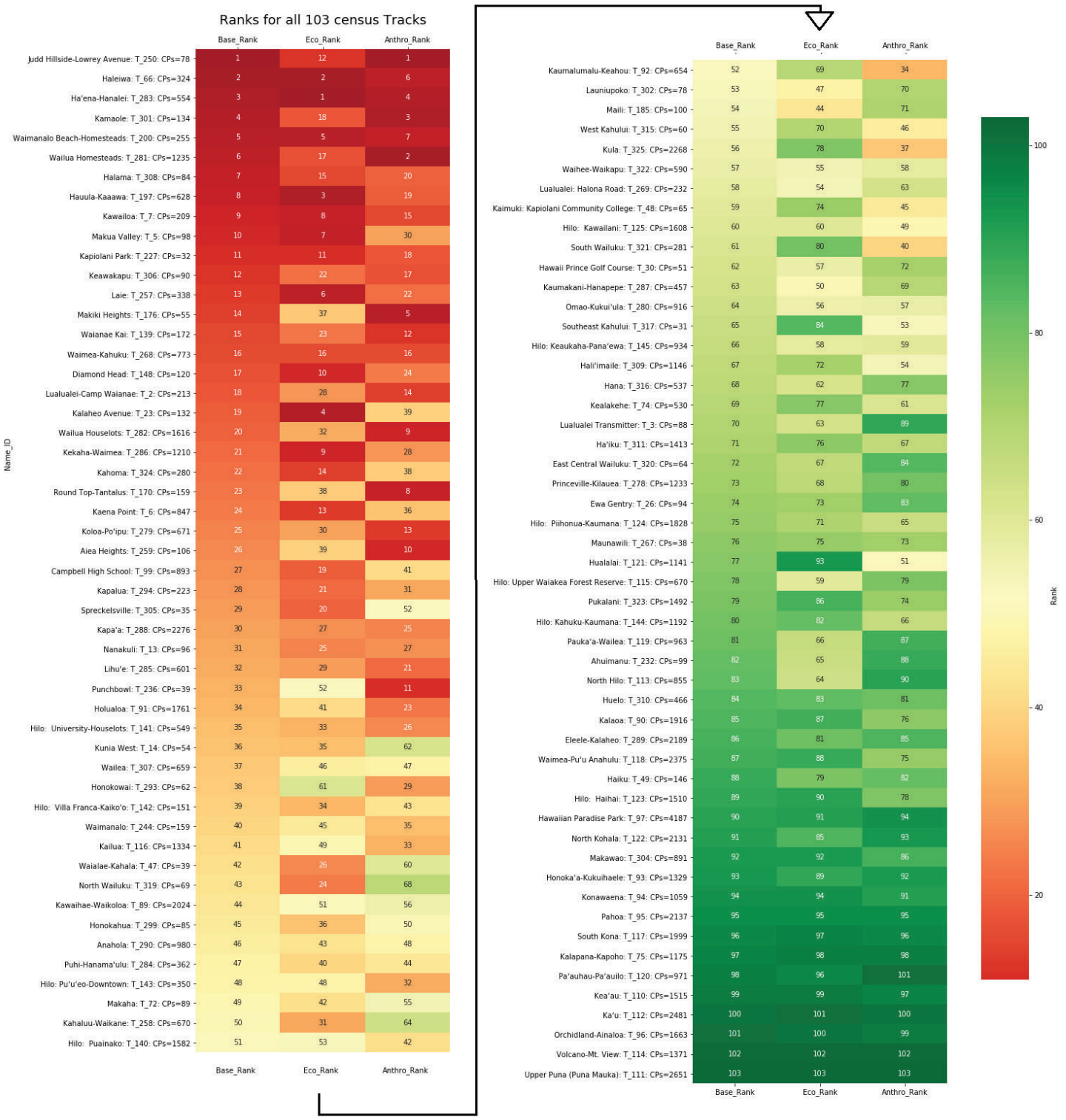


Figure B1. *Results of the sensitivity analysis, where each column represents how census tracts are prioritized (via a statewide ranking) for each of the three scenarios. The leftmost being the base scenario where all weights are equal to one, the middle column represents the Ecological Scenario and the rightmost represents the human health scenario.*

To quantify the difference between the sensitivity test scenarios numerically, the deviation from the base scenario was calculated for each tract by simply subtracting the rank of the tract in the test scenario by its rank in the base scenario and taking the absolute value of the result. This metric shows how far up or down the ranking an individual track will move given the changes in the risk-factor weights. Relevant statistics are compiled in Table B2 below. These statistics indicate that the average deviation in ranking one might expect if the risk factor weights were modified to the extent they were in this test would be on the average order of 6 to 9 places, though it could change up to 26 places in the maximum case. Overall, considering the rankings cover 103 census tracts, this translates into an 'uncertainty' of less than 10% on the final results, thereby lending greater confidence to the final priority rankings (using the base scenario) presented in this report.

Table B2. *Statistical table describing the deviations in ranking values of individual census tracts between the Base Scenario and the other test scenarios. Higher mean or median (50th percentile) deviations indicate that the test scenario, on average, yields a prioritization result that has a higher degree of difference when compared to the base scenario.*

Statistics for Deviations in Ranks	Ecological Scenario Deviations	Human Health Scenario Deviations
Mean	6.93	8.35
Standard Dev.	6.25	6.37
Min	0	0
25th percentile	1	3
50th percentile	5	8
75th percentile	11	12
Max	25	26

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

DEC 4 1986

MEMORANDUM

SUBJECT: UIC Program Definition of Significant Noncompliance

FROM: Michael B. Cook, Director
Office of Drinking Water

TO: Water Management Division Directors
Water Supply Branch Chiefs
State Directors

Background

Over the past 13 months, we have been working to develop a definition of what shall constitute "significant noncompliance" (SNC) for the UIC program. This effort began with a meeting in Denver in October 1985 and has continued to date with discussions at the UIPC Winter Meeting in Orlando in January, the UIPC Summer Meeting in San Antonio, the National Branch Chiefs Meeting in Seattle in September and at a UIPC/EPA SNC Meeting in Dallas in October.

The initial definition of SNC was sent to the Regions in March 1986 and was incorporated into the Office of Water's FY 1987 Accountability System and Mid-Year Evaluation Guide. Discussions of the SNC definition after March centered on guidance language that was meant to set out certain criteria for the Director to consider in determining SNC for certain MIT failures and operations over authorized pressure limits.

We have now finished these discussions and reached agreement on a definition of SNC which differs only slightly from the March 1986 version and introduced a new concept of non-SNC violations and how to deal with them.

Significant Noncompliance Definition

The definition of significant noncompliance (SNC) for the UIC program consists of the following:

I. Violations as described in Section 144.8(a) and on EPA Form 7520-4 (6-83) by the owner/operator of a Class I or a Class IV well.

II. The following violations by the owner/operator of a Class II, III or V well:

A. Any unauthorized emplacement of fluids (where formal authorization is required);

B. Well operation without mechanical integrity (MI) which causes the movement of fluid outside the authorized zone of injection if such movement may have the potential for endangering a USDW;

C. Well operation at an injection pressure that exceeds the permitted or authorized injection pressure and causes the movement of fluid outside the authorized zone of injection if such movement may have the potential for endangering a USDW;

D. The plugging and abandonment of an injection well in an unauthorized manner; [Note: This includes the "walking-away-from" responsibility to plug and abandon a well. These wells will be SNCs if there is endangerment of a USDW and there is an identifiable owner/operator. Appropriate action in those instances where no owner/operator can be identified remains unresolved and will be part of future MOAs between the States and EPA.]

E. Any violation of a formal enforcement action, including an administrative or judicial order, consent agreement, judgment or equivalent State action;

F. The knowing submission or use of any false information in a permit application, periodic report or special request for information about a well.

Guidance

Under II B, C and D of the SNC definition, it will be the Director's decision as to whether or not the noncompliance could result in endangerment. In making that decision, the Director shall be guided by the following:

In order that a decision is effectively supported and able to be documented, the Director shall take into consideration the following criteria when determining whether or not an MI test failure or the operation of an injection well above the permitted injection pressure represents an endangerment of a USDW. The criteria may be considered singly or in combination, as appropriate.

1. The presence/absence and location of a USDW.

2. How may levels of protection are there? How many have been breached? (This relates solely to well construction).

3. The quality of the injected fluid and the USDW.

4. Operational and geological experience in the adjacent area.

5. Well logs or additional logs.

6. Thickness of intervening layers.

7. Extent of the MIT failure.

8. Location of the MIT failure.

9. Injection pressure and rate (volume) and formation pressure.

10. The type of well - Salt Water Disposal or Enhanced Recovery?

11. Hydrogeological conditions.

12. Cementing records - bond logs.

While the responsibility for demonstrating that the noncompliance does not have a potential to endanger a USDW rests with the owner/operator, the Director may utilize information available from public records or from information submitted by the injection well owner/operator to make his decision.

Non-Significant Noncompliance (NSNC)

For injection wells that fail the mechanical integrity test or are found injecting at excessive pressure but are not considered to be SNC because of the above listed criteria, the Director will negotiate an agreement with the Region on taking appropriate action against the owner/operator according to the following guidelines:

1. A specific percent of wells in each State failing MI or found over pressure would have to come into compliance within 90 days of discovery of the failure. The percentage range discussed in Dallas was from 75 to 90 percent with the final number negotiated between the State and Region with Headquarters review.

2. State shall report quarterly the number or percentage of NSNC wells brought into compliance within 90 days.

3. The Regional Office and the State would agree on the variety of actions which the State would take to bring the remainder into compliance within a set period. Two years was a period suggested although not made final.

Reporting

The above referenced SNC definition is to be used for Federal reporting by approved State and Direct Implementation (DI) UIC programs beginning with the first quarter of FY 1987, October 1, 1986. Reporting of non-SNC MI failures and operation over pressure limits is to begin with the second quarter of FY 1987, January 1, 1987. Regions should begin immediately to negotiate with their States on the percentage of non-SNC wells brought into compliance within 90 days of discovery of the failure and the acceptable actions and time period for bringing wells that remain in noncompliance after 90 days into compliance.

Endangerment Criteria Examples

We are requesting that you provide us with examples of pass/fail conditions for each of the 12 endangerment criteria listed in the SNC definition. Specifically, we would like you to cite examples from your experience of instances where you would consider a well to be SNC or non-SNC based on one or more of the 12 listed criteria. Please send your examples to Tom Belk at Headquarters by December 19, 1986.

Additionally, please indicate what you consider to be a reasonable percentage of non-SNC wells to take appropriate action against in a 90 day period, and how long is reasonable to take action against any remaining wells. Ninety days, six months, one year, two years? If you require any clarification on this request please call Don Olson at FTS 382-5558.

After receipt of your comments we will summarize the cited endangerment/non-endangerment examples and incorporate them as a supplemental guidance. If necessary, we may discuss these examples and the time frame for dealing with non-SNC violations at the Winter UIC Meeting in Santa Fe.

cc: UIC Section Chiefs
Michel Paque, Director, UIPC

Please type or print all information. Please read instructions on reverse. OMB No. 2040-0042 Approval Expires 4/30/22

United States Environmental Protection Agency
Office of Ground Water and Drinking Water
Washington, DC 20460

UIC Federal Reporting System
Part II: Compliance Evaluation Significant Noncompliance

(This information is solicited under the authority of the Safe Drinking Water Act)

I. Name and Address of Reporting Agency

United States Environmental Protection Agency

II. Date Prepared *(month, day, year)*

III. State Contact *(name, telephone no.)*

IV. Reporting Period *(month, year)*

From October 1, 20

To

Item				Class and Type of Injection Wells						
				I	II SWD 2D	II ER 2R	II HC 2H	III	IV	V
V. Summary of Significant Non-Compliance (SNC)	Total Wells	A	Number of Wells with SNC Violations							
	Total Violations	B	1. Number of Unauthorized Injection SNC Violations							
			2. Number of Mechanical Integrity SNC Violations							
			3. Number of Injection Pressure SNC Violations							
			4. Number of Plugging and Abandonment SNC Violations							
			5. Number of SNC Violations of Formal Orders							
			6. Number of Falsification SNC Violations							
			7. Number of Other SNC Violations *(Specify)*							
VI. Summary of Enforcement Against SNC	Total Wells	A	Number of Wells with Enforcement Actions Against SNC							
	Total Enforcement Actions	B	1. Number of Notices of Violation							
			2. Number of Consent Agreements/Orders							
			3. Number of Administrative Orders							
			4. Number of Civil Referrals							
			5. Number of Criminal Referrals							
			6. Number of Well Shut-ins							
			7. Number of Pipeline Severances							
			8. Number of Other Enforcement Actions Against SNC Violations *(Specify)*							
VII. Summary of Compliance	Number of Wells in SNC Returned to Compliance		A. This Quarter							
			B. This Year							
VIII. Contamination	Number of Cases of Alleged Contamination of a USDW									
IX. Well Closure	Class IV/Endangering Class V Well Closures		Involuntary Well Closure							
			Voluntary Well Closure							

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate, and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

Signature and Typed or Printed Name and Title of Person Completing For m	Date	Telephone No.

Instructions and Definitions

All reporting is cumulative over the fiscal year, and includes activities from October 1 – September 30. All fields should contain a value. Do not leave blank fields. Enter 0 if there are no wells affected or no activities that occurred pertaining to the information requested. Enter NA if the field or section is not applicable to the submitter (e.g., the well type is not overseen by the submitter). Enter U if the information is unknown or not captured; fields designated as U require explanation.

Note: Significant Noncompliance violations are a subset of the violations reported on EPA Form 7520-2A.

Definitions of SNC Violations: SNC violations are violations that endanger or pose a significant potential to endanger underground sources of drinking water (USDWs), and violations that are not addressed after enforcement actions. For example:

1. The following violations for a Class I well:
   - Contamination of a USDW;
   - Injection of unauthorized fluid(s);
   - Injection into unauthorized zones;
   - Failure to cease injection after loss of MI detected; Failure to comply with corrective action requirements;
   - Failure to operate automatic shutdown system;
   - Failure to operate automatic warning system;
   - Unauthorized plugging and abandonment;
   - Violation of a Formal Order;
   - Knowing submission of false information;
   - Violations involving loss of mechanical integrity;
   - Violations of maximum injection pressure;
   - Failure to install and/or operate injection pressure and annulus pressure monitoring systems or other monitoring systems, required by permit or rule; and
   - Failure to maintain required annulus pressure.

Also, any Class I well with a non-SNC violation that is noted three times within twelve months of the first violation is considered to be in SNC. List these Class I specific violations under Other SNC Violations unless they clearly fall within the categories of violations in the list below.

2. The following violations for a Class II, III, or V well:
   - Unauthorized Injection – Any unauthorized emplacement of fluids (where formal authorization is required);
   - Mechanical Integrity – Well operation without mechanical integrity which causes the movement of fluid outside the authorized zone – if injection of such fluid may have the potential for endangering a USDW;
   - Injection Pressure – Well operation at an injection pressure that exceeds the permitted or authorized injection pressure and causes the movement of fluid outside the authorized zone of injection – if such movement may have the potential for endangering a USDW;
   - Plugging and Abandonment – The plugging and abandonment of an injection well in an unauthorized manner. These wells are in SNC only when there is endangerment of USDW and there is an identifiable owner/operator;
   - Violation of a Formal Order – Any violation of a formal enforcement action, including an administrative or judicial order, consent agreement, judgment, or equivalent action;
   - Falsification – The knowing submission or use of any false information in a permit application, periodic report or special request for information about a well; or
   - Other SNC Violations.

3. Any violation for a Class IV well.

Section V. Total No. of Wells with SNC Violations: *Significant Noncompliance violations are a subset of the violations reported on EPA From 7520-2A.* For each well class, enter the number wells with SNC violations identified in the federal fiscal year to date. Report the well even if the violation has been corrected. *Count each well only once.*

For each well class in subsections 1 through 7, enter the number the number of times each SNC violation has been identified this federal fiscal year to date.

Section VI. Total SNC Enforcement Actions: *Significant Noncompliance violations are a subset of the violations reported on EPA Form 7520-2A.* For each well class, enter the number of wells with SNC violations that have received an enforcement action(s) this year to date. Report the well even if the violation has been corrected. *Count each well only once.*

For each well class in subsections 1 through 8, enter the number of times wells with SNC violations have received each type of enforcement action this federal fiscal year to date.

Section VII. No. of Wells Returned to Compliance: *"Well Returned to Compliance" is a well that has all underlying violations resolved and compliance has been verified by the primacy program. Note: an enforcement action alone (e.g., well shut-in) does not constitute a "return to compliance;" however, plugging and abandonment does constitute a return to compliance.*
For each well class in subsection A, enter the number of wells returned to compliance (as a result of an enforcement action against a SNC violation). For each well class in subsection B, enter the number of wells returned to compliance (as a result of an enforcement action against an SNC violation) this federal fiscal year to date. *Enter each well only once.*

Section VIII. USDW Contaminations: For each well class, enter the number of times a well in SNC has allegedly contaminated a USDW this federal fiscal year to date.

Section IX. Number of Class IV/V Endangering Class V Well Closures: For Class IV and Class V wells, enter the number of voluntary or involuntary well closures.

Voluntary well closure means well closed as a direct result of outreach activities.

Involuntary well closure means wells closed as a result of enforcement actions or permit call-ins.

Well closure describes a process to permanently discontinue injection in accordance with the UIC regulations.

Paperwork Reduction Act

The public reporting and record keeping burden for this collection of information is estimated to average 5.5 hours per response. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, DC 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

CITY AND COUNTY OF HONOLULU
Department of Budget and Fiscal Services
Real Property Assessment Division

Parcel Information

Parcel Number	560050050000
Location Address	56-970 KAMEHAMEHA HWY
Project Name	
Legal Information	LOT 20 MAP 6 LCAPP 1095 35.660 AC TOG W/ESMT SUBJ/GRANT OF ESMT
Property Class	AGRICULTURAL
Land Area (approximate sq ft)	1,553,350
Land Area (acres)	35.6600

Plat Map PDF GIS Parcel Map

Email us at bfsrpmailbox@honolulu.gov regarding Supplemental Plat Map PDFs.

Owner Information

Owner Names
PONTIN,DUKE H Fee Owner
PONTIN,BRANDI A Fee Owner
PONTIN,COVE K Fee Owner
PONTIN,KEAL T Fee Owner

⊖ Hide All Owners and Addresses

Owner Name	Owner Type
PONTIN,DUKE H	Fee Owner
PONTIN,BRANDI A	Fee Owner
PONTIN,COVE K	Fee Owner
PONTIN,KEAL T	Fee Owner

Assessment Information

⊕ Show Historical Assessments

Assessment Year	Property Class	Assessed Land Value	Dedicated Use Value	Land Exemption	Net Taxable Land Value	Assessed Building Value	Building Exemption	Net Taxable Building Value	Total Property Assessed Value	Total Property Exemption	Total Net Taxable Value
2023	AGRICULTURAL	$855,800	$8,600	$0	$8,600	$552,800	$0	$552,800	$561,400	$0	$561,400

2023 amended values not to be posted until new tax rates are processed on or after July 20.
How to calculate real property taxes

The Assessment Information section contains records for the last 10 years.
For inquiries over 10 years and any other assessment data questions, please email the Real Property Assessment Division at bfsrpmailbox@honolulu.gov

Land Information

Land Classification	Square Footage	Acreage	Agricultural Use Indicator
AGRICULTURAL	1,553,350	35.66	Yes

Department of Planning and Permitting (DPP)

Agricultural Assessment Information

Acres in Production	Agricultural Type	Agricultural Value
35.66	PAST	$8,558

This parcel has land in agricultural usage and therefore agricultural usage assessments have been made.

Commercial Improvement Information

Property Class		**Units**	0
Building Card	1	**Structure Type**	WAREHOUSE MET/LOW
Building Number	1	**Year Built**	2013
Improvement Name		**Effective Year Built**	2013
Identical Units	0	**Gross Building Description**	

Card	Section	Floor #	Area	Perimeter	Usage	Wall Height	Exterior Wall
1	1	1	50,750	990	Horse Arena	22	DEFAULT WALLS

Other Building and Yard Improvements

Description	Quantity	Year Built	Area
PHOTOVOLTAIC	1	2013	1

Permit Information

Date	Permit Number	Reason	Permit Amount
1/12/2015	759765	ALTERATION	$35,000
5/6/2013	722683	ELECTRICAL	$150,000
2/27/2012	686990	NEW BUILDING	$500,000
2/27/2012	686989	OTHER WORK	$2,200,000
6/9/2010	657336	ELECTRICAL	$1,000

Department of Planning and Permitting (DPP)

Sales Information

Sale Date	Sale Amount	Instrument #	Instrument Type	Instrument Description	Valid Sale	Date of Recording	Land Court Document Number	Cert #	Book/Page
06/08/2010			FEE CONVEYANCE	Grant of easement		06/10/2010	3970391	863387	
03/15/2010			FEE CONVEYANCE	Grant of easement		06/10/2010	3970285	954528	
07/30/2009	$1,050,000		FEE CONVEYANCE	Deed	Valid	08/06/2009	3886123	954528	
07/27/2005	$14,400,000	2005-149155	FEE CONVEYANCE	Deed	Valid	07/27/2005	3304476	761922	
07/11/2002	$18,844,354	2002-127617	FEE CONVEYANCE	Deed	Valid	07/23/2002	2824842	617562	
12/19/1997						12/24/1997	2428680	17854	

Recent Sales in Area

Sale date range:

From: 02/23/2020 **To:** 02/23/2023

Sales by Neighborhood

1500 Feet Sales by Distance

Treasury Division
Pay online at www.rphnlpay.com
Other Payment Options Click Here

Please call Treasury Division at (808)768-3980 if you have questions on your balance.

Historical Tax Information

Year	Tax	Payments and Credits	Penalty	Interest	Other	Amount Due
⊞ 2022	$2,916.69	($2,916.69)	$0.00	$0.00	$0.00	$0.00
⊞ 2021	$300.00	($300.00)	($3.24)	($0.19)	$0.00	$0.00
⊞ 2020	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2019	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2018	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2017	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2016	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2015	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2014	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00

Treasury Division
How to calculate real property taxes

The Historical Tax Information section displays records for the last 10 years. For real property tax information inquiries over 10 years, please contact the Treasury division at bfstreasmailbox@honolulu.gov or (808)768-3980.

Map



No data available for the following modules: Condominium/Apartment Unit Information, Appeal Information, Residential Improvement Information, Residential Additions, Sketches, Current Tax Bill Information.

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Developed by Schneider GEOSPATIAL

L-322 STATE OF HAWAII
OFFICE OF ASSISTANT REGISTRAR
RECORDED
AUG 06, 2009 08:01 AM

Doc No(s) 3886123
on Cert(s) 761,922

Issuance of Cert(s) 954,528

/s/ NICKI ANN THOMPSON
ASSISTANT REGISTRAR
CONVEYANCE TAX: $3150.00

20 3/4 Z7

LAND COURT SYSTEM | REGULAR SYSTEM

Return by Mail ☐ Pickup XX To:

GOODSILL ANDERSON QUINN & STIFEL LLP
Alii Place, Suite 1800
1099 Alakea Street
Honolulu, Hawaii 96813
Attn.: Lani L. Ewart

TGOH A200935035-S
TGES A9-101-3457
BARBARA PAULO

Total Pages: 13

Tax Map Key No.: (1) 5-6-5-5

LIMITED WARRANTY DEED WITH COVENANTS

CONTINENTAL PACIFIC, LLC, a Delaware limited liability company (the "Grantor"), whose address is P. O. Box 1350, Santa Rosa, Florida 32459, in consideration of the sum of TEN AND NO/100 DOLLARS ($10.00) and other valuable consideration previously paid to Grantor by **DUKE HANCOCK PONTIN**, husband of Brandi Ann Pontin, **BRANDI ANN PONTIN**, wife of Duke Hancock Pontin, **COVE KIRKWOOD PONTIN**, unmarried, and **KEAL THOMAS PONTIN**, unmarried (collectively, the "Grantee"), whose address is P. O. Box 717, Kahuku, Hawaii 96731, the receipt and sufficiency of which is hereby acknowledged by Grantor, and upon and subject to the covenants and conditions herein set forth, does hereby GRANT, BARGAIN, SELL and CONVEY unto Grantee, **AS JOINT TENANTS**, their assigns, and the survivor of them and his or her heirs, devisees, personal representatives and assigns, forever, that certain real estate (the "Property") situated at Kahuku, City and County of Honolulu, Island of Oahu, State of Hawaii, and more particularly described in **Exhibit A**, attached hereto and incorporated herein by this reference, subject to the encumbrances herein and in **Exhibit A**, attached hereto, **AND SUBJECT ALSO TO THE FOLLOWING COVENANTS AND AGREEMENTS:**

1. Property in "As Is, Where Is" Condition.

a. No Warranties. Subject to the representations made by Grantor in paragraph 4 (Seller's Representations) of that certain unrecorded Purchase and Sale Agreement dated July 21, 2009, by and between Grantor and said Duke Pontin and Brandi Pontin (the "Sales Contract"), it is expressly understood and agreed that, except for the limited warranty of title contained herein, Grantor has not made any representation or warranty, express or implied, regarding any aspect of the Property, including (i) the soil, water, utilities, condition or location of any improvements, or other condition located upon or otherwise affecting the Property, or (ii) any laws, ordinances, regulations, licenses, permits, certificates or any legal, engineering or construction studies, estimates or matters relating to the Property, or (iii) the use or condition of the Property or any improvements thereon, or any development on the Property or the right so to do, or the feasibility thereof, and Grantor shall not be liable for any latent or patent defect therein, or (iv) the implied warranties of merchantability, fitness for a particular purpose, suitability, habitability, quality, physical condition and value, and Grantor hereby disclaims any and all liability for any and all such representations and warranties. Grantee agrees that they have examined and investigated the Property prior to the execution of this instrument and that Grantee has relied solely upon such examinations and investigations in acquiring the Property. Without limiting the generality of the foregoing, Grantee acknowledges that (i) they have made all inspections, investigations and analyses deemed necessary or appropriate to determine whether to proceed with Grantee's acquisition of the Property, and (ii) subject to the representations made by Grantor in paragraph 4 (Seller's Representations) of the Sales Contract, Grantor has made no representation or warranty, express or implied, concerning the Property's compliance with environmental or other applicable laws.

b. "As Is" Condition. Grantee acknowledges and agrees that, subject to the representations made by Grantor in paragraph 4 (Seller's Representations) of the Sales Contract, they are acquiring the Property in its "as is, where is" condition, with all faults, and that Grantee has assumed all risks regarding all aspects of the Property, and the condition thereof, including, without limitation: (i) the risk of any physical condition affecting the Property including, without limitation, the existence of any soils conditions, or the existence of archeological or historical conditions on the Property; (ii) the risk of any damage or loss to the Property caused by any means including, without limitation, flood or earthquake; and (iii) the risk of use, zoning, habitability, merchantability or quality of the Property or the suitability of the Property for its present use or future development; and (iv) the activities of Grantor or others on adjacent or nearby lands in compliance with applicable laws and regulations, and covenants, if any, applicable to such lands.

c. Adjacent Land Use. Grantee acknowledges and agrees for its successors and assigns and any other party claiming by, through or under it that: (i) the

Trustees under the Will and of the Estate of James Campbell, Deceased, affiliates of the Estate of James Campbell and others have entered and may further enter into agreements with others for the development and use of other lands owned by or formerly owned by said Trustees located adjacent to or near the Property; (ii) such agricultural, developmental, commercial and other activities may involve by way of example and not in limitation thereof, noise, smoke, soot, dust, lights, noxious vapors, odors, and other nuisances of every description arising from or incidental to the activities conducted from time to time on adjacent or other nearby lands, subject only to zoning and other legal restrictions on use; and (iii) Grantee is acquiring the Property subject to all risks associated with the location of the Property. The foregoing shall not prevent Grantee from pursuing all remedies legally available to Grantee in the event of any violation of zoning or other legal restrictions on use or other applicable law or regulation.

d. Government Approvals. Grantee acknowledges that Grantor has made and makes no representations regarding Grantee's ability to obtain or retain the zoning, governmental approvals or permits necessary to use, occupancy or further development of the Property.

2. Attorneys' Fees. In the event of a dispute under this instrument, the prevailing party shall be entitled to recover from the losing party all costs including reasonable attorneys' fees.

3. Governing Law. This instrument shall be governed by laws of the State of Hawaii.

4. Effect of Invalidity. The reservations, limitations, restrictions, covenants and conditions set forth herein shall be deemed independent and severable, and the invalidity or partial invalidity of any provision or portion thereof, of any such reservations, limitations, restrictions, covenants or conditions shall not affect the validity or enforceability of any other provisions hereof.

5. Joint and Several Liability. Wherever the term "Grantee" refers to more than one person, the terms, covenants, conditions and agreements of this instrument shall be jointly and severally binding upon each such person. Any notice given to any such person shall be deemed to be notice upon all such persons.

TOGETHER WITH the reversions, remainders, rents, issues and profits thereof, together with all buildings, improvements, tenements, rights, easements, privileges, and appurtenances to the same belonging or appertaining or held and enjoyed therewith, and all of the estate, right, title and interest of Grantor both at law and in equity therein and thereto.

TO HAVE AND TO HOLD the same unto Grantee, **AS JOINT TENANTS**, their assigns, and the survivor of them and his or her heirs, devisees, personal representatives and assigns, forever.

AND Grantor, for itself and its successors and assigns, does hereby covenant and agree with Grantee, their assigns, and the survivor of them and his or her heirs, devisees, personal representatives, and assigns, that Grantor has done or suffered no act or thing whereby the Property hereby granted is encumbered, except as aforesaid and set forth hereinafter; that the property is free and clear of liens and encumbrances made or suffered by Grantor except for the encumbrances contained herein and as set forth in **Exhibit A**, and real property taxes not yet due and payable; and that Grantor will and its successors and assigns shall **WARRANT AND DEFEND** the same unto Grantee, their assigns, and the survivor of them and his or her heirs, devisees, personal representatives, and assigns, forever, against the loss or claims and demands of all persons claiming by, through or under Grantor except as aforesaid.

AND Grantee does hereby covenant to and with Grantor for the benefit of Grantor, that Grantee will observe and comply with all of the terms, covenants, conditions and restrictions set forth in any declaration of covenants or deed of record with respect to the Property, as the same exist or may hereafter be amended from time to time in accordance with law and the terms of such declaration(s) of covenants or deed(s), on the part of Grantee to be observed and performed, as and when required to do so, and will indemnify, defend and hold Grantor harmless from and against any failure to observe and comply with any such terms, covenants, conditions and restrictions.

The terms "Grantor" and "Grantee" wherever herein used shall be held to mean and include Grantor, its successors and assigns, and Grantee, their assigns, and the survivor of them and his or her heirs, devisees, personal representatives, and assigns, and this instrument shall be binding upon and shall inure to the benefit of the parties hereto and their said respective heirs, devisees, personal representatives, successors and assigns.

The parties hereto agree that this instrument may be executed in counterparts, each of which shall be deemed an original, and said counterparts shall together constitute one and the same agreement, binding all of the parties hereto, notwithstanding that all of the parties are not signatory to the original or the same counterpart.

[The following page is the signature page]

IN WITNESS WHEREOF, the parties have executed this Limited Warranty Deed with Covenants as of the 30th day of July, 2009.

Grantee:

DUKE HANCOCK PONTIN

BRANDI ANN PONTIN

COVE KIRKWOOD PONTIN

KEAL THOMAS PONTIN

Grantor:

CONTINENTAL PACIFIC, LLC,
a Delaware limited liability company

By _____
Jefe A. Henderson
Its Manager

IN WITNESS WHEREOF, the parties have executed this Limited Warranty Deed with Covenants as of the 30 day of July, 2009.

Grantee:

DUKE HANCOCK PONTIN

BRANDI ANN PONTIN

COVE KIRKWOOD PONTIN

Keal Pontin

KEAL THOMAS PONTIN

Grantor:

CONTINENTAL PACIFIC, LLC,
a Delaware limited liability company

By _____
Jere A. Henderson
Its Manager

STATE OF HAWAII)
) SS.
CITY & COUNTY OF HONOLULU)

On this 29th day of July, 2009, before me personally appeared DUKE HANCOCK PONTIN, to me personally known, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

BARBARA T. PAULO NOTARY 96-314 PUBLIC STATE OF HAWAII

Barbara T. Paulo

Printed Name: _____

Notary Public, State of Hawaii

Barbara T. Paulo
Expiration Date: June 14, 2012

My commission expires: _____

(Official Stamp or Seal)

NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Limited Warranty Deed with Covenants re: TMK No. (1) 5-6-5-5

Doc. Date: _____ or ☐ Undated at time of notarization.

No. of Pages: 12 Jurisdiction: First Circuit (in which notarial act is performed)

Barbara T. Paulo 7/29/09

Signature of Notary Date of Notarization and Certification Statement

BARBARA T. PAULO NOTARY 96-314 PUBLIC STATE OF HAWAII

Barbara T. Paulo

Printed Name of Notary

(Official Stamp or Seal)

STATE OF HAWAII)
) SS.
CITY & COUNTY OF HONOLULU)

On this 29th day of July, 2009, before me personally appeared BRANDI ANN PONTIN, to me personally known, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

Barbara T. Paulo

Printed Name: _____

Notary Public, State of Hawaii Barbara T. Paulo
Expiration Date: June 14, 2012

My commission expires: _____
Barbara T. Paulo
Expiration Date: June 14, 2012

(Official Stamp or Seal)

NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Limited Warranty Deed with Covenants re: TMK No. (1) 5-6-5-5

Doc. Date: _____ or ☒ Undated at time of notarization.

No. of Pages: 12 Jurisdiction: First Circuit
(in which notarial act is performed)

Barbara T. Paulo 7/29/09

Signature of Notary Date of Notarization and Certification Statement

Barbara T. Paulo

Printed Name of Notary

(Official Stamp or Seal)

STATE OF HAWAII)
) SS.
CITY & COUNTY OF HONOLULU)

On this 29th day of July, 2009, before me personally appeared COVE KIRKWOOD PONTIN, to me personally known, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

BARBARA T. PAULO NOTARY 96-314 PUBLIC STATE OF HAWAII

Barbara T. Paulo

Printed Name: Barbara T. Paulo

Notary Public, State of Hawaii Barb

My commission expires: Expiration Date: June 14, 2012

(Official Stamp or Seal)

NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Limited Warranty Deed with Covenants re: TMK No. (1) 5-6-5-5

Doc. Date: _____ or ☐ Undated at time of notarization.

No. of Pages: 12 Jurisdiction: First Circuit (in which notarial act is performed)

BARBARA T. PAULO NOTARY 96-314 PUBLIC STATE OF HAWAII

Barbara T. Paulo 7/29/09

Signature of Notary Date of Notarization and Certification Statement

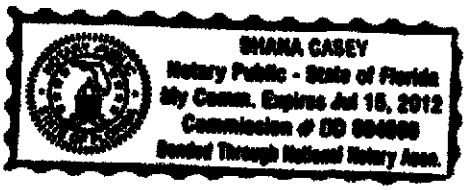
Barbara T. Paulo

Printed Name of Notary

(Official Stamp or Seal)

STATE OF Florida)
) SS.
COUNTY OF Monroe)

On this 30 day of July, 2009, before me personally appeared KEAL THOMAS PONTIN, to me personally known, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.



Shana Casey

Printed Name: Shana Casey

Notary Public in and for the above State

My commission expires: 7/15/2012

(Official Stamp or Seal)

STATE OF HAWAII)
) SS.
CITY & COUNTY OF HONOLULU)

On this _____ day of JUL 3 0 2009, 2009, before me personally appeared JERE A. HENDERSON, to me personally known, who, being by me duly sworn or affirmed, did say that such person executed the foregoing instrument as the free act and deed of such person, and if applicable in the capacity shown, having been duly authorized to execute such instrument in such capacity.

ALAN S. CHUN NOTARY 91-269 PUBLIC STATE OF HAWAII

_____

Printed Name: _____

Notary Public, State of Hawaii ALAN S. CHUN

My commission expires: Expiration Date: April 11, 2011

(Official Stamp or Seal)

NOTARY CERTIFICATION STATEMENT

Document Identification or Description: Limited Warranty Deed with Covenants re: TMK No. (1) 5-6-5-5

Doc. Date: _____ or ☒ Undated at time of notarization.

No. of Pages: 12

Jurisdiction: First Circuit
(in which notarial act is performed)

JUL 3 0 2009

_____

Signature of Notary

Date of Notarization and Certification Statement

Alan S. Chun

_____

Printed Name of Notary

ALAN S. CHUN NOTARY 91-269 PUBLIC STATE OF HAWAII

(Official Stamp or Seal)

EXHIBIT A

Tax Map Key No. (1) 5-6-5-5

All of that certain parcel of land situate at Kahuku, District of Koolauloa, city and County of Honolulu, State of Hawaii, described as follows:

LOT 20, area 35.660 acres, more or less, as shown on Map 6, filed in the Office of the Assistant Registrar of the Land Court of the State of Hawaii with Land Court Application No. 1095 of Trustees under the Will and of the Estate of James Campbell, deceased.

TOGETHER WITH a nonexclusive easement for ingress and egress and utility purposes, over a Portion of Easement "26" as shown on Map 51, located within Lot 1190 as shown on Map 153, Lot 200 as shown on Map 17 and Lot 1167 as shown on Map 137, as granted by GRANT OF EASEMENT FOR ACCESS AND UTILITY RIGHTS dated July 23, 2002, filed as Land Court Document No. 2824843; assigned by document dated July 27, 2005, filed as Land Court Document No. 3304477, and subject to the terms and provisions, including the failure to comply with any covenants, conditions and reservations, contained therein.

Being land(s) described in Transfer Certificate of Title No. 761,922 issued to CONTINENTAL PACIFIC, LLC, a Delaware limited liability company.

SUBJECT, HOWEVER, to the following:

1. Triangulation Survey Station "PUUKI" located within the land described herein, as shown on the Tax Map. Attention is invited to the provisions of Section 172-13 of the Hawaii Revised Statutes, relative to destruction, defacing or removal of survey monuments.

2. GRANT

TO	:	HAWAIIAN ELECTRIC COMPANY, INC., a Hawaii corporation
DATED	:	December 19, 1997
FILED	:	Land Court Document No. 2428681
GRANTING	:	a perpetual right and easement for utility purposes

3. The terms and provisions contained in the following:

INSTRUMENT	:	TRUSTEES LIMITED WARRANTY DEED AND QUITCLAIM DEED WITH RESTRICTIONS, COVENANTS AND RESERVATION OF RIGHTS
DATED	:	July ---, 2002 (acknowledged July 9, 2002 and July 11, 2002)
FILED	:	Land Court Document No. 2824842
RECORDED	:	Document No. 2002-127617

The foregoing includes, but is not limited to, matters relating to drainage, access and utility rights, right to grant easements and other rights and rights of kuleana owners.

4. The terms and provisions contained in the following:

INSTRUMENT	:	LIMITED WARRANTY DEED AND QUITCLAIM DEED WITH COVENANTS
DATED	:	July 27, 2005
FILED	:	Land Court Document No. 3304476

5. Claims arising out of customary and traditional rights and practices, including without limitation those exercised for subsistence, cultural, religious, access or gathering purposes, as provided for in the Hawaii Constitution or the Hawaii Revised Statutes.

6. Discrepancies, conflicts in boundary lines, shortage in area, encroachments or any other matters which a correct survey or archaeological study would disclose.

7. Water rights, claims or title to water, whether or not shown by the public records.

8. Unrecorded month-to-month tenant lease.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 9

IN THE MATTER OF:	)	**DECLARATION OF JELANI SHAREEM (PENALTY)**
NSHE HI Narcissus, LLC,	)	
Respondent.	)	Docket No. UIC-09-2022-0058

I, Jelani Shareem, hereby declare as follows:

Professional Background

1. Since 2014, I have been employed as a credentialed Large Capacity Cesspool (LCC) Inspector and Enforcement Officer in the Safe Drinking Water Act (SDWA) Section of the Enforcement and Compliance Assurance Division (ECAD-3-3) at the U.S. Environmental Protection Agency (EPA), Region 9, in San Francisco, California. I continue to work for EPA in this capacity and am the Enforcement Officer assigned to the above-referenced case.

2. To obtain my inspector credential's (ID Number 32505), I completed EPA's Order 3500.1 Program-Specific Training Requirements for the SDWA's UIC Program by taking the mandatory "Introduction to the Underground Injection Control Program" training that was delivered in 2013 by the Region's most senior class V shallow injection well inspectors and completing the "R9 UIC Class V Well Exam". In addition, I also completed mandatory self-study of the UIC Program regulations at 40 C.F.R. part 144 and the UIC Inspection Manual. Regarding completion of my mandatory on-the-job field training, I

completed the required 16 hours of on-site class V shallow injection well facility inspections with the Region's three most experienced class V shallow injection well inspectors. I also reviewed the required two class V shallow injection well inspection reports that were prepared by the senior inspectors.

3. As a credentialed LCC Inspector and Enforcement Officer, my duties include targeting facilities for inspections, conducting inspections, post inspection follow-up, initiating enforcement if an LCC violation is identified, and calculating bottom-line and initial offer penalties for settlement of LCC enforcement actions using the Underground Injection Control Program Judicial and Administrative Order Settlement Penalty Policy (UIC Penalty Policy), September 1993 and BEN Financial model.

4. In the fall of 2019, I became ECAD's principal Enforcement Officer responsible for targeting facilities in the state of Hawai'i for LCC inspections and potential SDWA enforcement actions. In addition to fulfilling my core enforcement responsibilities as ECAD's principal Enforcement Officer, I routinely train new inspectors on the fundamentals of the UIC Program's regulations for shallow injection wells and the importance of the ban on LCCs. I also regularly train new inspectors on LCC targeting techniques, methods for conducting thorough on-site facility inspections, and the process for developing and calculating fair and equitable penalties for the purpose of settlement. To date, I have trained 7 inspectors on conducting thorough class V shallow injection well facility inspections and LCC case development.

5. Targeting a facility for an inspection typically includes researching geographic information systems and property databases in order to locate evidence indicating that

a facility is served by an LCC. If my targeting shows that a facility may be served by an LCC, I recommend to ECAD management that a future inspection be scheduled to gather more information about the facility.

6. To date, I have conducted more than 70 Class V well inspections and initiated 24 enforcement actions that required the closure of 133 LCCs.

NSHE HI Narcissus, LLC Case Background

7. In February 2021, I began reviewing available information on properties in Haleiwa, Hawai‘i because the town of Haleiwa is known for having a high concentration of cesspools that are recognized by the State of Hawai‘i as being Priority Level 1 for replacement because they have a high potential to impact human health and the environment. As part of my inspection targeting, I reviewed: 1) City and County of Honolulu (CCH) sewer maps; 2) County Assessor Tax Maps and Hawai‘i’s Department of Commerce and Consumer Affairs business registration website; 3) the State of Hawai‘i, Department of Health (HDOH) individual wastewater system (IWS) extract from February 2021; 4) geographic imagery via Google Maps; and 5) EPA’s R9iWells database for inventoried Class V Injection Wells, which includes large capacity septic systems.

8. Through my targeting research, I determined that:

    1) The CCH operated sewer system did not appear to extend service to a property located at 66-532 Kamehameha Highway in Haleiwa, HI (Tax Map Key: 1-6-2-007-019) (hereafter, “Property”).

    2) The County Assessor Tax Maps showed that the Property is owned by NSHE HI Narcissus, LLC and the Department of Commerce and Consumer Affairs business

registration website showed that Duke Pontin was listed as the managing member of NSHE HI Narcissus, LLC.

3) The February 2021 HDOH IWS extract did not have any records on the type of wastewater system(s) that serve the Property.

4) Aerial imagery from Google Maps showed that a mid-size commercial building is located on the Property. Street view images available on Google Maps showed that the building appeared to contain an art gallery. A July 2019 Street view image from Google Maps also showed two food trucks, Jenny's Shrimp Truck, and Island Fresh Takeout, operating in the Property's parking lot. The same street view image also showed potential restrooms located on the side of the building that is opposite Jenny's Shrimp Truck.

5) There was no record that NSHE HI Narcissus, LLC had submitted any inventory information to the R9iWells database regarding the operation of any Class V Injection Wells at the Property.

9. Based on the information I had gathered and my experience as an LCC Inspector, I concluded that the Property may be served by a cesspool that meets the regulatory criteria of a non-residential LCC. I referred the Property to Inspector Connor Adams for inspection to confirm whether the Property had a non-residential cesspool with the capacity to serve 20 or more persons in a day.

10. Inspector Adams conducted an inspection of the Property on March 2, 2021 (Exhibit 1). Based on Inspector Adams observations, which are documented in his inspection report, Inspector Adams and I determined that the Property is served by a non-residential LCC.

11. In or about April 2021, Inspector Adams emailed a copy of EPA's signed inspection report to Respondent's managing member Duke Pontin. Duke Pontin provided photographs dated April 28, 2021 that showed "Employees Only" signs had been posted on the Property's restroom doors and a portable bathroom had been provided (Exhibit 18d).

12. Inspector Adams departed from EPA Region 9 later in the summer of 2021. I was officially assigned to be the case officer on the NSHE HI Narcissus, LLC enforcement matter in the fall 2021.

13. On November 22, 2021, I sent managing member Duke Pontin a Show Cause letter that was signed by manager to inform him that EPA had determined that NSHE HI Narcissus, LLC was liable under the SDWA for failing to close the LCC that serves the Property by the April 5, 2005 regulatory deadline or any time afterwards. The same day, Duke Pontin contacted me by telephone to discuss the Show Cause letter and EPA's regulations regarding LCCs. About an hour after our telephone conversation, Duke Pontin emailed me photographs that showed the Property's restroom doors had been screwed shut and the Property's cesspool had been pumped (Exhibits 18e and 18f).

14. On August 2, 2022, EPA filed an administrative complaint for penalties and opportunity for a public hearing on the demand for penalties (Complaint). In the Complaint, EPA alleged that NSHE HI Narcissus, LLC (Respondent) owned and operated the LCC identified on the Property from at least October 4, 2017, when Respondent purchased the parcel, until at least April 28, 2021, when the restrooms served by the cesspool were closed by Respondent.

Development of Target Penalty Figure

15. I relied on The Policy on Civil Penalties (GM-21), and its companion document, A Framework for Statute-Specific Approaches to Penalty Assessments (GM-22) to develop an appropriate target penalty figure (Exhibit 36).

16. In developing an appropriate target penalty figure, I considered the following SDWA statutory factors: (i) seriousness of violation; (ii) the economic benefit (if any) resulting from the violation; (iii) any history of such violations; (iv) any good-faith efforts to comply with the applicable requirements; (v) the economic impact of the penalty on the violator; and (vi) such other matters as justice requires.

17. In accordance with the GM-21 and GM-22 penalty framework, I first determined the preliminary deterrence figure, which is composed of a benefit component that is based on Respondent's economic benefit of noncompliance and a gravity component that reflects the seriousness of the violation. After combining the benefit component and the gravity component to yield the preliminary deterrence figure, I then adjusted the preliminary deterrence figure by evaluating Respondent's degree of willfulness or negligence, level of cooperation, history of noncompliance, ability to pay, extent of noncompliance in specific areas of the United States, and any other unique factors to derive an appropriate target penalty figure.

18. As detailed below, I determined a penalty of **$133,450** is appropriate for Respondent, NSHE HI Narcissus, LLC's violation of the SDWA.

Benefit Component

19. GM-21 and GM-22 provide that the economic advantage gained by noncompliance is the benefit of avoiding expenditures necessary to achieve compliance. Here, Respondent realized an economic advantage gained from noncompliance by: (1) delaying the costs of closing and replacing the LCC with a permitted wastewater treatment system, and (2) avoiding the costs of operating and maintaining the new wastewater system.

20. To calculate the benefit component value resulting from Respondent's noncompliance, I contacted David Smith-Watts, who is EPA's National Coordinator for Civil Penalties and Financial Analyses. My reason for contacting National Coordinator Smith-Watts to calculate the benefit component value was because of his many years of experience in computing the economic advantage gained from noncompliance by using a cash flow analysis model that examines the effect that the delayed and/or avoided pollution control costs had on a violator's cash flow. In using the delayed capital investments, delayed one-time non-depreciable costs, and avoided cost inputs that I provided, National Coordinator Smith-Watts calculated a benefit component value of $4,317.98 (Exhibit 48). A breakdown of costs, dates, and other information that I presented to National Coordinator Smith-Watts to compute the benefit component value is discussed below.

    a. Delayed Costs. Delayed costs are expenditures that are deferred, such as the capital costs of converting LCCs to individual wastewater treatment systems, and one-time non-depreciable costs that are associated with designing and

permitting an individual wastewater treatment system and closing an LCC. Respondent delayed the costs of closing and replacing the LCC between October 4, 2017, when Respondent purchased the property, and the time when the costs were incurred. On December 3, 2021 and March 9, 2023, Respondent provided EPA with documentation that showed the various capital investments and one-time non-depreciable expenditures that Respondent made in order to achieve compliance with the LCC closure requirements.[1] A breakdown of my understanding of the documents that showed Respondent's delayed capital investments and one-time non-depreciable costs and the dates in which the costs were incurred are shown in Tables 1 and 2 below:

Table 1: Delayed Capital Investments

Capital Investment	Costs
Septic Tank	$8,010
Chambers	$6,570
Piping	$670
Sand	$730
Rock	$1,140

[1] On December 3, 2021, Respondent provided me with an invoice from ABC Plumbing, LLC for cesspool pumping (Exhibit 19c). On March 9, 2023 and as part of its prehearing exchange, Respondent provided EPA with a copy of a handwritten breakdown of various dollar figures that I interpreted to mean the amount of money Respondent spent to close and replace the LCC with an approved individual wastewater system (Respondent's Exhibit C).

Table 2: Delayed One-Time Non-Depreciable Costs

Item or Service	Costs	Cost Estimate Date
Cesspool Pumping	$175	November 11, 2021
Cesspool Backfill	$665	December 02, 2021
Geotechnical Survey	$1,880	June 03, 2022
Engineering/Design	$2,800	June 03, 2022
Dirt Hauling	$600	June 03, 2022
Rock Hauling	$1,355	June 03, 2022
Hauling Fee	$1,228.51	June 03, 2022

b. Avoided Costs. Avoided costs, such as annual operation and maintenance costs, are expenditures that are nullified by the violator's failure to comply; these costs will never be incurred. Using operation and maintenance estimates that I identified in the January 2021 Cesspool Conversions Finance Research Summary Report by HDOH (Exhibit 30), I estimated that Respondent would also have incurred annual septic system operating and maintenance costs of $852 if the property had been served by a 1,000-gallon septic tank with chamber disposal system between October 4, 2017, when Respondent acquired the property, and April 28, 2021, when the restrooms served by the cesspool were closed. Due to the period of noncompliance, Respondent avoided paying the costs associated with operating and maintaining the septic system.

Gravity Component

21. GM-21 and GM-22 advises penalty developers to determine the "seriousness of the violation" by considering (i) the actual or possible harm to the environment; (ii) the importance of the regulatory scheme; (iii) available data from other sources; and (iv) size of the violator.

22. (i) Actual or Possible Harm. GM-22 (at 15-16) recommends penalty developers determine the "actual or possible harm" associated with the violation by considering the (a) amount of pollutant; (b) toxicity of the pollutant; (c) sensitivity of the environment; and (d) length of time the violation continued.

23. (a) amount of pollutant and (b) toxicity of the pollutant. GM 22 at page 15 suggests penalty developers consider the concentration of the pollutant and the toxicity of the pollutant. For these considerations, I relied on information provided in EPA's December 7, 1999 Revisions to the Underground Injection Control Regulations for Class V Injection Wells (Exhibit 35), which notes that "Large-capacity cesspools have a high potential to contaminate USDWs because: they are not designed to treat sanitary waste; they frequently exceed drinking water MCLs for nitrates, total suspended solids and coliform bacteria; and, they may contain other constituents of concern such as phosphates, chlorides, grease, viruses, and chemicals used to clean cesspools such as trichloroethane and methylene chloride. Pathogens in untreated sanitary waste released into large capacity cesspools could contaminate the water supply sources… and pose an ''acute'' risk if consumed."

24. (c) sensitivity of the environment. GM-22 at page 15 suggests penalty developers consider the sensitivity of the environment at issue and provides the following examples of a sensitive environment: "[I]mproper discharge into waters near a drinking water intake or a recreational beach is usually more serious than discharge into waters not near any such use."

25. In consideration of the sensitivity of the environment, I relied on information presented in the 2022 Hawai‘i Cesspool Hazard Assessment & Prioritization Tool Report (Exhibit 37.1).

26. The report, which was prepared for HDOH, assesses fifteen (15) risk-factors to determine which cesspools in state census tracts should be a priority for closure because of the risks the cesspools pose to human health and the environment. According to the information provided in the report, I learned that the O‘ahu census tract in which Respondent’s LCC was located was designated a “Priority Category” area of number 2 (pg. 60) for closure because the report’s analysis of the fifteen risk-factors found that these cesspools have the “greatest contamination hazard.” In addition, the report’s analysis also determined that the O‘ahu census tract in which Respondent’s LCC was located had an “Island-Specific Priority Rank” for closure of number 2 of 34 census tracts (pg. 60). Considering the information above, I determined that from October 4, 2017 to April 28, 2021, Respondent owned or operated an LCC in an environmentally sensitive area which adds weight to the seriousness of the violation.

27. <u>(d) Length of time of the violation continued</u>. Respondent owned and operated the LCC identified on the property from at least October 4, 2017, when Respondent purchased the property, until at least April 28, 2021, when the restrooms served by the cesspool were closed by Respondent.

28. (ii) Importance to EPA's Regulatory Scheme. GM-21 and GM-22 recommends penalty developers consider the regulatory requirement at issue, i.e., failing to close the LCC that serves the property by the April 5, 2005 regulatory deadline or any time afterwards.

29. Violation of the LCC ban is an unauthorized injection of wastewater, which is a significant violation of the Underground Injection Control (UIC) program's core requirements to protect all current and potential underground sources of drinking water from contamination by injection wells. Respondent's period of unauthorized injection of untreated sanitary wastewater from the time the property was purchased to the time Respondent closed the restrooms constitutes a significant violation of one of the fundamental requirements of the UIC regulatory program (Exhibits 38 and 39).

30. (iii) Availability of Data from Other Sources. This factor was not relevant to the penalty determination in this matter because there are no recordkeeping or reporting requirements at issue, and thus was not taken into consideration.

31. (iv) Size of the Violator. GM-21 and GM-22 recommends that penalty developers should increase the gravity component where it is clear that the resultant penalty will otherwise have little impact on the violator in light of risk of harm posed by the violation.

32. Using publicly available resources, I found that Respondent is a Hawai‘ian domestic limited liability company that is the listed fee owner of real property located at 66-532 Kamehameha Highway, Haleiwa, HI 96712, Tax Map Key (TMK): 1-6-2-007-019 (Exhibit

8.1). This property comprises a commercial building and a parking lot, which is leased to mobile food vendors, and has an assessed value of $2,528,100 (Exhibit 8.1).

33. In addition to the real property located in Haleiwa, I also found that Respondent is the listed fee owner of two additional real properties located at 56-1030 Kamehameha Highway, Kahuku, HI 96731, TMK: 1-5-6-005-024, and 56-1048 Kamehameha Highway, Kahuku, HI 96731, TMK: 1-5-6-005-006 (Exhibits 33 and 56). These agricultural properties have an assessed land values of $901,900 and $26,500 (Exhibits 33 and 56).

34. In addition to identifying records that showed Respondent is the listed fee owner of three real properties, I also reviewed financial information in a OneStop Report that indicated Respondent generated $53,480 in annual sales (Exhibit 55). However, because I am unable to confirm the accuracy of the OneStop Report's estimation, I did not adjust the gravity component upward for the size of the violator factor.

Calculating the Preliminary Deterrence Figure

35. In accordance with GM-21 and GM-22, the preliminary deterrence figure is the benefit component plus the gravity component.

36. After accounting for the $4,317.98 economic benefit Respondent gained from noncompliance, I determined that the seriousness of violation warrants an assessment of fifty (50) percent of the remaining statutorily allowable penalty because Respondent's LCC was found to be located in an environmentally sensitive area and untreated sanitary waste released into LCCs has been determined to pose an acute risk to human health. The maximum administrative penalty currently allowed under the

SDWA where penalties are assessed on or after December 6, 2023 is $348,671. I referred to the Civil Monetary Penalty Inflation Adjustment Rule of 2024, 88 *Fed. Reg.* 89,312 (Dec. 27, 2023), for the current maximum administrative penalty amount.

Preliminary Deterrence Figure

Preliminary Deterrence Figure =	Benefit Component	+ Gravity Component
	= $4,317.98	+ (($348,671 - $4,317.98))*(.5)
	= $4,317.98	+ $172,176.51

Adjustments to the Preliminary Deterrence Figure

37. GM-21 and GM-22 provide that penalty developers consider the following factors for adjusting the preliminary deterrence figure either up or down: a) Degree of Willfulness and/or Negligence; b) Degree of Cooperation/Noncooperation; c) History of Noncompliance; d) Ability to Pay; and e) Any Other Unique Factors.

a. Degree of Willfulness and/or Negligence. GM-22 (p. 18) suggests penalty developers adjust the penalty up or down by no more than 20% of the gravity component to account for Respondent's negligence unless unusual circumstances require a greater adjustment. In considering this factor, I applied no adjustment on the basis that the final calculated target penalty figure will achieve the goal of deterrence by showing the general public that Respondent is in a worse position than other businesses that have complied with the LCC ban. In addition, the final calculated target penalty figure will also likely deter others in the regulated community from continuing to own and/or operate LCCs.

b. Degree of Cooperation/Noncooperation. For this factor, GM-22 (p. 19) suggests penalty developers consider: (i) prompt reporting of noncompliance; (ii) prompt correction of environmental problems; and (iii) delaying compliance. Since prompt reporting and delaying compliance are not relevant factors to consider for this matter, I evaluated only the effort that Respondent put forth to promptly correct the environmental problem. GM-22 (pg. 20) advises that when applicable, penalty developers should provide incentives to a violator for the prompt correction of the environmental problem. GM-22 also instructs penalty developers that in instances where the "violator will take all necessary steps toward correcting the problem but may refuse to reach an agreement on penalties… the gravity component of the penalty may be reduced up to twenty-five (25) percent at the discretion of the case development team." In accordance with the guidance provided, I applied a twenty-five (25) percent downward adjustment to the preliminary gravity component of the penalty because Respondent provided evidence that showed it restricted access to the restrooms served by the LCC on April 28, 2021, soon after receiving EPA's Compliance Evaluation Inspection report that was officially signed by ECAD management on April 19, 2021, and closed the LCC on December 2, 2021, 10 days after receiving EPA's November 22, 2021 show cause letter.

c. History of Noncompliance. I am not aware of any other LCC violations by Respondent, so I applied no adjustment for this factor.

d. Ability to Pay. Since Respondent has not raised inability to pay as an issue and has not provided any information to prove such a claim, I applied no adjustment for this factor.

e. Other Unique Factors. Since the start of my time as an LCC inspector for EPA Region 9, I have witnessed extensive noncompliance with the LCC ban in the State of Hawai'i. To date, I have initiated 24 enforcement actions in Hawai'i that required the closure of 133 LCCs, including closures within 0.1 miles and 0.5 miles of Respondent's property.[2] All 24 enforcement actions were well publicized throughout the state. In addition, and as reported in HDOH's 2022 Hawai'i Cesspool Hazard Assessment & Prioritization Tool report, there is an estimated 324 Priority Category 1 cesspools located in the approximate 5.178 square miles that makeup the Haleiwa census tract.[3] Based on this information, it is evident that Respondent's LCC was located in an environmentally sensitive area where past enforcement has not been sufficient to deter ongoing noncompliance. In accordance with guidance, the penalty could be adjusted up or down by 10% of the gravity component to account for unique factors to the case (GM-22 p. 24), but I applied no adjustment for this factor.

38. In summary, while I did not apply any adjustments to the degree of willfulness, history of noncompliance, ability to pay and other unique factors, I applied a twenty-five (25)

[2] Since the 2005 ban on LCCs EPA Region 9's enforcement of LCCs has required the closure of 1,250 LCCs in Hawai'i. A list of EPA's enforcement actions in Hawai'i is available at https://www.epa.gov/uic/hawaii-cesspool-administrative-orders (last visited on March 5, 2024).

[3] A portion of the estimated 324 cesspool are likely LCCs operating in violation of the ban.

percent downward adjustment to the preliminary deterrence figure on the basis of Respondent's effort to close the LCC in a timely manner.

Penalty Figure

Penalty Figure = Benefit Component + Gravity Component = $4,317.98 + ($172,176.51) + [(-.25) * ($172,176.51)] = $4,317.98 + $129,132.38 = $133,450.36

Conclusion

39. In consideration of the statutory factors at 42 U.S.C. § 300h-2(c)(4)(B) and for the reasons described above, I determined that a penalty figure of **$133,450** is appropriate for Respondent's violation of the SDWA.

JELANI SHAREEM

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Date: 2024.04.16 09:25:28 -07'00'

Jelani Shareem
Environmental Protection Specialist
Enforcement and Compliance Assurance Division

An official website of the United States government

Hawai'i Cesspool Administrative Orders

EPA has issued Administrative Orders to a number of public agencies and private entities to address violations of the large capacity cesspool requirements. Administrative Orders are issued under the Safe Drinking Water Act (SDWA) <https://epa.gov/sdwa> Sections 1423(c) and 1445(a).

This table has a scrollbar beneath for use on narrow screens.

Show ALL entries

Search:

Hawai‘i Cesspool Administrative Orders

Island(s)	Location	Respondent
Hawai‘i	Pāhoa	Kalani Honua Inc. and Retreat Village at Kalani Kai LLC <https://epa.gov/uic/sdwa-u
Kaua‘i	Kalaheo	Bank of Hawaii as Trustee of the Kukuiolono Park Trust Estate <https://epa.gov/ui
Maui	Kahului	Hawthorne Pacific Corp. <https://epa.gov/uic/uic-09-2023-0074-hawthorne-pacific-corp-cor
O‘ahu & Hawai‘i	Kapaau and Haleiwa	Hawaii Conference Foundation <https://epa.gov/uic/uic-09-2023-0060-hawaii-conference-
O‘ahu & Hawai‘i	Kaaawa, Pahoa, Hilo	Seven-Eleven Hawaii Inc. <https://epa.gov/uic/uic-09-2023-0036-seven-eleven-hawaii-inc-c
Hawai’i	Kailua-Kona	Extra Space Management Inc. and Kaloko Storage (18) HI LLC <https://epa.gov/uic
Hawai‘i	Kailua-Kona	SC Kona Self Storage LP <https://epa.gov/uic/uic-09-2023-0006-sc-kona-self-storage-lp-cons
Hawai‘i	Hilo	EAN Holdings LLC <https://epa.gov/uic/uic-09-2023-0016-ean-holdings-llc-consent-agreemen
Kaua‘i	Kalāheo	Olegario and Anne Rivera Joint Trust (Koloa Zipline and Kauai ATV) <https://epa.
Hawai‘i	Kealakekua	American Savings Bank <https://epa.gov/uic/uic-09-2023-0002-consent-agreement-and-fina
Hawai‘i	Kailua-Kona	SKS Management LLC <https://epa.gov/uic/uic-09-2022-0061-sks-management-llc-kailua-ko
O‘ahu	Hale‘iwa	NSHE HI Narcissus LLC <https://epa.gov/uic/uic-09-2022-0058-nshe-hi-narcissus-llc-kahuku-
Kaua‘i	Kapa‘a	Department of Land and Natural Resources (DLNR) <https://epa.gov/uic/uic-09-2022
Kaua‘i	Kōloa	Koloa Partners LLC <https://epa.gov/uic/uic-09-2022-0043-koloa-partners-llc-koloa-hi-settlen
Hawai‘i	Hilo	Wailuku Professional Plaza LLC <https://epa.gov/uic/uic-09-2022-0034-wailuku-profession

Island(s)	Location	Respondent
Oʻahu	Haleʻiwa	Chieko Takahashi Family Limited Partnership <https://epa.gov/uic/sdwa-uic-aoc-09-2(
Kauaʻi	Lihue	Hale Kauai Ltd. <https://epa.gov/uic/uic-09-2020-0030-kauai-beach-resort-association-lihue-h
Hawaiʻi	Captain Cook	Whale Spirit Sanctuary LLC <https://epa.gov/uic/sdwa-uic-aoc-2022-0001-whale-spirit-san(
Hawaiʻi	Honolulu	Halona Pacific LLC <https://epa.gov/uic/uic-09-2022-0015-halona-pacific-llc-honolulu-hi-cons
Hawaiʻi	Kealakekua	David Basque Trust <https://epa.gov/uic/sdwa-uic-aoc-2021-0001-david-basque-trust-kealak
Hawaiʻi	Kealakekua	B & B Lumber Inc <https://epa.gov/uic/sdwa-uic-aoc-2021-0002-b-b-lumber-inc-kealakekua-h
Maui	Lāhainā	Olowalu Elua Associates LLC <https://epa.gov/uic/uic-09-2021-0054-olowalu-elua-associat
All	State-Wide	Department of Land and Natural Resources (DLNR) <https://epa.gov/uic/uic-09-2021
Kauaʻi	Eleʻele	Smoky Mountain Helicopters Inc. <https://epa.gov/uic/uic-09-2021-0013-smoky-mountai
Oʻahu & Hawaiʻi	Waialua and Kealakekua	Hawaiʻi State Public Library System <https://epa.gov/uic/uic-09-2020-0057-hawaii-state-
Kauaʻi	Lihue	Kauai Housing Development Corporation <https://epa.gov/uic/sdwa-uic-aoc-09-2020-0
Hawaiʻi	Kailua	Hawaiʻi Department of Human Services <https://epa.gov/uic/uic-09-2020-0032-hawaii-(
Kauaʻi	Lihue	Kauai Beach Resort Association <https://epa.gov/uic/uic-09-2020-0030-kauai-beach-resor
Hawaiʻi	Kealakekua	K. Oue, Limited <https://epa.gov/uic/uic-09-2020-0013-k-oue-limited-kealakekua-hi-consent-a
Hawaiʻi	Kailua-Kona	Group Investments LLC <https://epa.gov/uic/uic-09-2020-0003-group-investments-llc-honol
Hawaiʻi	Kealakekua	County of Hawaiʻi, Kainaliu Parking Lot Comfort Station <https://epa.gov/uic/uic-09
Oʻahu	Helemano Plantation, Wahiawa	Department of Land and Natural Resources (DLNR) and City and County of Honolulu <https://epa.gov/uic/uic-09-2020-0005-hawaii-department-la
Hawaiʻi	Kealakekua	Kamuela Management LLC <https://epa.gov/uic/uic-09-2019-0057-kamuela-management-l
Hawaiʻi	Kailua-Kona	Kailua View Estates Association Inc. <https://epa.gov/uic/uic-09-2019-0051-kailua-view-e
Oʻahu	Haleʻiwa	LuckyU Enterprises Inc. <https://epa.gov/uic/uic-09-2019-0048-luckyu-enterprises-inc-halei
Oʻahu	Kapolei Business Park, Kapolei	Detroit Diesel Corporation <https://epa.gov/uic/uic-09-2019-0032-detroit-diesel-corporatio
Oʻahu	Honolulu	Kamehameha Schools <https://epa.gov/uic/uic-09-2018-0008-kamehameha-schools-honolu
Kauaʻi	Kōloa	Smith Waterhouse Family of Koloa – Old Koloa Town LLC <https://epa.gov/uic/uic-0
Oʻahu	Hawaiʻi Country Club, Wahiawa	Hawaiʻi Country Club LLC <https://epa.gov/uic/uic-09-2018-0007-hawaii-country-club-llc-w
Oʻahu	Kapolei, Honolulu	Honolulu LLC dba Hon Realty LLC <https://epa.gov/uic/uic-09-2018-0005-honolulu-llc-db
Oʻahu	Kapolei	Kloeckner Metals Corporation <https://epa.gov/uic/uic-09-2018-0004-kloeckner-metals-co
Kauaʻi	Kōloa	N.F. Kawakami Store Ltd. <https://epa.gov/uic/uic-09-2018-0003-nf-kawakami-store-ltd-kol(

Island(s)	Location	Respondent
Oʻahu	Puuiki Beach Park, Waialua	Dole Food Company Inc. <https://epa.gov/uic/uic-09-2018-0002-dole-food-company-inc-co
Hawaiʻi	Kamuela	Uilani Associates Inc. <https://epa.gov/uic/uic-09-2017-0001-uilani-associates-inc-kamuela-h
Hawaiʻi	Honolulu	Maui Varieties Investments Inc. <https://epa.gov/uic/uic-09-2017-0003-maui-varieties-inve
Oʻahu	Kapolei	Fileminders of Hawaiʻi LLC and Hawaiʻi MMGD LCC. <https://epa.gov/uic/uic-09-2017
Oʻahu	Kapolei	Matheson Tri-Gas <https://epa.gov/uic/uic-09-2017-0002-matheson-tri-gas-inc-kapolei-hi-con
Hawaiʻi	Hilo	County of Hawaiʻi, Department of Environmental Management <https://epa.gov/u
Hawaiʻi	Captain Cook	Aloha Petroleum LTD <https://epa.gov/uic/uic-09-2016-0003-aloha-petroleum-ltd-captain-co
Oʻahu	Joint Base Pearl Harbor-Hickam	U.S. Department of Navy <https://epa.gov/uic/uic-09-2017-0001-us-department-navy-joint-
Hawaiʻi	Pāhala and Nāʻālehu (Pahala, Naalehu)	County of Hawaiʻi, Closure of Cesspools in Pāhala and Nāʻālehu <https://epa.gov/
Hawaiʻi	Hilo	County of Hawaiʻi, Department of Parks and Recreation <https://epa.gov/uic/uic-09
Maui	Maui Raceway Park	County of Maui <https://epa.gov/uic/uic-09-2016-0002-county-maui-maui-raceway-park-conse
Maui	Waianapanapa State Park, Hāna	Department of Land and Natural Resources (DLNR) <https://epa.gov/uic/uic-09-2016
Hawaiʻi	Kīlauea Military Camp and Pōhakuloa Training Area	United States Army <https://epa.gov/uic/uic-09-2016-0001-us-army-garrison-hawaii-kilauea-m
Maui	Hāna	Heavenly Hāna LLC and Hāna Town Center LLC <https://epa.gov/uic/uic-09-2015-0001
Oʻahu	Waimānalo	Keith Ward <https://epa.gov/uic/uic-09-2015-0003-keith-ward-waimanalo-hi-administrative-orc
Oʻahu	Haleʻiwa	Vacation Inns International Inc. <https://epa.gov/uic/uic-09-2015-0002-vacation-inns-inter
Hawaiʻi	Pāhoa	Shaka's Pāhoa LLC <https://epa.gov/uic/uic-09-2012-0003-shakas-pahoa-llc-pahoa-hi-initial-c
Kauaʻi	Kōloa	Lealani Corp. and Poipu Inn Inc. (Brennecke's Beach Broiler) <https://epa.gov/uic/uic-09-2012-0002-lealani-corporation-and
Kauaʻi	Hanalei	Tahiti Nui Enterprises Inc. LLC and Christian Marston <https://epa.gov/uic/uic-09-201
All	State-Wide	Hawaiʻi Department of Education (DOE) <https://epa.gov/uic/uic-ao-2006-0001-hawaii-c
All	State-Wide	Housing and Community Development Corporation of Hawaiʻi (HCDCH) <https://epa.gov/uic/uic-ao-2005-0011-housing-and-com
All	State-Wide	Department of Land and Natural Resources (DLNR) <https://epa.gov/uic/uic-ao-2005
Hawaiʻi	Kailua-Kona	GLACS LLC <https://epa.gov/uic/uic-09-2011-0003-glacs-llc-kailu-kona-hi-consent-agreement-a
Hawaiʻi	Kona	Jazmin Family Trust <https://epa.gov/uic/uic-09-2010-0006-jazmin-family-trust-consent-agre
Hawaiʻi	Holualoa	Hula Daddy Kona Coffee <https://epa.gov/uic/uic-09-2012-0001-hula-daddy-kona-coffee-ho
Hawaiʻi	Kailua-Kona	Taylor Family Limited Partnership <https://epa.gov/uic/uic-09-2011-0001-taylor-family-lir

Island(s)	Location	Respondent
Hawai'i	Kona	Hawai'i Housing Finance and Development Corporation, Jack Hall Memorial Housing <https://epa.gov/uic/uic-09-2010-0005-hawaii-housing-financ
Hawai'i	Kailua-Kona	Johnson Resort Properties Inc. <https://epa.gov/uic/uic-09-2010-0002-johnson-resort-pro
Kaua'i	Kaumakani	Gay & Robinson Inc. <https://epa.gov/uic/uic-09-2009-0004-gay-robinson-inc-kaumakani-hi-c
Hawai'i	Hilo	County of Hawai'i, Department of Environmental Management <https://epa.gov/u
Maui	Kula	Kula Lodge and Restaurant <https://epa.gov/uic/uic-09-2010-003-kula-lodge-and-restaurar
Hawai'i	Hilo	K. Taniguchi LTD <https://epa.gov/uic/uic-09-2009-0002-k-taniguchi-ltd-hilo-hi-consent-agreer
Hawai'i	Hilo	PTC Partners Inc. <https://epa.gov/uic/uic-09-2009-0001-ptc-partners-hilo-hi-consent-agreem
O'ahu	Ka'a'awa	Lion Pacific Investments LLC, et al. <https://epa.gov/uic/uic-09-2008-0002-lion-pacific-inv
Hawai'i	Hilo	Mauna Loa Macadamia Nut Co. <https://epa.gov/uic/uic-09-2007-0001-mauna-loa-macad
Hawai'i	Kailua-Kona	Costco Wholesale Corporation <https://epa.gov/uic/uic-ao-2006-0002-costco-wholesale-c
Hawai'i	Hilo	County of Hawai'i, Department of Environmental Management <https://epa.gov/u
Hawai'i	Hilo	County of Hawai'i, Department of Public Works <https://epa.gov/uic/uic-ao-2005-001
O'ahu	Kailua	The Kailuan <https://epa.gov/uic/uic-ao-2005-0012-kailuan-kailua-hi-consent-agreement-and-
Hawai'i	Hawai'i Volcanoes National Park	National Park Service <https://epa.gov/uic/uic-ao-2005-0002-national-park-service-hawaii-v
Hawai'i	Kīlauea Military Camp	United States Army <https://epa.gov/uic/uic-ao-2005-0010-united-states-army-hawaii-25th-ir
Hawai'i	Pōhakuloa Training Area	United States Army <https://epa.gov/uic/uic-ao-2005-0007-us-army-hawaii-pohakuloa-trainir
Kaua'i	Lihu'e	County of Kauai <https://epa.gov/uic/uic-ao-2005-0006-county-kauai-lihue-hi-consent-agreen
Molokai	Kalaupapa	National Park Service, Kalaupapa National Historical Park <https://epa.gov/uic/uic
O'ahu	Kailua	Kailua Arms and Windward Apartments <https://epa.gov/uic/uic-ao-2005-0008-kailua-a
O'ahu	Kailua	Kailua Palms <https://epa.gov/uic/uic-ao-2005-0009-kailua-palms-kailua-hi-consent-agreemer
O'ahu	Kailua	The Coral Apartments <https://epa.gov/uic/uic-ao-2005-0005-coral-apartments-kailua-hi-co
O'ahu	Kailua	Town and Country Apartments <https://epa.gov/uic/uic-ao-2005-0004-town-and-country-

Public Notice

Kalani Honua Inc. and Retreat Village at Kalani Kai LLC, Pahoa, HI; Proposed Safe Drinking Water Act Administrative Order for Compliance <https://epa.gov/uic/kalani-honua-inc-and-retreat-village-kalani-kai-llc-pahoa-hi-proposed-safe-drinking-water-act>

Public Notice: Proposed Safe Drinking Water Act Administrative Order for Compliance: In the Matter of Kalani Honua Inc. and Retreat Village at Kalani Kai, LLC.

Comments Due Date: April 11, 2024
Geographic Locations: Southwest, Hawaii

Related Content

- **Cesspools in Hawai'i** <https://epa.gov/uic/cesspools-hawaii>
- Underground Injection Control in EPA Region 9 <https://epa.gov/uic/underground-injection-control-region-9-az-ca-hi-nv-mp-gu>
- Hawai'i State Department of Health, Wastewater Branch <https://health.hawaii.gov/wastewater/>

National Resources

- Large-Capacity Cesspools <https://epa.gov/uic/large-capacity-cesspools>
- Large-Capacity Septic Systems <https://epa.gov/uic/large-capacity-septic-systems>
- Underground Injection Control (UIC) <https://epa.gov/uic>
- UIC Regulations <https://epa.gov/uic/underground-injection-control-regulations-and-safe-drinking-water-act-provisions>

Contact Us <https://epa.gov/uic/forms/contact-us-about-underground-injection-control> to ask a question, provide feedback, or report a problem.

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In the Matter of: NSHE HI Narcissus, LLC
Docket No. UIC-09-2022-0058

Report Calculating the Economic Benefit of Noncompliance

By: David Smith-Watts
Senior Attorney
National Coordinator for Civil Penalties and Financial Analyses
U.S. Environmental Protection Agency
Washington, DC

DAVID SMITH-WATTS

Digitally signed by DAVID SMITH-WATTS
Date: 2024.04.16 11:33:25 -04'00'

April 16, 2024

I. Background and Credentials

My name is David Smith-Watts. EPA Region 9 requested I calculate the economic benefit of non-compliance NSHE HI Narcissus, LLC (Respondent) gained through its Safe Drinking Water Act (SDWA) violations in this case.

I graduated from Denison University with a B.A. in Philosophy, Political Science, and Economics, and from the University of Toledo College of Law with a J.D. and Certificate of Specialization in Environmental Law.

In 2008, I joined EPA's Office of Enforcement and Compliance Assurance (OECA) located in Washington D.C., and specifically OECA's Office of Site Remediation Enforcement (OSRE). In OSRE, I was responsible for leading multi-regional bankruptcy cases and developing policy on nationally significant issues related to EPA's enforcement at Superfund sites. In 2015 and 2016, I served a detail to EPA's Waste and Chemical Enforcement Division within OECA's Office of Civil Enforcement (OCE) where I led EPA's financial assurance enforcement practice, which ensures that hazardous waste facilities demonstrate they have sufficient financial resources to properly close their facilities and provide appropriate emergency responses in case of accidental releases.

In 2016, I joined OCE's Crosscutting Policy Staff and became EPA's National Coordinator for Civil Penalties and Financial Analyses. In this role, in which I currently serve, I provide EPA enforcement case teams with legal, policy, and financial support for the calculation and collection of civil penalties in environmental cases. I am responsible for advising case teams on a wide range of financial and civil penalty subject matters, including the calculation of economic benefit. Since 2016, I estimate that I have calculated economic benefit or advised case teams when they have calculated economic benefit in over 500 cases.

I also am responsible for maintaining, updating, and advising EPA case teams on EPA's BEN computer model, which is used to calculate economic benefit for delayed and avoided cost scenarios. The BEN model needs to be updated annually with up-to-date financial data, such as new inflation, tax, and economic rates. It is also updated to improve user friendliness. I have been responsible for these annual updates eight times.

In 2020, I started providing EPA and states with trainings on economic benefit, the BEN model, and other civil penalty topics. For economic benefit and BEN model trainings, I have given 23 trainings to 1,362 participants from EPA and states. I have also given seven presentations on economic benefit and other civil penalty topics to delegates from foreign countries, including Argentina, Brazil, China, Suriname, and Taiwan.

This report is the second economic benefit report I have written for an EPA case team litigating an administrative case.

II. Principles and Methodology of Calculating Economic Benefit

a. General Economic Benefit Information

Compliance with environmental laws typically requires financial expenditures by regulated entities. When a regulated entity does not make these expenditures to comply with the law, the entity can use those funds for other profit-making activities. Thus, the violating entity gains an unfair financial advantage compared to their competitors who made the necessary expenditures and complied with the law. Economic benefit represents the amount of money an entity gained by not complying with an environmental law in a timely manner.

Most federal environmental statutes authorize EPA to assess civil penalties from violating entities. Some statutes, including the SDWA, require EPA to consider economic benefit when calculating civil penalties. Economic benefit is also one of the main components of EPA's penalty policies, which guide EPA case teams when calculating civil penalties in specific enforcement cases. EPA's *Policy on Civil Penalties* and *A Framework for Statute-Specific Approaches to Penalty Assessments* establish general goals for penalty assessments and provide guidance on developing media-specific penalty policies.[1] These policies state that "… it is Agency policy that penalties generally should, at a minimum, remove any significant economic benefits resulting from failure to comply with the law."[2]

There are three types of economic benefit: delayed costs; avoided costs; and wrongful profits. Delayed costs occur when an entity should have paid money to be compliant and did not, but subsequently, the entity incurred the necessary costs to come into compliance. Avoided costs occur when an entity should have paid money to be compliant and did not, and to date, the entity still has not incurred the necessary costs to come into compliance. Wrongful profits occur when an entity's violation of the law directly results in increased profits, thereby providing the entity with an unfair competitive advantage. The facts in this case do not warrant a calculation of wrongful profits because there does not appear to be any wrongful profits gained by non-compliance. Therefore, for purposes of the economic benefit calculation in this case, only delayed and avoided costs are applicable.

b. EPA's Approach for Calculating Delayed and Avoided Costs

In 1984, EPA created the BEN computer model to assist case teams in calculating economic benefit for delayed and avoided costs. At that time, EPA encouraged case teams to use the BEN model or a simplified approach called the "rule of thumb" method. In 1996[3] and 1999,[4] EPA issued Federal Register Notices (FRN) requesting public comment on BEN model's methodology, precision, and user-

[1] EPA's *Policy on Civil Penalties* from February 16, 1984, is also known as EPA General Enforcement Policy #GM-21. EPA's *A Framework for Statute-Specific Approaches to Penalty Assessments* from February 16, 1984, is also known as EPA General Enforcement Policy #GM-22. Both policies are available here: https://www.epa.gov/sites/default/files/documents/epapolicy-civilpenalties021684.pdf

[2] Page 3 of EPA's *Policy on Civil Penalties*.

[3] 61 Fed. Reg. 53,026 (October 9, 1996), https://www.govinfo.gov/content/pkg/FR-1996-10-09/pdf/96-25893.pdf.

[4] 64 Fed. Reg. 32,948 (June 18, 1999), https://www.govinfo.gov/content/pkg/FR-1999-06-18/pdf/99-15271.pdf.

friendliness. After receiving and evaluating comments, EPA modified the BEN model and published changes to the model in the 1999 FRN and in a 2005 FRN.[5]

EPA's BEN model uses a standard and widely accepted technique for evaluating costs and investments referred to as a "cash flow analysis."[6] The cash flow analysis captures the "real, 'out of pocket,' cash effects resulting from expenditure" with a focus on three important factors: inflation, taxation, and the time value of money.[7] In the vast majority of EPA enforcement cases where economic benefit has been calculated since 2005, including in this report, EPA relies upon the BEN model's methodology or its general principles to calculate economic benefit for delayed and avoided costs. Consistent with EPA's BEN Model, for the purposes of calculating the economic benefit gained by Respondent in this matter, I used a cash flow analysis to calculate the delayed and avoided costs using customized spreadsheets.[8]

A cash flow analysis examines the effect that the delayed and avoided compliance costs have on an entity's cash flow. To calculate delayed costs, EPA compares a compliant, hypothetical scenario (on-time scenario) with the non-compliant, actual scenario (delayed scenario), and then adjusts the benefit to the estimated penalty payment date by accounting for inflation, taxation, and the time value of money. To calculate avoided costs, EPA calculates the compliant, hypothetical scenario and then adjusts the benefit to the estimated payment date by accounting for inflation, taxation, and the time value of money. Because there is no delayed cost payment made for avoided costs, there is no delayed cost scenario to compare with the on-time scenario when calculating avoided costs.

There are three different types of costs that must be considered when looking at delayed and avoided costs, which are capital investments, one-time non-depreciable expenditures, and annual recurring costs. Capital investments are costs of items that depreciate, such as purchasing and installing pollution control equipment. One-time non-depreciable expenditures are costs that are made once and do not depreciate, such as staff costs or disposal costs. Annual recurring costs are average annual incremental costs, such as costs for operating and/or maintaining the required pollution control measures. When an entity fails to pay annual costs, they become avoided costs.

c. Important Factors in Economic Benefit Calculations

As mentioned above, inflation, taxes, and the time value of money are three important factors in a cash flow analysis of economic benefit for delayed and avoided costs. A brief description of each concept is provided below.

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[5] 70 Fed. Reg. 50,326 (August 26, 2005), https://www.govinfo.gov/content/pkg/FR-2005-08-26/pdf/05-17033.pdf.
[6] 64 Fed. Reg. 32,950.
[7] *Id*.
[8] EPA has "The BEN Help System" document that is located within the BEN model. The Help System provides background information on economic benefit and instructs users on how to use the BEN model. On page 3 of the Help System's PDF, it says, "In general, EPA uses the model to assist its own staff in developing settlement penalty figures. (For trial or hearing, an expert in financial economics must present the analysis of economic benefit, using whatever analytical tools -- possibly including BEN, or maybe instead customized computer spreadsheets -- are appropriate to the case's particular compliance scenarios.)"

i. Inflation

To compare the compliant, hypothetical scenario versus the non-compliant, actual scenario, one must use inflation to adjust these costs from two different points of time to one common point in time in order to compare them. There are different inflation indices that can be used for these cash flow adjustments, and I used the Plant Cost Index (PCI) in this case. The PCI inflation index is published by the *Chemical Engineering* magazine and is a composite index consisting of four sub-indices: equipment; construction labor; buildings; and engineering and supervision. PCI is the default inflation index in EPA's BEN model.

ii. Taxes

Under a cash flow analysis, economic benefit is calculated on an after-tax basis because environmental expenditures can reduce income tax liability. Businesses can also depreciate capital investments for tax purposes. When an asset is used to produce income, a business can depreciate the value on their taxes to compensate it for the loss of the asset's value. Estimated federal and state taxes, including depreciation of capital investments, should be subtracted from the on-time and delayed cost scenarios at the time those costs should have been or were incurred to obtain after-tax values.

iii. Time Value of Money

The time value of money is a fundamental concept of the economic benefit calculation, and it is illustrated by the saying, "A dollar today is worth more than a dollar tomorrow." This is because today's dollar can be used or invested to generate a return of more than one dollar tomorrow. The same principle can be said looking backward in time: a dollar a year ago is worth more than a dollar today.

EPA uses a discount rate to reflect the time value of money principle in economic benefit calculations. Specifically, since November 1992, EPA's BEN model has used the Weighted Average Cost of Capital (WACC) as the time value of money discount rate. The WACC is the average of the cost of debt and the cost of equity, weighted by the portions of debt and equity out of total financing. In other words, the WACC represents the amount of money a company must earn on average to pay its debt holders and equity owners to stay in business, or the return the company can earn on its money, including money not incurred on compliance costs. Courts have approved the use of the WACC as the discount rate.[9] Over the 2017-2024 time period which is applicable in this case, the BEN model calculates the discount rate at 7.5%.

d. Delayed Capital Investments

The most complex economic benefit cost to compute in this case is delayed capital investments. To calculate the economic benefit of delayed capital investments, there are five general steps.

[9] See *United States v. Smithfields Foods, Inc.*, 191 F.3d 516, 529-31 (4th Cir. 1999).

The first step is to calculate the after-tax cost of complying on time (i.e., after-tax cost of complying as of the Non-Compliance Date), which can be described as the "On-Time Scenario" (Step 1A). For this, I took the costs from the Cost Estimate Date and adjusted them, using inflation, to the Non-Compliance Date. Then, I subtracted federal and state taxes, taking into account depreciation, to get the after-tax cash flow of the capital costs for the On-Time Scenario as of the Non-Compliance Date (Step 1B). I also calculated the Imputed Lease Cost. The Imputed Lease Cost represents the benefit a violator derives from not having to replace the capital investment as soon as it would have should it have spent compliance money on time. Adding the Initial Capital Costs and Imputed Lease Cost equals the Total On-Time Costs for the On-Time Scenario.

The second step is to calculate the after-tax delayed costs as of the Non-Compliance Date, which can be described as the "Delayed Cost Scenario." For this, I took the costs as of the Cost Estimate Date and adjusted them using inflation to the Compliance Date (Step 2A). Next, I subtracted federal and state taxes taking into account depreciation, and I adjusted these costs to the Non-Compliance Date using the discount rate (Step 2B). As mentioned above, the discount rate reflects the amount of money Respondent could have gained on its money that was not incurred on compliance costs starting at the Non-Compliance Date.

The third step is to subtract the Delayed Cost Scenario calculated in Step 2 from the On-Time Scenario calculated in Step 1. This results in the economic benefit gained as of the Non-Compliance Date.

The fourth step is to calculate the years between the Non-Compliance Date and the Estimated Penalty Payment Date.

The fifth and final step is to adjust the economic benefit as of the Non-Compliance Date to the Estimated Penalty Payment Date using the time value of money discount rate. This results in the economic benefit of the delayed capital investment.

e. Delayed One-Time Non-Depreciable Costs

Delayed one-time non-depreciable costs have the same steps as delayed capital investments above, except for three differences stemming from the fact the one-time costs are non-depreciable. First, there is no Imputed Lease Cost in Step 1 because the investment does not need to be replaced in the future (i.e., the investment does not depreciate). Second, there is no consideration of depreciation when calculating federal and state taxes because one-time non-depreciable costs cannot be depreciated for tax purposes. Third, I subtracted the taxes in Step 2B and created a new Step 2C to adjust the after-tax cash flows to the Non-Compliance Date.

f. Annually Avoided Costs

Annually avoided costs are calculated differently than the two costs above. For annually avoided costs, the first step is to separate the annual costs into each year that the costs were avoided (Step 1A). The annual costs are adjusted from the Cost Estimate Date to the middle day of each one-year period, taking into account the number of days within each one-year period that Respondent was non-compliant.

Next, to obtain the after-tax cash flows, I subtracted federal and state taxes for each one-year period (Step 1B).

The second step is to adjust the cash flows from the middle day of each one-year period to the Non-Compliance Date.

The third step is to calculate the years between the Non-Compliance Date and the Estimated Penalty Payment Date.

The fourth step is to adjust the costs from the Non-Compliance Date to the Estimated Penalty Payment Date using the discount rate. Finally, the economic benefits of each one-year period need to be added together to produce the total annually avoided cost.

III. Input Values for Economic Benefit Calculation

Jelani Shareem, Environmental Protection Specialist in EPA Region 9, provided me with the following information about the case, specifically the costs, dates, and other information needed to calculate economic benefit. In this case, Respondent is a domestic limited liability company that owns real property located at 66-532 Kamehameha Highway, Haleiwa, HI 96712. Respondent purchased the property on October 4, 2017. The property has a commercial building containing two restrooms that were connected to a large capacity cesspool (LCC). The property also has a parking lot that Respondent leased to mobile food vendors. Respondent closed the restrooms on April 28, 2021.

Mr. Shareem estimated:

1. The date of non-compliance began on 10/4/2017;
2. On average, septic systems need to be replaced every 50 years;
3. As of 6/3/2022, Respondent spent $17,120 to install a new septic system, which includes $8,010 for a septic tank, $6,570 for chambers, $670 for piping, $730 for sand, and $1,140 for rock;
4. As of 6/3/2022, Respondent spent $3,183.51 to haul backfill materials to and from the property, which includes $600 for dirt, $1,355 for rocks, and $1,228.51 for hauling;
5. As of 12/2/2021, Respondent spent $665 to close the LCC;
6. As of 11/11/2021, Respondent spent $175 on cesspool pumping;
7. As of 6/3/2022, Respondent spent $1,880 on a geotechnical survey;
8. As of 6/3/2022, Respondent spent $2,800 on engineering costs; and
9. As of January 2021, Respondent would have needed to spend $71 per month or $852 annually to operate and maintain the septic system.

The only input value I determined was the Estimated Penalty Payment Date. Looking at EPA administrative dockets, I estimate it typically takes EPA Presiding Officers about seven months or longer to render decisions. Because of this, I conservatively estimate the penalty payment date to be 12/31/2024. If I used a date further in the future, it would increase the amount of economic benefit to Respondent. I believe this date is a reasonable approximation of when the penalty will be due.

IV. Economic Benefit Calculations

I calculated the economic benefit of each cost in an Excel workbook. Screen shots from the Excel workbook are provided as figures below.

a. Capital Investment Costs of Installing a New Septic System

Installing a new septic system is considered a capital investment because a septic system wears out over time and eventually needs to be replaced. Accordingly, all costs provided to me by Mr. Shareem in #3 above are considered capital investments.

Step 1A. The first step is to adjust the cost estimate from the Cost Estimate Date to the Non-Compliance Date, which is when Respondent should have spent the money on the new septic system. Mr. Shareem estimated it cost $17,120.00, as of 6/3/2022, for Respondent to install the new septic system. In my first calculation, I took $17,120.00 and adjusted it, using inflation, from the Cost Estimate Date to the Non-Compliance Date of 10/4/2017. Because PCI has an inflation value of 832.6 for 6/3/2022 and an inflation value of 574.7 for 10/4/2017, the equation used is $17,120.00 / 832.6 * 574.7 = $11,817.04, as shown in Cell G5 of Figure 1. This takes the cost and divides it by the inflation index of that cost's time, and then multiplies it by the inflation index as of the Non-Compliance Date to equal the cost as of the Non-Compliance Date.

Figure 1:

	B	C	D	E	F	G
3	**Step 1A - Adjust Compliance Costs from Cost Estimate Date to Start of Noncompliance Date (NCD)**					
4	Compliance Costs	Cost Estimate Date	Inflation Value as of Cost Estimate Date	NCD Start (On Time Date)	Inflation Value as of the NCD	Cost Estimate NCD Start
5	$17,120.00	6/3/2022	832.6	10/4/2017	574.7	$11,817.04

Step 1B. Next, I calculated the after-tax cost of complying on time. I took the $11,817.04 from Step 1A above and subtracted federal and state taxes. For federal taxes, Respondent could have depreciated the entire $11,817.04 in 2018 and would have been taxed at 29.6%. The equation is $11,817.04 * 29.6%, which equals $3,497.84 as shown in Cell D7 of Figure 2. For state taxes, the depreciation rate is spread out over many years as show in Row 16 of Figure 2. Taking the $11,817.04 and depreciating it at the percentages in Row 16 results in the depreciable amounts in Row 8 of Figure 2. Then, for the depreciable amounts in Row 8 of Figure 2, I applied the Hawaii tax rate that accounts for federal

deductibility for each respective year in Row 9 of Figure 2, which results in the state tax amounts in Row 10 of Figure 2. The sum of each column's figures in Rows 4, 7, and 10 in Figure 2 is the total net after-tax cash flow in Row 11 of Figure 2.

Next, I adjusted each year's after-tax cashflow to the Non-Compliance Date. This is a two-step process. First, I calculated the Present Value factor, which is a number that will adjust the cash flows in each column to the Non-Compliance Date. The equation is slightly different for each cell in Row 12 of Figure 2 because each column is from a different year. As an example, for Cell D12 of Figure 2, the equation is (1+0.075)^((C2-D2)/365). This applies the 0.075 or 7.5% discount rate across the time of each column to the Non-Compliance Date. The Present Value factors are in Row 12 of Figure 2. Second, I applied the Present Value factors in Row 12 to each after-tax cash flow in Row 11. As an example, I multiplied C11 by C12 and the result is in C13. Then, I added the values in Row 13 of Figure 2 and pasted them in Cell I5 of Figure 3.

Figure 2:

	A	B	C	D	E	F	G	H	I	J	K
1											
2		**On-Time Capital Cost**	10/4/2017	4/4/2018	4/4/2019	4/4/2020	4/4/2021	4/4/2022	4/4/2023	4/4/2024	4/4/2025
3			2017	2018	2019	2020	2021	2022	2023	2024	2025
4		Capital Investment - Initial Installation	(11,817.04)								
5		Depreciation - Federal	0.00	(11,817.04)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6		Marginal Tax Rate (MRT) - Federal	39.6%	29.6%	29.6%	29.6%	29.6%	29.6%	29.6%	29.6%	29.6%
7		Tax Liability Offset - Federal	0.00	3,497.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8		Depreciation - State (HI)	0.00	(1,688.65)	(2,893.99)	(2,066.80)	(1,475.95)	(1,055.26)	(1,054.08)	(1,055.26)	(527.04)
9		MTR - State	5.0%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%	7.7%
10		Tax Liability Offset - State	0.00	130.70	223.99	159.97	114.24	81.68	81.59	81.68	40.79
11		Net After-Tax Cash Flow	(11,817.04)	3,628.54	223.99	159.97	114.24	81.68	81.59	81.68	40.79
12		PV Factor	1.0000	0.9646	0.8973	0.8345	0.7763	0.7221	0.6718	0.6248	0.5812
13		PV Cash Flow as of NCD	(11,817.04)	3,500.03	200.99	133.50	88.68	58.98	54.81	51.03	23.71
14											
15		*Federal Utilized Depreciation Schedule*		*100.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
16		*State Utilized Depreciation Schedule*		*14.29%*	*24.49%*	*17.49%*	*12.49%*	*8.93%*	*8.92%*	*8.93%*	*4.46%*
17											

Figure 3:

	I	J	K
3	**Step 1B - Calculate After-Tax Cost of Complying On Time (On-Time Scenario)**		
4	Cash Flow of Initial Capital Costs as of NCD	Imputed Lease Cost	Total NPV On-Time Costs
5	$7,705.32	$237.83	$7,943.15

Next, I calculated the Imputed Lease Cost based on Mr. Shareem's estimate that on average an entity needs to replace their septic system every 50 years. Accordingly, the Lease Start Date is 50 years after the Non-Compliance Date, which is 10/4/2067. Next, I calculated the Lease End Date from the

Compliance Date. Because the Compliance Date is 4/28/2021, the Lease End Date is 4/28/2071. The difference between the Lease Start Date and Lease End Date is 3.6 years, as shown in Cell E19 of Figure 4. Then, I took original estimated cost of $17,120.00 and adjusted for inflation to the State Lease Date, which has a PCI value of 2293.1. The equation is ($17,120.00*2293.1/832.6) to equal $57,979.43 as shown in Cell F19 of Figure 4. Then, I calculated the Annual Lease Cost, which is the payments needed over 50 years to pay the $57,979.43 using the 7.5% discount rate, by using the Payment or PMT function in Excel. The equation is =-PMT(0.075, 50, -$57,979.43) and the result is -$4,468.61 in Cell G19 of Figure 4. Next, I multiplied the Annual Lease Cost by the difference in years from Cell E19 of Figure 4 (i.e., -$4,468.61 * 3.6 = -$16,087.01). Next, I subtracted taxes to obtain the after-tax cash flow. The federal and state combined rate is 37.3%. This rate multiplied by -$16,087.01 results in -$10,086.56 in Cell J19 of Figure 4. Then, similar to the two steps above to find the Present Value factors and which is used to adjust the cash flow to the Non-Compliance Date, I used the following equation (1+0.075)^((C2-(C19+D19)/2)/365) which results in a present value of 0.0236 in Cell K19 of Figure 4. When the Present Value Factor is multiplied by net after-tax cash flow of -$10,086.56, it results in $237.83 in Cell L19 of Figure 4 and Cell J5 of Figure 3.

Adding the initial capital costs in Cell I5 of Figure 3 and the imputed lease cost in Cell J5 of Figure 3 results in total On-Time Costs of $7,943.15 in Cell K5 of Figure 3.

Figure 4:

	B	C	D	E	F	G	H	I	J	K	L
18		Lease Start Date (50 Years after NCD)	Lease End Date (50 Years after Compliance Date)	Difference in Years	Capital Cost as of Lease Start Date	Annualized Lease Cost	Total Imputed Lease Cost	MTR-Federal and State Combined	Net After-Tax Cash Flow	PV Factor	NPV Imputed Lease Cost
19	Imputed Lease Cost for Interim Period when On-Time Equipment would Need Replacement	10/4/2067	4/28/2071	3.6	(57,979.43)	(4,468.61)	(16,087.01)	37.3%	(10,086.56)	0.0236	-237.83
20											
21	**NPV of Capital Costs**										
22	Imputed Lease Cost	(237.83)									
23	Initial Install	(7,705.32)									
24	**Total**	**(7,943.15)**									

Step 2A. Step 2 is to calculate the After-Tax Delayed Costs as of the Non-Compliance Date. I adjusted the compliance costs of $17,120.00 from the Cost Estimate Date of 6/3/2022, which has an inflation index of 832.6, to the Delayed Cost Date of 4/28/2021, which has an inflation index of 677.1. The equation is $17,120.00 / 832.6 * 677.1 = $13,922.59. This is shown in Figure 5.

Figure 5:

	M	N	O	P	Q	R
3	**Step 2A - Adjust Delayed Compliance Costs from Cost Estimate Date to When Delayed Costs Will be Incurred**					
4	Compliance Costs	Cost Estimate Date	Inflation Value as of Cost Estimate Date	Delayed Cost Date/Compliance Date	Inflation Value as of the Delayed Cost	Delayed Costs Incurred as of Delayed Cost Date
5	$17,120.00	6/3/2022	832.6	4/28/2021	677.1	$13,922.59

Step 2B. Next, I calculated the after-tax Delayed Costs by deducting federal and state taxes, which include federal and state depreciation, as of the Delayed Cost Date. I followed the same calculations in Step 1B above but used the Delayed Cost Scenario figures as shown in Figure 6. The federal tax depreciable amounts are in Row 29 of Figure 6, the federal tax rates per year are in Row 30, and the federal tax amounts are in Row 31. The Hawaii tax depreciation amounts are in Row 32, the Hawaii tax rates are in Row 33, and the State Tax amounts are in Row 34. The Net After-Tax Cash Flow amounts are in Row 35, the Present Value Factors are in Row 36, and then Present Value Cash Flows as of the Non-Compliance Date are in Row 37. Then, I added the values in Row 37 of Figure 6 and pasted them in Cell T5 of Figure 7.

Figure 6:

	A	B	C	D	E	F	G	H	I	J	K
26		**Delayed Capital Costs**	4/28/2021	10/28/2021	10/28/2022	10/28/2023	10/28/2024	10/28/2025	10/28/2026	10/28/2027	10/28/2028
27			2021	2021	2022	2023	2024	2025	2026	2027	2028
28		Capital Investment - Initial Installation	-13922.59								
29		Depreciation - Federal	0.00	-13922.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30		Marginal Tax Rate (MRT) - Federal	29.60%	29.60%	29.60%	29.60%	29.60%	29.60%	29.60%	29.60%	29.60%
31		Tax Liability Offset - Federal	0.00	4,121.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00
32		Depreciation - State (HI)	0.00	(1,989.54)	(3,409.64)	(2,435.06)	(1,738.93)	(1,243.29)	(1,241.90)	(1,243.29)	(620.95)
33		MTR - State	7.74%	7.74%	7.74%	7.74%	7.74%	7.74%	7.74%	7.74%	7.74%
34		Tax Liability Offset - State	0.00	153.99	263.91	188.47	134.59	96.23	96.12	96.23	48.06
35		Net After-Tax Cash Flow	(13,922.59)	4,275.08	263.91	188.47	134.59	96.23	96.12	96.23	48.06
36		PV Factor	0.7726	0.7451	0.6931	0.6448	0.5997	0.5578	0.5189	0.4827	0.4489
37		PV Cash Flow as of NCD	(10,756.78)	3,185.36	182.92	121.52	80.71	53.68	49.88	46.45	21.58
38											
39		*Federal Utilized Depreciation Schedule*		*100.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
40		*State Utilized Depreciation Schedule*		*14.29%*	*24.49%*	*17.49%*	*12.49%*	*8.93%*	*8.92%*	*8.93%*	*4.46%*
41											
42		NPV of Capital Costs									
43		**Initial Install**	**(7,014.68)**								

Figure 7:

	T
3	**Step 2B - Calculate After-Tax Cost of Delayed Costs Incurred (Delayed Scenario)**
4	Adjust After Tax Delayed Costs to NCD
5	$7,014.68

Step 3. Next, I subtracted the Delayed Cost Scenario in Step 2B from the On-Time Scenario in Step 1B to equal $928.46 in Cell V5 of Figure 8. $928.46 is the economic benefit as the Non-Compliance Date.

Figure 8:

	V	W	X	Y	Z	AA	AB	AC	AD
3	**Step 3 - Subtract Delayed Scenario from On Time Scenario**		**Step 4 - Calculate Years between NCD and Estimated Penalty Payment Date**					**Step 5 - Calculate Final Economic Benefit as of Penalty Payment Date**	
4	Subtract Delayed Scenario from On Time Scenario		NCD Start (On Time Date)	Estimated Penalty Payment Date	Days Between NCD and Penalty Payment Date	Divide Days Difference with 365 to Obtain Years		Discount Rate	Final Economic Benefit as of Penalty Payment Date
5	$928.46		10/4/2017	12/31/2024	2645	7.246575342		0.075	$1,568.08

Step 4. Next, I calculated the number of days between the Non-Compliance Date of 10/4/2017 and the Estimated Penalty Payment Date of 12/31/2024 to be 2,645 days. Then, I converted these days to years to be 7.246575342 years in Cell AA5 of Figure 8.

Step 5. Lastly, I calculated the economic benefit from the Non-Compliance Date to the Estimated Penalty Payment Date. The equation is $928.46*((1+0.075)^7.246575342), which equals $1,568.08 as shown in Cell AD5 of Figure 8. $1,568.08 is the economic benefit of the delayed capital costs of the septic system.

b. One-Time Non-Depreciable Expenditures

There are five compliance costs that are one-time non-depreciable expenditures: $3,183.51 for hauling backfill materials to and from the property; $665 for LCC closure; $175 for cesspool pumping; $1,880 for geotechnical survey; and $2,800 for engineering costs. Mr. Shareem identified these in #4 through #8

above. Each of these costs are one-time non-depreciable expenditures because they are made once, they are for items or services that do not wear out, and they do not need to be replaced.

Calculating the economic benefit for each of these costs results in negative economic benefit amounts. This means that Respondent did not financially benefit by delaying these costs. When negative economic benefit amounts occur in EPA cases, EPA inputs these amounts in penalty worksheets as $0. EPA does not reduce other components of the civil penalty, including economic benefit for other costs, by negative economic benefit results. Even though these are negative amounts, I will still provide a description of each step in the calculation along with screenshots.

Step 1A. The first step is identical to Step 1A for delayed capital investments above where I adjusted the compliance costs from the Cost Estimate Date to the Non-Compliance Date as shown in Figure 9. Some of these costs have different Cost Estimate Dates compared to others.

Figure 9:

	A	B	C	D	E	F	G
3		**Step 1A - Adjust Compliance Costs from Cost Estimate Date to the Noncompliance Date (NCD)**					
4	**Violations and Associated Costs**	Compliance Costs	Cost Estimate Date	Inflation Value as of Cost Estimate Date	NCD Start (On Time Date)	Inflation Value as of the NCD	Cost Estimate NCD Start
5	Hauling Backfill Materials to and from the Property	$3,183.51	6/3/2022	832.6	10/4/2017	574.7	$2,197.41
6	LCC Closure	$665.00	12/2/2021	776.3	10/4/2017	574.7	$492.30
7	Cesspool Pumping	$175.00	11/11/2022	814.6	10/4/2017	574.7	$123.46
8	Geotechnical Survey	$1,880.00	6/3/2022	832.6	10/4/2017	574.7	$1,297.67
9	Engineering Costs	$2,800.00	6/3/2022	832.6	10/4/2017	574.7	$1,932.69

Step 1B. Next, I subtracted federal and state taxes using the tax rates as of the Non-Compliance Date. As discussed above, the difference in Step 1B for one-time non-depreciable costs versus Step 1B for capital investments is that I do not account for depreciation. For each cost in Column G of Figure 9, I multiplied it by the federal tax rate in Column I of Figure 10 to get the amount of federal tax deduction in Column J of Figure 10. For state tax deduction, the Hawaii taxable rate is in Column K of Figure 10 and the taxable amount is in Column L of Figure 10. Subtracting federal and state taxes for each cost results in the after-tax cash flow as of the Non-Compliance Date in Column M of Figure 10.

Because one-time non-depreciable costs do not depreciate like capital investments, one-time non-depreciable costs do not have associated imputed lease costs.

Figure 10:

	A	H	I	J	K	L	M	N	O
3			**Step 1B - Calculate After-Tax Cost of Complying On Time (On-Time Scenario)**						
4	**Violations and Associated Costs**		Federal Tax Rate	Federal Tax Offset	State Tax Rate, Adjusted for Fed. Deductibility	State Tax Offset	Cash Flow as of NCD	Imputed Lease Cost	Total NPV On-Time Costs
5	Hauling Backfill Materials to and from the Property		39.60%	$870.17	5.00%	$109.87	$1,217.36	N/A	$1,217.36
6	LCC Closure		39.60%	$194.95	5.00%	$24.62	$272.74	N/A	$272.74
7	Cesspool Pumping		39.60%	$48.89	5.00%	$6.17	$68.40	N/A	$68.40
8	Geotechnical Survey		39.60%	$513.88	5.00%	$64.88	$718.91	N/A	$718.91
9	Engineering Costs		39.60%	$765.35	5.00%	$96.63	$1,070.71	N/A	$1,070.71

Step 2A. Next, I adjusted the delayed costs from the Cost Estimate Date to the Delayed Cost Date, as shown in Figure 11.

Figure 11:

	A	P	Q	R	S	T	U	V
3			**Step 2A - Adjust Delayed Compliance Costs from Cost Estimate Date to When Delayed Costs Will be Incurred**					
4	**Violations and Associated Costs**		Compliance Costs	Cost Estimate Date	Inflation Value as of Cost Estimate Date	Delayed Cost Date	Inflation Value as of the Delayed Cost	Delayed Costs Incurred as of Delayed Cost Date
5	Hauling Backfill Materials to and from the Property		$3,183.51	6/3/2022	832.6	4/28/2021	677.1	$2,588.94
6	LCC Closure		$665.00	12/2/2021	776.3	4/28/2021	677.1	$580.02
7	Cesspool Pumping		$175.00	11/11/2022	814.6	4/28/2021	677.1	$145.46
8	Geotechnical Survey		$1,880.00	6/3/2022	832.6	4/28/2021	677.1	$1,528.88
9	Engineering Costs		$2,800.00	6/3/2022	832.6	4/28/2021	677.1	$2,277.06

Step 2B. Next, I subtracted federal and state taxes as of the Delayed Cost Date, as shown in Figure 12. The Delayed Cost Date is 4/28/2021, and the federal tax rate in 2021 was 29.60%. Because state taxes need to be adjusted for federal deductibility, the Hawaii state tax rate in 2021 was 7.70%.

Figure 12:

	A	W	X	Y	Z	AA	AB
3			**Step 2B - Calculate After-Tax Cost of Delayed Costs Incurred (Delayed Scenario)**				
4	**Violations and Associated Costs**		Federal Tax Rate	Federal Tax Offset	State Tax Rate, Adjusted for Fed. Deductibility	State Tax Offset	Cash Flow as of Delayed Cost Date
5	Hauling Backfill Materials to and from the Property		29.60%	$766.33	7.70%	$199.35	$1,623.27
6	LCC Closure		29.60%	$171.69	7.70%	$44.66	$363.67
7	Cesspool Pumping		29.60%	$43.06	7.70%	$11.20	$91.20
8	Geotechnical Survey		29.60%	$452.55	7.70%	$117.72	$958.61
9	Engineering Costs		29.60%	$674.01	7.70%	$175.33	$1,427.72

Step 2C. Next, I adjusted the cash flow as of the Delayed Cost Date to the Non-Compliance Date, using the discount rate of 7.5%, as shown in Figure 13. As an example, the equation in Cell AI of Figure 13 is $1,623.27 * (1+0.075)^-3.567123288 = $1,254.16.

Figure 13:

	A	AC	AD	AE	AF	AG	AH	AI
3			**Step 2C - Adjust After Tax Delayed Costs to NCD**					
4	**Violations and Associated Costs**		Delayed Cost Date	NCD Start (On Time Date)	Days Between NCD and Delayed Cost Date	Divide Days Difference with 365 to Obtain Years	Discount/Compound Rate (7.5%)	Adjust After Tax Delayed Costs to NCD
5	Hauling Backfill Materials to and from the Property		4/28/2021	10/4/2017	-1302	-3.567123288	0.075	$1,254.16
6	LCC Closure		4/28/2021	10/4/2017	-1302	-3.567123288	0.075	$280.98
7	Cesspool Pumping		4/28/2021	10/4/2017	-1302	-3.567123288	0.075	$70.47
8	Geotechnical Survey		4/28/2021	10/4/2017	-1302	-3.567123288	0.075	$740.63
9	Engineering Costs		4/28/2021	10/4/2017	-1302	-3.567123288	0.075	$1,103.07

Step 3. Next, I subtracted the Delayed Cost Scenario in Step 2C from the On-Time Scenario in Step 1B. See Column AK of Figure 14. For each of the five costs, they resulted in negative values.

Figure 14:

	A	AK	AL	AM	AN	AO	AP	AQ	AR	AS
3		**Step 3 - Subtract Delayed Scenario from On Time Scenario**		**Step 4 - Calculate Years between NCD and Estimated Penalty Payment Date**					**Step 5 - Calculate Final Economic Benefit as of Penalty Payment Date**	
4	**Violations and Associated Costs**	Subtract Delayed Scenario from On Time Scenario		NCD Start (On Time Date)	Estimated Penalty Payment Date	Days Between NCD and Penalty Payment Date	Divide Days Difference with 365 to Obtain Years		Discount/ Compound Rate (7.5%)	Final Economic Benefit as of Penalty Payment Date
5	Hauling Backfill Materials to and from the Property	-$36.79		10/4/2017	12/31/2024	2645	7.246575342		0.075	-$62.14
6	LCC Closure	-$8.24		10/4/2017	12/31/2024	2645	7.246575342		0.075	-$13.92
7	Cesspool Pumping	-$2.07		10/4/2017	12/31/2024	2645	7.246575342		0.075	-$3.49
8	Geotechnical Survey	-$21.73		10/4/2017	12/31/2024	2645	7.246575342		0.075	-$36.70
9	Engineering Costs	-$32.36		10/4/2017	12/31/2024	2645	7.246575342		0.075	-$54.65

Step 4. This Step 4 is the same as Step 4 for delayed capital investments above; I calculated the number of days between the Non-Compliance Date of 10/4/2017 and the Estimated Penalty Payment Date of 12/31/2024 to be 2,645 days. Then, I converted these days to years to be 7.246575342 years in Cell AP5 of Figure 14.

Step 5. Lastly, I calculated the economic benefit from the Non-Compliance Date to the Estimated Penalty Payment Date. The equation is the cost in Column AK of Figure 14 multiplied by ((1+0.075)^7.246575342). Each result is, again, a negative number in Column AS of Figure 14.

c. Annually Avoided Costs of Foregoing Septic System Maintenance

The annual septic maintenance costs are considered annually avoided costs because they should have been incurred once a year and cannot be incurred now for those previous years to be considered delayed costs. Mr. Shareem identified these costs in #9 above.

Step 1A. The first step is to separate the annual costs by each year into separate rows in the Excel Workbook, as shown in Column A of Figure 15. Next, I took the compliance cost of $852 for each year and adjusted it, using inflation, to the middle day of each respective one-year period and accounted for how many days of non-compliance there were in that respective one-year period. For instance, for the avoided costs from 10/4/2017 to 12/31/2017 in row 5 of Figure 15, the Cell I5 has the equation =(((F5-E5)+1)/365)*(B5/D5*H5). Numerically, this is (((12/31/2017 – 10/4/2017)+1)/365)*($852/616.5*573.2). The first half of the equation finds the middle day of the time period and adds one to account for the number of days (not the days between two dates), and then divides it by 365 to account for the per day cost. Then, the second half of the equation is the same inflation adjustment equation made in Steps 1A above but adjusts the costs from the Cost Estimate Date to the middle day of each one-year period.

Figure 15:

	A	B	C	D	E	F	G	H	I
3		**Step 1A - Adjust Compliance Costs from Cost Estimate Date to Middle Day of Non-Compliance Period (NCD)**							
4	**Annually Avoided Costs of Septic Maintenance for Each Year**	Compliance Costs	Cost Estimate Date	Inflation Value as of Cost Estimate Date	Start Date of Each Time Period	End Date of Each Time Period	Middle Day of Each Time Period	Inflation Index Value of Middle Day	Cost Estimate as of Middle Day
5	Avoided Costs from 10/4/2017 to 12/31/2017	$852.00	1/15/2021	616.5	10/4/2017	12/31/2017	11/16/2017	573.2	$193.16
6	Avoided Costs from 1/1/2018 to 12/31/2018	$852.00	1/15/2021	616.5	1/1/2018	12/31/2018	7/2/2018	607.2	$839.15
7	Avoided Costs from 1/1/2019 to 12/31/2019	$852.00	1/15/2021	616.5	1/1/2019	12/31/2019	7/2/2019	604.6	$835.55
8	Avoided Costs from 1/1/2020 to 12/31/2020	$852.00	1/15/2021	616.5	1/1/2020	12/31/2020	7/2/2020	593.6	$822.60
9	Avoided Costs from 1/1/2021 to 4/28/2021	$852.00	1/15/2021	616.5	1/1/2021	4/28/2021	2/28/2021	637.8	$284.96

Step 1B. The next step is to calculate the after-tax cost as of the middle day of each one-year period. The federal tax rates for each year are in Column K of Figure 16, the federal tax amounts are in Column L of Figure 16, the state tax rates are in Column M of Figure 16, and the state tax amounts are in Column N of Figure 16. Taking each cost from Column I of Figure 15 and subtracting the respective federal and state tax amounts equals the amounts in Column O of Figure 16.

Figure 16:

	A	K	L	M	N	O
3		**Step 1B - Calculate After-Tax Cost of Complying On Time (On-Time Scenario)**				
4	**Annually Avoided Costs of Septic Maintenance for Each Year**	Federal Tax Rate	Federal Tax Offset	State Tax Rate, Adjusted for Fed. Deductibility	State Tax Offset	After-Tax Cash Flow as of Middle Day
5	Avoided Costs from 10/4/2017 to 12/31/2017	39.60%	$76.49	4.98%	$9.62	$107.05
6	Avoided Costs from 1/1/2018 to 12/31/2018	29.60%	$248.39	7.74%	$64.95	$525.81
7	Avoided Costs from 1/1/2019 to 12/31/2019	29.60%	$247.32	7.74%	$64.67	$523.56
8	Avoided Costs from 1/1/2020 to 12/31/2020	29.60%	$243.49	7.74%	$63.67	$515.44
9	Avoided Costs from 1/1/2021 to 4/28/2021	29.60%	$84.35	7.74%	$22.06	$178.55

Step 2. Next, I adjusted the after-tax cash flows from the middle day of each one-year period to Non-Compliance Date. I did this by taking the Non-Compliance Date in Column Q of Figure 17 and subtracting it by the middle date in Column G of Figure 15. The result is in Column R of Figure 17. Then, I converted these days to years in Column S of Figure 17. Then, using the discount rate, I adjusted the cash flow to the Non-Compliance Date. As an example, in Cell T5 of Figure 17, the equation is =O5*((1+0.075)^S5). Numerically, this is = $107.05 * ((1+0.075)^-0.117808219). The results are in Column T of Figure 17.

Figure 17:

	A	Q	R	S	T
3		**Step 2 - Adjust After Tax Cash Flow from Middle Day to NCD**			
4	**Annually Avoided Costs of Septic Maintenance for Each Year**	Non-Compliance Date	Days from Middle Day of Time Period to NCD	Days converted to years	Cash Flow as of NCD
5	Avoided Costs from 10/4/2017 to 12/31/2017	10/4/2017	-43	-0.117808219	$106.14
6	Avoided Costs from 1/1/2018 to 12/31/2018	10/4/2017	-271	-0.742465753	$498.32
7	Avoided Costs from 1/1/2019 to 12/31/2019	10/4/2017	-636	-1.742465753	$461.57
8	Avoided Costs from 1/1/2020 to 12/31/2020	10/4/2017	-1002	-2.745205479	$422.63
9	Avoided Costs from 1/1/2021 to 4/28/2021	10/4/2017	-1243.5	-3.406849315	$139.56

Step 3. Next, I calculated the days between the Non-Compliance Date in Column V of Figure 18 and the Estimated Penalty Payment Date in Column W of Figure 18 to be 2,645 days in Column X of Figure 18. Then, converting these days to years is 7.246575342, as shown in Column Y of Figure 18.

Figure 18:

	A	V	W	X	Y	Z	AA	AB
3		**Step 3 - Calculate Years between NCD and Estimated Penalty Payment Date**					**Step 4 - Calculate Final Economic Benefit as of Penalty Payment Date**	
4	**Annually Avoided Costs of Septic Maintenance for Each Year**	NCD (On Time Date)	Estimated Penalty Payment Date	Days Between NCD and Penalty Payment Date	Divide Days Difference with 365 to Obtain Years		Discount/ Compound Rate (7.5%)	Final Economic Benefit as of Penalty Payment Date
5	Avoided Costs from 10/4/2017 to 12/31/2017	10/4/2017	12/31/2024	2645	7.246575342		0.075	$179.26
6	Avoided Costs from 1/1/2018 to 12/31/2018	10/4/2017	12/31/2024	2645	7.246575342		0.075	$841.61
7	Avoided Costs from 1/1/2019 to 12/31/2019	10/4/2017	12/31/2024	2645	7.246575342		0.075	$779.54
8	Avoided Costs from 1/1/2020 to 12/31/2020	10/4/2017	12/31/2024	2645	7.246575342		0.075	$713.77
9	Avoided Costs from 1/1/2021 to 4/28/2021	10/4/2017	12/31/2024	2645	7.246575342		0.075	$235.71
10								
11							Total Annually Avoided Economic Benefit	$2,749.90

Step 4. Next, I calculated the economic benefit from the Non-Compliance Date to the Penalty Payment Date. For Cell AB5 of Figure 18, I used this formula: =T5*((1+AA5)^Y5). Numerically, this is $106.14 ((1+0.075)^7.246575342) = $179.26. Doing this for all of rows, resulted in the amounts in Column AB of Figure 18. Adding together the five individual avoided costs for each year equals a total annually avoided economic benefit of $2,749.90, as shown in Cell AB11 of Figure 18.

V. Conclusion

Adding together the economic benefit from the capital costs of $1,568.08 and the annually avoided costs of $2,749.90 results in a total economic benefit in this case of $4,317.98, as shown in Figure 19.

Figure 19:

	A	B
1		**Economic Benefit Amounts**
2	**Capital Costs**	$1,568.08
3	**One-Time Non-Depreciable Costs**	$0.00
4	**Annually Avoided Costs**	$2,749.90
5	**Total Economic Benefit**	$4,317.98

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Clarification of the Size of Violator/Size of Business Civil Penalty Factor

FROM: Rosemarie Kelley, Director
Office of Civil Enforcement
ROSEMARIE KELLEY
Digitally signed by ROSEMARIE KELLEY
Date: 2023.05.04 12:37:30 -04'00'

Cynthia L. Mackey, Director
Office of Site Remediation Enforcement
CYNTHIA MACKEY
Digitally signed by CYNTHIA MACKEY
Date: 2023.05.04 17:40:54 -04'00'

TO: Regional ECAD Directors and Deputies
Regional Counsels and Deputies

The purpose of this memorandum is to clarify that, when determining an appropriate civil penalty, case teams should calculate the size of business or size of violator component based on the violating entity and, in appropriate circumstances, related parties such as corporate affiliates. Certain environmental statutes require the U.S. Environmental Protection Agency to consider the "size of violator" or "size of business" as a factor when calculating civil penalties in enforcement cases. This clarification applies to all penalty policies (and appendices thereto) and enforcement response policies that implement these statutes.

Appropriate circumstances for considering related parties such as corporate affiliates include, but are not limited to, when:

- case teams are directed by the applicable penalty policy or enforcement response policy;
- a related party oversees or exercises control over the activities that gave rise to the violation;
- a related party controls the violating entity to the extent there is no meaningful separation between the violating entity and the related party;
- transactions between the violating entity and related party are less than arm's length transactions;
- the violating entity is grossly undercapitalized, and the related party finances the violating entity's operations; or
- monies are commingled to such a degree that it is not possible to determine what funds belong to which entity.

For any questions about this memorandum, please contact the Office of Civil Enforcement's David Smith-Watts at smith-watts.david@epa.gov or 202-564-4083, or Ryan Didion at didion.ryan@epa.gov or 202-564-0332.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX – PACIFIC SOUTHWEST REGION
75 Hawthorne Street
San Francisco, CA 94105-3901

Charles W. Gall, Attorney for Respondent
Kobayashi Sugita & Goda, LLP
First Hawaiian Center
999 Bishop Street, Suite 2600
Honolulu, Hawaii 96813

Via Electronic Mail

Re: Request for Other Discovery in the Matter of NSHE HI Narcissus, LLC (Dkt No. UIC-09-2022-0058)

Charles Gall,

The United States Environmental Protection Agency, Region IX (EPA or Complainant) writes to respectfully request that NSHE HI Narcissus, LLC provide the information identified below by electronic mail by **March 6, 2023**. EPA intends to include the information provided in NSHE HI Narcissus, LLC's response in its pre-hearing exchange, due on March 9, 2023.

As background, Complainant moved for accelerated decision in this matter under 40 C.F.R § 22.20 for liability only, not the appropriate penalty amount. The information requested herein is necessary to enable Complainant to adequately assess the economic benefit and economic impact of the penalty on the violator, which are statutory factors under the Safe Drinking Water Act that EPA must consider in determining an appropriate penalty amount. *See* 42 U.S.C. § 300h-2(c)(4)(B). If you refuse to provide this information voluntarily and it is not otherwise included in your pre-hearing exchange, Complainant may move to compel discovery under 40 C.F.R § 22.19(e).

Complainant's Requests for Other Discovery

Request No. 1

Identify all assets of NSHE HI Narcissus, LLC, and include an estimate of the current value of each asset.

Request No. 2

Provide copies of all lease agreements with tenants renting from NSHE HI Narcissus, LLC at 66-532 Kamehameha Highway, Haleiwa, HI 96712, Tax Map Key (TMK) 1-6-2-007-019 (the "Property"), since 2017. This request includes, but is not limited to, the lease agreements with Jenny's Shrimp Truck, Island Fresh Takeout, and tenants of the commercial building on the Property, as referenced in the pleadings in this matter.

Request No. 3

Provide tax documentation confirming the gross and net annual income of NSHE HI Narcissus, LLC since 2017.

Request No. 4

Provide all documentation related to the cost(s) and payment(s) for the closing and backfill of the cesspool on the Property. This request includes, but is not limited to, receipts, invoices, and a description of the individual or entity and account(s) that paid for the closure and backfill.

Request No. 5

Provide all documentation related to the cost(s) and payment(s) for the installation of any individual wastewater system on the Property following the closure of the cesspool referenced in Request No. 4. This request shall include, but is not limited to, receipts, invoices, and a description of the individual or entity and account(s) that paid for the installation. If no wastewater system has been installed since the closure of the cesspool, so state.

All submittals made in response to this letter must be accompanied by the following certification, which is to be signed by a duly authorized representative of NSHE HI Narcissus, LLC in accordance with 40 C.F.R. §§ 144.32(b) and (d):

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Thank you for your attention to this matter. Please feel free to contact Complainant's counsel Kimberly Wells at (415) 972-3056 or wells.kimberly@epa.gov or Daron Ravenborg at (415) 972-3866 or ravenborg.daron@epa.gov.

Respectfully submitted,

Daron Ravenborg
Digitally signed by Daron Ravenborg
Date: 2023.02.24 09:51:13 -08'00'

Daron Ravenborg
Assistant Regional Counsel
Office of Regional Counsel, EPA 9

PropertyOwnerLastName	PropertyOwnerFirstName	PropertyOwnerState	PropertyOwnerZipCode	ProjectStreetAddress
NARCISSUS LLC	NHSE HI	HI	96712	66-532 Kamehameha Highway

ProjectStreetAddress2	ProjectSuiteAptNumber	ProjectCity	TMK	PermitID	LegacyFileNo	SubmitDate
		Haleiwa	162007019	68488		1/6/2022

PlanApprovalDate	InspectionDate	FinalApprovalDate	TerminationDate	DisposalType	IWSType	LCC
3/8/2022	5/19/2022	6/3/2022		Infiltrators / Chambers	Septic Tank	FALSE

BedroomType	Source	IWS_Statu	AU_Contra	IWSManufacturer	FlowRate
Commercial Volume	eHawaii	Use Approved		Jensen Precast	1000

An official website of the United States government

Frequent Questions on Septic Systems

Select from the list below to view frequent questions in each category:

- About Septic Systems
- Caring for Septic Systems
- Maintaining Septic Systems
- Failing Septic Systems
- Inspecting Septic Systems
- Septic System Regulations
- Septic System Compliance
- Paying for Septic Systems
- Environmental/Public Health Impacts from Septic Systems



About Septic Systems

- **How do I find a copy of my septic system's design?**
  - Typically, a septic system is permitted and inspected by your local permitting authority (i.e., local health or environmental department). You can contact these entities to obtain a copy of your property's septic record drawing (the "as-built" design) and copies of the permit(s). The permit(s) may also have additional information on your system, such as the date of installation, soil properties, etc.

- **How do I know if I have a septic system?**
  - One way to determine if your home has a septic system is to check your property records. The property deed, building permit and design plans for your home and property will likely contain information about the presence (or lack) of a septic system. In some cases, there may be visual signs you have a septic system. For example, for some septic systems a mound or small hill is created for the installation of the drainfield. Also, if you follow the plumbing outlet leaving your home, you might find an access riser (black or green disc) or probe for the top of the septic tank. It is usually about 10 feet away from the building.
  - If you have a septic system, you will see a $0.00 charge for wastewater or sewer services on your utility bill (or you will not receive a utility bill). Your home's location also can help you figure out if you have a septic system. If you live in a rural area, there is a high likelihood your home is served by a septic system. You can also talk to your neighbors. If they all have septic systems, your home likely does too. In many cases, people with septic systems also have a private drinking water well instead of public water. If the water line into your home does not have a meter attached to it, that usually indicates you have a private well and not public utility water. You also may not receive a water bill for drinking water if you have a private well.
  - If you are still having trouble, contact your local permitting authority (i.e., local health or environmental department) for a list of local septic system professionals who can help you find your septic tank and drainfield. A septic system professional will walk your property and determine where the system and its components are located.
- **Where should septic tanks be placed?**
  - Your local health department may have septic tank placement requirements and a minimum setback distance from your foundation. Typically, it should be located on level ground so solids can settle in the tank. The location of the plumbing outlet usually dictates where the tank is located and depth of the tank to account for adequate slope on the inlet pipe. Septic tanks should be placed away from areas subject to flooding and surface water ponding. The tank should be properly vented. Avoid steep slopes and areas of dense tree roots or other obstructions. Also, place the septic tank where it is accessible for future inspections and pump outs.
- **How close can a septic tank be to a property line?**
  - Isolation distances from septic tanks to property lines are typically part of local or state permitting regulations. Contact your local permitting authority (i.e., local health or environmental department) for specific requirements in your area. Your local zoning regulations may also include setbacks to various features like buildings and property lines.
- **How do I get a permit for the repair, new construction, or replacement of a septic system?**
  - A septic system permit is issued by your local permitting authority (i.e., local health or environmental department). You can apply for the permit yourself, or the contractor hired to build the system can obtain it on your behalf. Check with your local municipality in the event they also require additional permits to install your system.

- **Is one type of septic system better than another?**
  - The type of septic system for your home depends on a variety of factors, such as lot size, ground slope, soil conditions, size of the home/occupancy, local/state regulations, and your budget. Some properties can be served by a conventional gravity septic tank and drainfield, while others may require advanced technologies for wastewater treatment or alternate drainfields – like low pressure pipe or drip distribution systems. For more information on the most common types of septic systems, visit EPA's Types of Septic Systems <https://epa.gov/septic/types-septic-systems>. Some advanced treatment systems have test results demonstrating their treatment performance. National Science Foundation (NSF) International tests and certifies many wastewater treatment systems. Visit EPA's Advanced Technology for Onsite Treatment of Wastewater, Products Approved by State <https://epa.gov/septic/advanced-technology-onsite-treatment-wastewater-products-approved-state> for links to your state's approved septic system technologies.
- **Where can I find a septic system professional to install a new system?**
  - Contact your local permitting authority (i.e., local health or environmental department). They typically can assist you with locating a septic system professional in your area.
  - The National Onsite Wastewater Recycling Association (NOWRA) maintains a public database of septic system professionals who are also NOWRA members. Home and property owners can use their Septic Locator tool <https://www.nowra.org/septic-locator/> to find septic system professionals in their area. Many states will license or certify septic system installers. Your local health department can provide additional information on licensed professionals.
- **Where can I find information about septic systems in a specific area?**
  - EPA does not have a database of septic systems throughout the U.S. because they are regulated at the state and local level. These data may be tracked on a local basis, depending on the state. Some states maintain a statewide database with information at the county level. For more information, contact the state of interest. Additionally, you can consult the most recent American Housing Survey <https://www.census.gov/programs-surveys/ahs/> conducted by the U.S. Census Bureau which has nationwide data available on decentralized system usage.

Caring for Septic Systems

- **Should I be careful of what I pour down the drain?**
  - Yes. Many materials that might be poured down the drain do not easily decompose. This can be harmful to the healthy bacteria that grow in your septic tank and drainfield to help break down organic matter. Do not pour grease (such as fats, butter, wax, cheese, heavy cream), liquid wastes (such as pesticides, drain cleaners, household chemicals, paints, paint thinners), oils or coffee grounds down the drain. If you have a garbage disposal, limit its use because food waste can add an unnecessary amount of solid material to your septic tank. Harmful chemicals put down your drain can also be discharged into the groundwater and can impact drinking water supplies and the environment. EPA's Quick Tip Video explains which items to put or not put down the drain, "Think at the Sink!"
- **Does using a garbage disposal unit impact my septic system?**
  - Yes. Using an in-sink garbage disposal unit can impact how often you need to pump your septic tank. Food waste usually is slowly digested by the healthy bacteria in your septic tank and can accumulate as scum and sludge. If a large amount of water enters the septic tank or the tank fills up with solids, it can push the solids into the drainfield, causing the pipes to clog and increasing the thickness of the biomat (a bacteria layer that forms on the bottom and sides of the drainfield trenches). If you must use a garbage disposal unit, your tank will need to be pumped more frequently.

- **What can I flush down the toilet?**
  - Only flush human waste and toilet paper down the toilet.
  - Never flush these items down the toilet because they could clog your septic system and cause a failure:
    - Cooking grease or oil
    - Non-flushable wipes, such as baby wipes or other wet wipes
    - Photographic solutions
    - Feminine hygiene products
    - Condoms
    - Dental floss
    - Diapers
    - Cigarette butts
    - Coffee grounds
    - Cat litter
    - Paper towels
    - Pharmaceuticals
    - Household chemicals like gasoline, oil, pesticides, antifreeze, and paint or paint thinners
  - EPA's Quick Tip Video explains which items not to put down the toilet, "Don't Overload the Commode!"
- **Should I avoid driving or building on my drainfield?**
  - Yes. Most drainfields (such as rock and pipe, chamber system, etc.) are constructed in open lawn areas and are not designed to handle vehicles or heavy equipment driving on them. The weight of vehicles and heavy equipment compacts the soil, which can damage pipes. Impermeable materials, such as concrete and asphalt, should not be laid on top of a drainfield because they reduce evaporation and the supply of oxygen to the soil. Oxygen is critical to the healthy bacteria in your septic system and the proper breakdown of sewage by soil microorganisms.
  - Do not build any structures in or on your drainfield area without checking with a local designer or permitting authority. It is not recommended to plant trees, shrubs, or vegetable gardens on the drainfield. Tree and shrub roots can ensnarl and damage drainfield pipes. Vegetables can potentially be exposed to sewage effluent and unsafe to consume. Native grasses and ground covers are the most appropriate planting over your drainfield. See EPA's Proper Landscaping On and Around Your Septic System <https://epa.gov/sites/default/files/2015-06/documents/septicsmart-week-landscaping-final.pdf> factsheet or WaterSense's What to Plant <https://epa.gov/watersense/what-plant> for more information.
  - EPA's Quick Tip Video explains how to safeguard your drainfield, "Shield Your Field!"

Maintaining Septic Systems

- **Who is responsible for maintaining septic systems?**
  - The owner of the system (i.e., the homeowner, property owner, homeowner's association, or other responsible management entity) is responsible for the overall operation, maintenance, and upkeep of the system, including repairs or replacement. The system users (i.e., occupants, tenants) are responsible for the proper use of the system, such as what materials go down the drain, how much water is used, etc.
  - EPA developed the New Homebuyer's Brochure and Guide to Septic Systems <https://epa.gov/septic/new-homebuyers-brochure-and-guide-septic-systems> to help new homeowners better understand maintaining their systems.
- **How often should my septic tank be pumped?**
  - In general, a septic tank should be inspected every 1 to 3 years and pumped every 3 to 5 years. The frequency of pumping the septic tank depends on the tank size, number of people in the household, habits of water use as well as the amount of solids accumulated in the tank. Some alternative systems that are more complex may require more frequent inspection or pumping. If you are unsure, ask your local septic system professional. A septic tank effluent filter may also require frequent maintenance and should be included in the inspection and maintenance activities. It is important to save your system's yearly schedule or maintenance records. See the National Onsite Wastewater Recycling Association's Guide and Record Keeping Folder example <https://www.nowra.org/customer-content/www/cms/files/resources/homeowner-onsite-systems-folder.pdf>.
  - Spring is a great time to service your septic system. EPA developed a customizable postcard <https://epa.gov/septic/spring-postcard> as a reminder to homeowners on the importance of regular preventative system maintenance.
- **I've never pumped my septic tank, is that a problem?**
  - If you have not pumped your septic tank in several years, but do not seem to be having any problems, it may mean one of several things:
    - There is minimal water use in the home, and/or the size of the septic tank and the biological activity maintains the solids at sustainable levels. This is rare but may occur when there are only one or two people in the home.
    - The tank has a leak and is discharging wastewater into the ground instead of into the drainfield.
    - The tank is full of solids, which are slowly migrating and may eventually clog the drainfield. This may increase the cost of pumping the tank and may require replacing the entire drainfield if it becomes clogged.

- **What kind of additives are acceptable for use in my septic system?**
  - EPA does not make recommendations on individual septic system products. Commercially available microbiological and enzyme additives are promoted to reduce sludge and scum accumulation in septic tanks. However, these additives are not necessary for a septic system to function properly when treating domestic wastewater. Use caution when using additives in your septic system as they may decrease the performance of septic drainfields, which treat the wastewater from the septic tank. In general, do not use additives made of organic solvents or strong alkali chemicals because they pose a potential threat to soil structure and groundwater.
  - A variety of publications and organizations have assessed the impacts and effectiveness of different kinds of additives. EPA's Onsite Wastewater Treatment Systems Manual <https://epa.gov/sites/default/files/2015-06/documents/2004_07_07_septics_septic_2002_osdm_all.pdf> has additional information. Further, some states and localities have state-specific rules and regulations regarding septic system additives. Contact your local permitting authority (i.e., local health or environmental department) for more guidance.
- **How long does a septic system last?**
  - The lifespan of a septic system depends on the material it is made of, the design, installation, service and exposure conditions, and maintenance of the system. Typically, a septic tank made of concrete may last 50 years or more, although older tanks may not be as well constructed as newer tanks. Tanks made from other materials, such as plastic may last a similar timeframe. See the manufacturer for projected lifespan estimates as well as strength, design, installation, and warranty information.
  - If your septic system includes a pump, many pumps and controls will need to be replaced every 10 to 20 years. If you have an advanced treatment unit, check with the manufacturer for estimates of lifespan and warranty information.
  - If your drainfield is more than 25 to 30 years old, the natural biomat that forms in the bottom of the trenches or beds can thicken and reduce the ability of the drainfield to properly discharge the wastewater into the ground. This can cause ponding in the drainfield, surfacing of untreated wastewater, or backing up into the septic tank and into the plumbing in the house.
  - If your septic system is more than 25 to 30 years old, start planning for an upgrade before you are in an emergency situation. It is likely your system is close to its useful lifespan.

Failing Septic Systems

- **How can I prevent a septic system failure?**
  - Regular maintenance is the best method to prevent a septic system failure. Septic maintenance includes inspecting the entire system every 1 to 3 years and pumping the tank every 3 to 5 years. The frequency for pumping the septic tank depends on the tank size, number of people in the household, the water habits and use, if a garbage disposal is used, and the amount of solids accumulated in the tank. A rule of thumb is to pump the tank when the solids are two-thirds of the volume in the tank. Routine maintenance is the responsibility of the home or property owner. If you rent a home, you have responsibility for the proper use and operation of the system.
  - In general, you can avoid a septic system failure by:
    - Inspecting your system every 1 to 3 years
    - Pumping the tank every 3 to 5 years or as needed
    - Avoiding excess water use (e.g. spreading out laundry use over the week)
    - Flushing only human waste and toilet paper down the toilet.
- **What are common signs of a failing septic system?**
  - Water and sewage from toilets, drains, and sinks backing up into the home's plumbing
  - Bathtubs, showers, and sinks draining very slowly
  - Gurgling sounds in the plumbing system
  - Standing water or damp spots near or over the septic tank or drainfield
  - Sewage odors around the septic tank or drainfield
  - Bright green, spongy lush grass over the septic tank or drainfield, even during dry weather
  - Straight pipe discharging untreated wastewater to the ground surface
  - Algae blooms in nearby lakes or waterbodies
  - High levels of nitrates or coliform bacteria in surface waters or drinking water wells

- **If I smell a foul odor coming from my septic system, does that mean my system is failing?**
  - There may be several reasons for the smell, which can occur inside or outside your home. If you notice an odor, it may be coming from a roof vent or other vent pipe that allows the system pressure to equalize. This is a normal part of your system. Sometimes these vents can become obstructed and clogged (from leaves, debris, etc.) or the vent pipe can freeze during prolonged cold spells. These situations could cause an odor inside or outside of your home. Another possibility is a down draft (changes to wind pattern) or other location-specific conditions, which can create an odor inside or outside your home. In these cases, the vent may need to be cleaned or raised. There are charcoal filters available for roof vents that may also alleviate the odors.
  - If your drainfield is not working properly, that could be another reason you smell an odor inside your home or around the septic system. Soft, wet, or spongy soil (especially when there have been no significant rainfall events) around your drainfield is a good indication of a system failure. For general information on maintenance of your septic system, consult EPA's A Homeowners' Guide to Septic Systems <https://epa.gov/sites/default/files/2015-06/documents/septicsmart_longhomeownerguide_english508_0.pdf>.
  - It is not possible to diagnose the exact cause of an odor remotely. EPA recommends you contact a local septic system service provider and/or plumber to address the issue.
- **What about a smell from the septic system in my recreational vehicle (RV), boat or mobile home?**
  - If you spend any time in an RV or boat, you probably know about the problem of odors from sewage holding tanks.
  - Factsheet on Safe Wastewater Disposal for RV, Boat and Mobile Home Owners and Operators <https://epa.gov/septic/safe-wastewater-disposal-rv-boat-and-mobile-home-owners-and-operators> includes information on the dangers of chemical additives, such as holding tank deodorizers.

Inspecting Septic Systems

- **What should I expect in a typical septic system inspection?**
  - Septic system inspections are a vital step in making sure your system is operating properly. Regular inspections ensure you and your family do not get sick due to a leak or other problems with your septic system. Since these wastewater systems are located underground, homeowners may overlook having a septic inspection. Routine inspections help prevent expensive repairs to your system or avoid a sewage backup in your home. In many states, a septic system must be inspected with the transfer of real estate. However, it is not only when you are buying a home that these inspections are needed. Septic system inspections should be done every 1 to 3 years for as long as you own your home.
  - In general, an inspection will involve the following:
    - Review of the system permit, design, and installation records (including system age)
    - Review of the septic tank pumping and system maintenance records
    - Opening and inspecting all tanks (septic tank, pump tank, distribution box)
    - Evaluating the septic tank sludge and scum levels and determining the need to pump
    - Assessing the condition of the septic tank effluent filter (if installed)
    - Looking for signs of leakage, such as low water levels in the tank
    - Looking for signs of backup, such as staining in the tank above the outlet pipe
    - Evaluating the integrity of the tank, inlet and outlet pipes and looking for signs of corrosion
    - Verifying all electrical connections, pumps, controls, and wiring are intact
    - Possibly using a camera to look at solid pipes and leach lines for blockages or collapsed piping
    - Evaluating the drainfield for signs of system failure, such as standing water (surfacing) or unequal drainage
    - Possibly excavating parts of the drainfield to look for signs of ponding in the system or groundwater impacting the drainfield
    - Examining the distribution box for structural integrity and to make sure drain lines are receiving equal flow
    - Reviewing other available records on water use and required inspections, monitoring, and reporting to ensure system compliance with local regulations regarding function and permit conditions.
  - EPA's Quick Tip Video walks through a typical inspection, "Protect It and Inspect It!"
  - Contact your local permitting authority (i.e., local health or environmental department) for a list of professional inspectors in your area.

Septic System Regulations

EPA does not regulate single family home septic systems. In most states, local health departments issue construction and operating permits to install septic systems under state laws that govern public health protection and abatement of public nuisances. Some states add water resource protection provisions to their septic system regulations because of the possible impacts from nitrogen and phosphorus.

Under most regulatory programs, the local permitting agency conducts a site assessment to determine whether the soils can provide adequate treatment. These programs ensure that ground water resources will not be threatened, and stipulate appropriate setback distances from buildings, driveways, property lines, and surface waters.

Some states permit alternative systems if conventional soil-based systems are not allowable. Very few permitting agencies conduct regular inspections of septic systems after they are installed.

Regulation of onsite wastewater treatment systems:

- Individual onsite systems are regulated by states, tribes and local governments, not the federal government.
- Large capacity septic systems are regulated under EPA's Safe Drinking Water Act Underground Injection Well program, large capacity septic systems requirements <https://epa.gov/uic/large-capacity-septic-systems>.
- Systems discharging to surface waters are regulated under EPA's Clean Water Act National Pollutant Discharge Elimination System program <https://epa.gov/npdes>.
- Disposal of sewage sludge (biosolids) and domestic septage are regulated under EPA's sewage sludge regulation <https://www.govinfo.gov/content/pkg/cfr-1998-title40-vol21/pdf/cfr-1998-title40-vol21-sec503-1.pdf> (40 CFR Part 503).
    - A Guide to the Biosolids Risk Assessment for the EPA Part 503 Rule <https://epa.gov/biosolids/guide-biosolids-risk-assessments-epa-part-503-rule> describes the risk assessment process that is the basis for the biosolids rule

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Septic System Compliance

- **What should I do if I witnessed a violation of environmental quality/law from the neglect of a septic system?**
  - If you have witnessed or are aware of an environmental violation, you can file a complaint with your state or local health department. It is imperative to contact your state or local health department as soon as possible to avoid public and/or environmental health risks. You can also report environmental violations to EPA's Office of Enforcement and Compliance <https://echo.epa.gov/report-environmental-violations>.
- **What can I do about an abandoned septic system that is no longer in use?**
  - A property owner may be required to properly remove the abandoned septic tank or drainfield, depending on your state or county rules and regulations. Other rules may allow a system to be abandoned in place where there is little potential for environmental, health, or safety impacts. Contact your local permitting authority (i.e., local health or environmental department) about regulations regarding when and how to properly handle an abandoned septic system in your area.

Paying for Septic Systems

- **How can I pay for my septic system? Are there grants or loans available to help me pay for the repair or replacement of my septic system or to buy a new one?**
  - In addition to EPA, there are national financing programs available through the U.S. Department of Agriculture (USDA), as well as other agencies.
  - EPA
    - Clean Water State Revolving Fund (CWSRF) <https://epa.gov/cwsrf> provides assistance for the repair or replacement of failing decentralized systems. Each state's CWSRF program is responsible for selecting the projects that receive assistance. You can contact your CWSRF state representative <https://epa.gov/cwsrf/state-cwsrf-program-contacts> to learn more about the application process and eligibility requirements.
    - Nonpoint Source (NPS) voluntary program <https://epa.gov/nps> provides grants and technical assistance to states, territories, and tribes to address nonpoint sources of pollution, including failing septic systems. Depending on your state's NPS management program, grants may be available to construct, upgrade, or repair individual septic systems. Please note that individual homeowners are not eligible to directly receive grant assistance through this program, as the grants are typically provided to watershed organizations that are actively implementing watershed-based plans to restore impaired waterbodies.

- USDA
  - Rural Home Loans Program <https://www.rd.usda.gov/programs-services/single-family-housing-programs/single-family-housing-direct-home-loans> offers loan assistance to low and very low-income applicants. The amount of assistance is determined by the adjusted family income. Funds can be used to build, repair, renovate, or relocate a home, or to purchase and prepare sites, including providing water and sewage facilities (Rural Home Loans Program Fact Sheet <https://www.rd.usda.gov/sites/default/files/fact-sheet/508_rd_fs_rhs_sfh502direct.pdf>).
  - Single-Family Housing Repair Loans and Grants Program <https://www.rd.usda.gov/programs-services/single-family-housing-programs/single-family-housing-repair-loans-grants> offers grants and low-interest loans to repair, improve, or modernize rural single-family homes or grants to elderly very-low-income homeowners to remove health and safety hazards, including septic systems. Loans may be used on repairs and improvements and grants must be used to remove health and safety hazards. The maximum loan amount is $20,000 and the maximum grant amount is $7,500 (Single-Family Housing Repair Loans and Grants Program Fact Sheet <https://www.rd.usda.gov/programs-services/single-family-housing-programs/single-family-housing-repair-loans-grants>).
  - Rural Decentralized Water Systems Grant Program <https://www.rd.usda.gov/programs-services/water-environmental-programs/rural-decentralized-water-systems-grant-program> offers grants to rural homeowners. Grant funds may be used to help a nonprofit create a revolving loan fund for eligible individuals who own and occupy a home in an eligible rural area. The fund may be used to construct, refurbish, or service individually-owned household water well and septic systems. Terms for the loans include one percent fixed interest rate, 20-year maximum term, and an $15,000 maximum loan per household (Rural Decentralized Water Systems Grant Program Fact Sheet <https://www.rd.usda.gov/sites/default/files/fact-sheet/rd_fs_rus_decentalizedwatersysgrant.pdf>).
- There are additional community financing programs that in certain cases may be used on wastewater infrastructure.
  - U.S. Department of Housing and Urban Development (HUD) <https://www.hud.gov/> provides funds to states through community development block grants. The grants fund various projects, including rehabilitation of residential and nonresidential structures, construction of public facilities, and improvement of water and sewer facilities.
  - U.S. Economic Development Administration (EDA) <https://www.eda.gov/> administers various funding programs to promote collaborative regional innovation, public/private partnerships, national strategic priorities, global competitiveness, and environmentally sustainable development.

Financing Options

	EPA CWSRF	EPA NPS	USDA Rural Home	USDA Single-Family Housing	USDA Rural Decentralized	HUD	EDA
Criteria							
Individuals Over 65 Years Old	X		X	X	X	X	
Low-Income Households	X		X	X	X	X	
Tribal Nations	X	X	X	X	X	X	X
Nongovernmental Organizations and/or Community Banks	X	X					X
States	X	X				X	X
Local/County Governments	X					X	X

For additional information, visit EPA's Funding for Septic Systems <https://epa.gov/septic/funding-septic-systems> or Water Finance Clearinghouse. The Clearinghouse is an easily navigable web-based portal to help communities locate information and resources that will assist them in making informed decisions for their drinking water, wastewater, and stormwater infrastructure needs, which includes septic system financing and assistance.

Environmental / Public Health Impacts from Septic Systems

- **Do septic systems impact water quality?**
  - In general, a properly installed, sited and maintained septic system should not adversely affect water quality. In some cases, the design may require advanced treatment to reduce the wastewater strength, impacts of nitrogen contamination, or include disinfection when there are properties in close proximity to surface waters.
  - If the system is failing or is an older system that is discharging directly into the groundwater, the wastewater is not treated to reduce pathogens or nutrient levels. If this discharge is in close proximity to a water body, it may negatively impact water quality.
  - Examples of these impacts may include:
    - Groundwater contamination with pathogens, chemicals or nutrients that affect drinking water wells.
    - Surface waters can be contaminated with pathogens, such as *E. coli*, chemicals, and nutrients including nitrogen and phosphorus.
      - Pathogens can cause illnesses for recreational swimming areas, even requiring beach closures and hazards to humans and pets. Excess nitrogen and/or phosphorus can cause an overgrowth of blue-green algae or cyanobacteria in a short period of time, triggering algae blooms. The overgrowth of algae consumes oxygen and blocks sunlight from underwater plants. When the algae eventually die, the oxygen in the water is consumed. This can cause fish and other aquatic organisms to die and create regional “dead zones.”
      - Coastal waters are more sensitive to nitrogen contamination from failing septic systems.
      - Freshwater rivers, lakes, and ponds are more sensitive to phosphorus contamination from failing septic systems.
  - The cumulative impact of failing septic systems that are in close proximity to each other and to a water body in environmentally sensitive areas may need to be addressed at the regional or watershed level.
  - For more information and outreach tools, EPA's Nutrient Pollution Outreach and Education Materials <https://epa.gov/nutrientpollution/nutrient-pollution-outreach-and-education-materials> offers various tools and publications to develop effective communications materials related to nutrient pollution.

- **Can failing septic systems affect human health?**
  - A failing septic system likely discharges untreated wastewater, which contains pathogens (e.g., *E. coli*), nutrients and other harmful substances directly into the groundwater or onto the ground and into surface waters.
  - Surfacing untreated wastewater from a failed drainfield is a direct public health hazard to anyone exposed to it. Children and pets can unknowingly be exposed to this hazard which can cause illness. If you or others have been exposed to untreated wastewater, contact your health professional.
  - Straight pipes can discharge untreated wastewater directly into ditches, streams and other water bodies causing a direct public health hazard and also a regional public health hazard to anyone who comes into contact with the untreated wastewater.
  - Drinking water from groundwater wells and from surface water sources can be contaminated by untreated wastewater and require filtration and disinfection to remain potable. Check with your local health department about having your water tested.
  - Excess nitrogen contamination in surface or groundwater supplies can impact drinking water systems requiring special treatment.
  - Chemicals that may be discharged into septic systems can negatively impact water quality and public health in both groundwater and surface water sources, even in very small amounts.
  - EPA's Quick Tip Video explains how regular water quality testing can protect and safeguard your family's health, "Keep It Clean!"

Additional Information: EPA Septic Systems Glossary

Septic Systems Home <https://epa.gov/septic>

About Septic Systems

How Septic Systems Work <https://epa.gov/septic/how-septic-systems-work>

Types of Septic Systems <https://epa.gov/septic/types-septic-systems>

Webinars <https://epa.gov/septic/webinars-about-decentralized-wastewater-treatment>

Frequent Questions

Care and Maintenance <https://epa.gov/septic/septic-system-care-and-maintenance>

Funding <https://epa.gov/septic/funding-septic-systems>

SepticSmart <https://epa.gov/septic/septicsmart>

Decentralized Wastewater Partnership <https://epa.gov/septic/epas-decentralized-wastewater-partnership>

Additional Resources <https://epa.gov/septic/additional-resources-about-septic-systems>

Contact Us <https://epa.gov/septic/forms/contact-us-about-septic-systems> to ask a question, provide feedback, or report a problem.

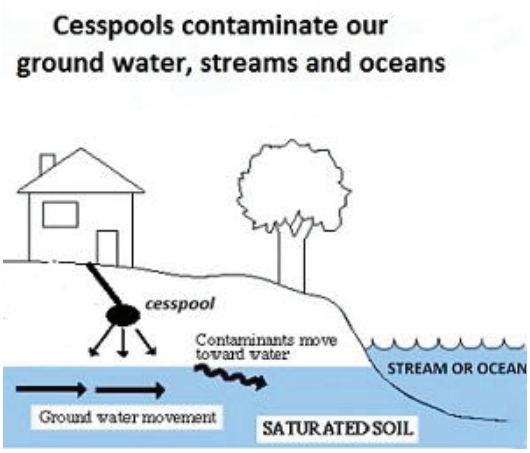
LAST UPDATED ON AUGUST 7, 2023

Privacy and Security Notice

<https://epa.gov/privacy/privacy-and-security-notice>

State of Hawaii, Department of Health
Wastewater Branch
Ka 'Oihana Olakino

CESSPOOLS IN HAWAI'I



Cesspools are substandard systems. They don't treat wastewater, they merely dispose of it. Cesspools concentrate the wastewater in one location, often deep within the ground and in direct contact with groundwater, causing groundwater contamination. This groundwater flows into drinking water wells, streams and the ocean, harming public health and the environment, including beaches and coral reefs.

What are cesspools?

- Cesspools are little more than holes in the ground that discharge raw, untreated human waste.
- Cesspools can contaminate ground water, drinking water sources, streams and oceans with disease-causing pathogens, algae-causing nutrients, and other harmful substances.
- Untreated wastewater from cesspools contains pathogens such as bacteria, protozoa and viruses that can cause gastroenteritis, Hepatitis A, conjunctivitis, leptospirosis, salmonellosis and cholera.

How many cesspools do we have in Hawai`i?

- There are approximately **88,000** cesspools in the State, with nearly 50,000 located on the Big Island, almost 14,000 on Kauai, over 12,000 on Maui, over 11,000 on Oahu and over 1,400 on Molokai.

How many cesspools pose a risk to our water resources and how do they impact our environment?

- There are **43,000** cesspools that pose a risk to our water resources.

- There are approximately 6,700 cesspools that are located within 200 feet of a perennial stream channel throughout the State. There are approximately 31,000 cesspools that are located within the perennial watersheds on the islands of Hawai`i, Kauai, Maui, and Molokai.
- Cesspools in Hawai`i release approximately **53 million gallons of untreated sewage** into the ground each day.
- Cesspools have significant impact on the quality of drinking water, general water quality, the health of our reefs, and the health of Hawaii's residents and visitors.

What is Act 125?

- Act 125 was passed in the 2017 legislative session and require the replacement of all cesspools by 2050. it directs the Hawaii Department of Health (DOH) to evaluate residential cesspools in the state, develop a Report to the Legislature that includes a prioritization method for cesspool upgrades, and work with the Department of Taxation on possible funding options to reduce the financial burden on homeowners.

Report to the Legislature – Relating to Cesspools and Prioritization for Replacement

- The report identifies 14 areas in the state where an evaluation of data on hand indicates greatest need for action.
- The report identifies four priority categories. **Priority 1** are areas where cesspools present a Significant Risk of Human Impacts, Drinking Water Impacts, or Draining to Sensitive Waters. **Priority 2** are areas where cesspools present a Potential to Impact Drinking Water. **Priority 3** are areas where cesspools have the Potential to Impact Sensitive Waters in our state. **Priority 4** is a placeholder for all cesspools whose impacts DOH have yet to fully analyze.
- The highest priority for action is located in Upcountry Maui and Kahalu'u.

How can I get a copy of the report?

- The Report is available for download: | .pdf |

Posters and Handouts from the Makawao Cesspool Community Meeting on January 9, 2018

- Flier | .pdf |
- Posters | .pdf |

Handouts, Powerpoint Presentation and Video from the Kahalu'u Cesspool Community Meeting on January 12, 2018

- Flier | .pdf |
- Powerpoint Presentation | .pdf |
- Video – Part 1 | youtube |

- Video – Part 2 | youtube |
- Video – Part 3 | youtube |
- Video – Part 4 | youtube |

Upcountry Maui Groundwater Nitrate Investigation Report, Appendices, PowerPoint Presentation and Public Notice

- Upcountry Maui Groundwater Nitrate Investigation Draft Report | .pdf |
- Upcountry Maui Groundwater Nitrate Investigation Draft Report Appendices | .pdf |
- Upcountry Maui Groundwater Nitrate Investigation Draft Report – Appendix VI: Groundwater Flow and Nitrogen Transport Model Report (Draft) | .pdf |
- Upcountry Maui Groundwater Nitrate Investigation PowerPoint Presentation – Kula Community Meeting on 2/21/18 | .pdf |
- Notice of Opportunity to Provide Public Comment on the Draft "Upcountry Maui Groundwater Nitrate Investigation Report" | .pdf |

Upcountry Maui Groundwater Nitrate Investigation Report – Department of Health Responses to Public Review Comments

- Department of Health Responses to Public Review Comments on the Upcountry Maui Groundwater Nitrate Investigation Report | .pdf |

Handouts and Video from the Waimanalo Cesspool Community Meeting on May 29, 2018

- Handouts | .pdf |
- Video – Part 1 | youtube |
- Video – Part 2 | youtube |
- Video – Part 3 | youtube |

Handouts and Video from the Kailua-Kona Cesspool Community Meeting on June 29, 2018

- Handouts | .pdf |
- Video | youtube |

Handouts and Video from the Hilo Cesspool Community Meeting on July 25, 2018

- Handouts | .pdf |
- Video | youtube |

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 9

IN THE MATTER OF:	)	**DECLARATION OF KATHERINE RAO**
	)	
NSHE HI Narcissus, LLC,	)	
	)	
	)	
Respondent.	)	Docket No. UIC-09-2022-0058
	)	

I, Katherine Rao, hereby declare as follows:

1. Since 2000, I have been employed as an Environmental Protection Specialist in the Groundwater Protection Section of the Water Division at the United States Environmental Protection Agency, Region 9 (EPA) in San Francisco, California.

2. The Groundwater Protection Section implements the Underground Injection Control (UIC) program under the Safe Drinking Water Act. The UIC program protects underground sources of drinking water (USDW) from endangerment by regulating the construction, operation, permitting, and closure of injection wells that place fluids underground for storage or disposal. The UIC program is designed to protect all current and potential USDWs from contamination from injection wells.

3. The UIC program consists of six classes of injection wells. Each well class is based on the type and depth of the injection activity. All injection must be authorized, either by individual permit or rule.

4. Class V wells are used to inject non-hazardous fluids underground. Most Class V wells are shallow disposal wells that depend on gravity to drain fluids directly into the

ground. Given the shallow depth of Class V wells, disposal through these wells can pose a direct threat to USDW if not managed properly. Most Class V wells are regulated by rule, not individual permits.

5. Large Capacity Cesspools (LCC) are a type of Class V injection well. LCCs have a high potential to contaminate USDW because they are not designed to treat sanitary waste and may contain other constituents of concerns, including chemicals used to clean cesspools.

6. In 1998, EPA proposed a rule to ban LCCs; in 1999, EPA finalized the rule. The final rule banned LCCs nationwide due to the acute nature of the risks posed by these types of endangering injection wells. The LCC ban went into effect on April 5, 2005.

7. The Groundwater Protection Section directly implements the UIC program, including the LCC ban, in the state of Hawaii.

8. In my current role as an Environmental Protection Specialist in the Groundwater Protection Section, I manage grants and contracts, provide technical support to Class V direct implementation programs (including in Hawaii), oversee primacy programs, manage UIC data, assist the Section on public outreach, and mentor new staff.

9. I have also been the LCC Coordinator for the Region since 2008. As the LCC Coordinator, I am responsible for identifying potential LCCs, providing compliance assistance to the regulated community about the LCC ban, coordinating with our enforcement team, and tracking compliance with the LCC ban.

10. EPA has implemented the LCC ban in Hawaii in several ways. Since the LCC ban went into effect, EPA Region 9 has issued news releases and factsheets, attended industry

and environmental meetings and conferences, participated in numerous interviews, provided outreach and education material via EPA's website, and contacted hundreds of potential LCCs owners. EPA Region 9 carries out these LCC efforts in close coordination with the Hawaii Department of Health (HDOH), Wastewater and Safe Drinking Water Branches. Additionally, EPA conducts LCC inspections and enforcement for LCCs that continue to operate in violation of the ban through the Region's Enforcement and Compliance Assurance Division. Normally, each enforcement case has an associated press release.

11. Since the LCC ban went into effect, EPA has identified more than 5,190 LCCs in Hawaii, and monitored the closure or conversion of approximately 74 percent of the known LCCs.

12. EPA, in cooperation with state and local partners such as HDOH, will continue to implement the LCC ban until all LCCs are closed to ensure the protection of USDW throughout the state of Hawaii and elsewhere. The LCC ban is one of many tools that is critical to the EPA to ensure the safety of our drinking water sources.

KATHERINE RAO

Digitally signed by KATHERINE RAO
Date: 2024.04.05 09:56:36 -07'00'

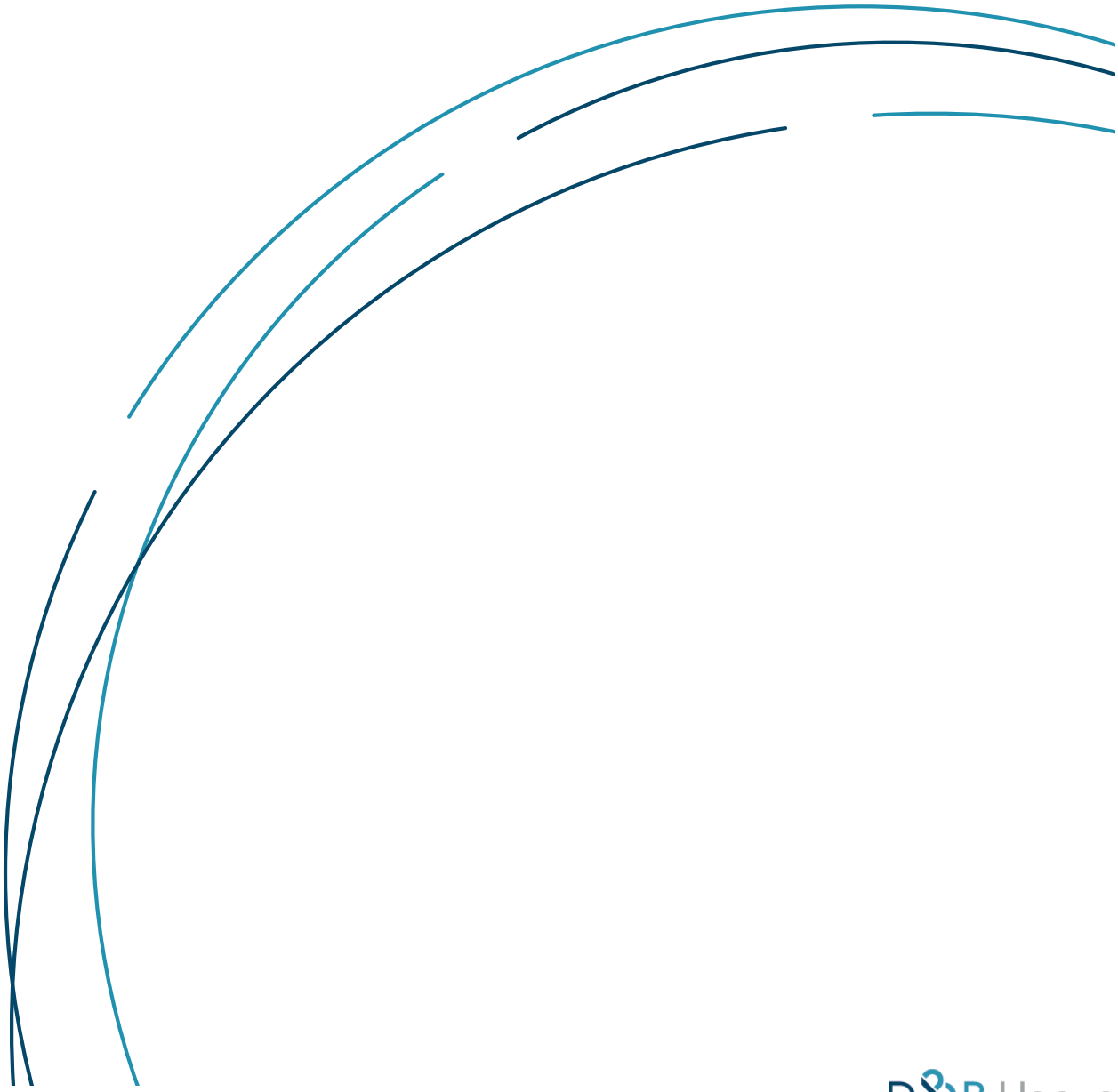
_____

Katherine Rao
Environmental Protection Specialist
Water Division

ONESTOP REPORT

HI Nshe Narcissus LLC

20-Mar-2023



D&B Hoovers

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COMPANY SUMMARY
SITE CONTACTS
CORPORATE OVERVIEW
SIGNALS
NEWS
TRIGGERS
CLOSEST INDUSTRY PEERS
CLOSEST COMPANIES

HI Nshe Narcissus LLC

Honolulu, Hawaii, United States

Private Independent

Marketability: Has limited marketability due to incomplete or invalid data

EMPLOYEES
11 (Here)
11 (Total)

D&B LEGAL STATUS TYPE
Corporation

INDUSTRY
Nonclassifiable Establishments

SALES
53.48K

REPORTING CURRENCY
USD

D-U-N-S® NUMBER
10-941-8823

ADDRESS

Unknown: No Physical Address Available From Registry
Honolulu, Hawaii, 96813 United States

(Primary Address)

Latitude: 21.317905

Longitude: -157.852072

Company Summary

Business Description

Nonclassifiable establishments

Source: D&B

Industry

D&B HOOVERS INDUSTRIES
Nonclassifiable Establishments

ANZSIC 2006
9900 - Nonclassifiable Establishments

US 8-DIGIT SIC
99992222 - Duns Support Record, nonclassifiable establishment

ISIC REV 4
9999 - Nonclassifiable Establishments

NACE REV 2
9999 - Nonclassifiable Establishments

View All

NAICS 2022
999990 - Unclassified Establishments

UK SIC 2003
99990 - Nonclassifiable Establishments

UK SIC 2007
99990 - Nonclassifiable Establishments

US SIC 1987
9999 - Nonclassifiable Establishments

Company Identifiers

D-U-N-S® NUMBER
109418823
LEI NUMBER

Corporate Highlights

GLOBAL ULTIMATE D-U-N-S® NUMBER
109418823

DOMESTIC ULTIMATE D-U-N-S® NUMBER
109418823

YEAR FOUNDED
2017

PRESCREEN SCORE
LOW RISK

STATE OF INCORPORATION
Hawaii

Spend Capacity

22

LOWEST

Highest Spend (99) Lowest Spend (0)

Growth Trajectory

GROWING	STABLE	SHRINKING
Increasing demand	Needs unlikely to change	Decreasing demand

Contacts

Duke Pontin
Principal

View All 1 Contacts

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Site Contacts

Duke Pontin

Principal at HI Nshe Narcissus LLC

Honolulu, Hawaii, United States

Nonclassifiable Establishments

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Corporate Overview

Key ID [SM] Number: 655002276

Key Corporate Relationships

AUDITOR
NA

Industry Codes

ANZSIC 2006
9900 - Nonclassifiable Establishments (Primary)

ISIC REV 4
9999 - Nonclassifiable Establishments (Primary)

NACE REV 2
9999 - Nonclassifiable Establishments (Primary)

NAICS 2022
999990 - Unclassified Establishments (Primary)

UK SIC 2003
99990 - Nonclassifiable Establishments (Primary)

UK SIC 2007
99990 - Nonclassifiable Establishments (Primary)

US 8-DIGIT SIC
99992222 - Duns Support Record, nonclassifiable establishment (Primary)

US SIC 1987
9999 - Nonclassifiable Establishments (Primary)

Business Description

Nonclassifiable establishments

Source: D&B

Financial Summary

Financials In	USD(mil)	1 Year Growth
Sales	0.1	NA

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Signals Report

Does Business in United States

100

The value of this signal is set to 100 when a company does business in the United States, zero otherwise. Determined for all possible companies in the D&B Hoovers database. Updated at least quarterly.

Company does business in United States

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News

We’re sorry, we couldn’t find any information at this time

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Triggers

We’re sorry, we couldn’t find any information at this time

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Closest Industry Peers

E. Chang Services Hawaii, LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-433-3419

Sales USD: 62.17K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

Orion HI Group LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-938-7562

Sales USD: 62.17K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

Hawaii Cria LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 06-095-5780

Sales USD: 62.17K
Employees (Here): 5
Employees (Total): 5

0.00 Miles Away

2729 Kekuanoni LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-933-6103

Sales USD: 53.48K
Employees (Here): 11
Employees (Total): 11

0.00 Miles Away

Hawaii Young Republicans

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-445-9370

Sales USD: 61.14K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

Shinyi, LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-938-6020

Sales USD: 117.67K
Employees (Here): 10
Employees (Total): 10

0.00 Miles Away

Green Artichoke Ventures LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-450-3797

Sales USD: 62.17K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

Ram Usa, Inc.

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-932-3900

Sales USD: 52.38K
Employees (Here): 10
Employees (Total): 10

0.00 Miles Away

Hundred and Ten LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-469-7369

Sales USD: 62.17K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

M & N Kokoleka LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-931-7054

Sales USD: 63.57K
Employees (Here): 10
Employees (Total): 10

0.00 Miles Away

Olakino Specialties LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-934-8874

Sales USD: 62.17K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

Krinklebop LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-434-4881

Sales USD: 62.17K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

SRC All Other Cell, LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-483-8494

Sales USD: 62.17K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

P&R Hui LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-930-5470

Sales USD: 62.17K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

Exspearmint LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-932-5763

Sales USD: 63.57K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

Hi'iao, LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-169-6050

Sales USD: 62.17K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

HI Nshe Sunflower LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-943-9879

Sales USD: 53.48K
Employees (Here): 11
Employees (Total): 11

0.00 Miles Away

MBA Admissions Guide LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-937-6896

Sales USD: 63.57K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

Tower Kapolei Mf Holdings, LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 04-865-4456

Sales USD: 62.17K
Employees (Here): 4
Employees (Total): 4

0.00 Miles Away

Pineapple Broadcasting Company, LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-941-0412

Sales USD: 53.48K
Employees (Here): 10
Employees (Total): 10

0.00 Miles Away

Kula Collections LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-451-4554

Sales USD: **62.17K**
Employees (Here): **7**
Employees (Total): **7**

0.00 Miles Away

Eel River LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-446-9238

Sales USD: **62.17K**
Employees (Here): **7**
Employees (Total): **7**

0.00 Miles Away

Sea of Indigo LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-932-1999

Sales USD: **63.57K**
Employees (Here): **9**
Employees (Total): **9**

0.00 Miles Away

Aces Life Coaching LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-935-2673

Sales USD: **63.57K**
Employees (Here): **9**
Employees (Total): **9**

0.00 Miles Away

West Beach Kauai LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-933-8718

Sales USD: **55.88K**
Employees (Here): **9**
Employees (Total): **9**

0.00 Miles Away

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Closest Companies

E. Chang Services Hawaii, LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-433-3419

Sales USD: 62.17K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

Akana Vending LLC

Honolulu, Hawaii, United States
Commercial and Industrial Rental
Private Independent
D-U-N-S: 12-466-9324

Sales USD: 70.36K
Employees (Here): 3
Employees (Total): 3

0.00 Miles Away

Orion HI Group LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-938-7562

Sales USD: 62.17K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

Downcountry Rental LLC

Honolulu, Hawaii, United States
Commercial and Industrial Rental
Private Independent
D-U-N-S: 12-446-0909

Sales USD: 70.36K
Employees (Here): 3
Employees (Total): 3

0.00 Miles Away

Hawaii Cria LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 06-095-5780

Sales USD: 62.17K
Employees (Here): 5
Employees (Total): 5

0.00 Miles Away

2729 Kekuanoni LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-933-6103

Sales USD: 53.48K
Employees (Here): 11
Employees (Total): 11

0.00 Miles Away

'ohana Hienaloli Development LLC

Honolulu, Hawaii, United States
Civil Engineering
Private Independent
D-U-N-S: 10-932-1436

Sales USD: 74.80K
Employees (Here): 5
Employees (Total): 5

0.00 Miles Away

Hawaii Young Republicans

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-445-9370

Sales USD: 61.14K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

Shinyi, LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-938-6020

Sales USD: 117.67K
Employees (Here): 10
Employees (Total): 10

0.00 Miles Away

Prosper Capital LLC

Honolulu, Hawaii, United States
Investment Services
Private Independent
D-U-N-S: 10-944-8912

Sales USD: 74.06K
Employees (Here): 5
Employees (Total): 5

0.00 Miles Away

Rf Incorporated

Honolulu, Hawaii, United States
Communications Equipment Manufacturing
Private Independent
D-U-N-S: 04-724-8889

Sales USD: 62.52K
Employees (Here): 3
Employees (Total): 3

0.00 Miles Away

Green Artichoke Ventures LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-450-3797

Sales USD: 62.17K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

Ram Usa, Inc.

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-932-3900

Sales USD: 52.38K
Employees (Here): 10
Employees (Total): 10

0.00 Miles Away

Global Mana Development LLC

Honolulu, Hawaii, United States
Civil Engineering
Private Independent
D-U-N-S: 12-446-8967

Sales USD: 74.80K
Employees (Here): 4
Employees (Total): 4

0.00 Miles Away

Hawaii Land & Power Development, LLC

Honolulu, Hawaii, United States
Civil Engineering
Private Independent
D-U-N-S: 12-434-3886

Sales USD: 74.80K
Employees (Here): 4
Employees (Total): 4

0.00 Miles Away

AG Financial Inc.

Honolulu, Hawaii, United States
Investment Services
Private Independent
D-U-N-S: 10-941-3230

Sales USD: 81.35K
Employees (Here): 6
Employees (Total): 6

0.00 Miles Away

Hundred and Ten LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-469-7369

Sales USD: 62.17K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

M & N Kokoleka LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-931-7054

Sales USD: 63.57K
Employees (Here): 10
Employees (Total): 10

0.00 Miles Away

Olakino Specialties LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-934-8874

Sales USD: 62.17K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

Krinklebop LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-434-4881

Sales USD: 62.17K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

SRC All Other Cell, LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-483-8494

Sales USD: 62.17K
Employees (Here): 7
Employees (Total): 7

0.00 Miles Away

Winslow Behavioral Health LLC

Honolulu, Hawaii, United States
Ambulatory Services
Private Independent
D-U-N-S: 06-277-1953

Sales USD: 34.74K
Employees (Here): 5
Employees (Total): 5

0.00 Miles Away

P&R Hui LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-930-5470

Sales USD: 62.17K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

Exspearmint LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 10-932-5763

Sales USD: 63.57K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

Hi'iao, LLC

Honolulu, Hawaii, United States
Nonclassifiable Establishments
Private Independent
D-U-N-S: 12-169-6050

Sales USD: 62.17K
Employees (Here): 9
Employees (Total): 9

0.00 Miles Away

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CITY AND COUNTY OF HONOLULU
Department of Budget and Fiscal Services
Real Property Assessment Division

Parcel Information

Parcel Number	560050060000
Location Address	56-1048 KAMEHAMEHA HWY
Project Name	
Legal Information	EXCLUSION 48 RP 249 LCAW 4422:2 1.105 AC DES TOG/ESMT
Property Class	AGRICULTURAL
Land Area (approximate sq ft)	48,134
Land Area (acres)	1.1050

Plat Map PDF GIS Parcel Map

Email us at bfsrpmailbox@honolulu.gov regarding Supplemental Plat Map PDFs.

Owner Information

Owner Names
NSHE HI NARCISSUS LLC Fee Owner
NSHE HI SUNFLOWER LLC Fee Owner
⊞ Show All Owners and Addresses

Assessment Information

⊞ Show Historical Assessments

Assessment Year	Property Class	Assessed Land Value	Dedicated Use Value	Land Exemption	Net Taxable Land Value	Assessed Building Value	Building Exemption	Net Taxable Building Value	Total Property Assessed Value	Total Property Exemption	Total Net Taxable Value
2023	AGRICULTURAL	$26,500	$300	$0	$300	$0	$0	$0	$300	$0	$300

2023 amended values not to be posted until new tax rates are processed on or after July 20.
How to calculate real property taxes

The Assessment Information section contains records for the last 10 years.
For inquiries over 10 years and any other assessment data questions, please email the Real Property Assessment Division at bfsrpmailbox@honolulu.gov

Land Information

Land Classification	Square Footage	Acreage	Agricultural Use Indicator
AGRICULTURAL	48,134	1.105	Yes

Department of Planning and Permitting (DPP)

Agricultural Assessment Information

Acres in Production	Agricultural Type	Agricultural Value
1.105	PAST	$265

This parcel has land in agricultural usage and therefore agricultural usage assessments have been made.

Permit Information

Date	Permit Number	Reason	Permit Amount
5/25/2012	692926	ADDITION	$50,000
5/25/2012	692925	NEW BUILDING	$15,000
6/16/2011	673075	ADDITION	$38,000
6/16/2011	673074	RELOC TO	$12,000

Department of Planning and Permitting (DPP)

Sales Information

Sale Date	Sale Amount	Instrument #	Instrument Type	Instrument Description	Valid Sale	Date of Recording	Land Court Document Number	Cert #	Book/Page
07/01/2021		A78520459	FEE CONVEYANCE	Deed	Valid	07/01/2021			
11/04/2009	$35,000	2009-169217	FEE CONVEYANCE	Quitclaim deed	Valid	11/04/2009			
07/27/2005	$14,400,000	2005-149155	FEE CONVEYANCE	Deed	Valid	07/27/2005	3304476	761922	
07/11/2002	$18,844,354	2002-127617	FEE CONVEYANCE	Deed	Valid	07/23/2002	2824842	617562	
09/28/1992		9200165197				10/12/1992			
12/01/1986	$11,530		FEE CONVEYANCE						

Recent Sales in Area

Sale date range:

From: 03/22/2020 To: 03/22/2023

Sales by Neighborhood

1500 Feet Sales by Distance

Treasury Division
Pay online at www.rphnlpay.com
Other Payment Options Click Here

Please call Treasury Division at (808)768-3980 if you have questions on your balance.

Historical Tax Information

Year	Tax	Payments and Credits	Penalty	Interest	Other	Amount Due
⊞ 2022	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2021	$300.00	($300.00)	($9.00)	($3.18)	$0.00	$0.00
⊞ 2020	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2019	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2018	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2017	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2016	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2015	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00
⊞ 2014	$300.00	($300.00)	$0.00	$0.00	$0.00	$0.00

Treasury Division
How to calculate real property taxes

The Historical Tax Information section displays records for the last 10 years. For real property tax information inquiries over 10 years, please contact the Treasury division at bfstreasmailbox@honolulu.gov or (808)768-3980.

Map



No data available for the following modules: Condominium/Apartment Unit Information, Appeal Information, Residential Improvement Information, Residential Additions, Commercial Improvement Information, Sketches, Other Building and Yard Improvements, Current Tax Bill Information.

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CURRICULUM VITAE

Name: Michael Anthony Mezzacapo

Mailing address: 8133 Pomfret Road
West Hartford, VT
Phone: (802) 276-0076
E-mail: michael.a.mezzacapo@gmail.com

1. Education

2005. AS. Allied Health Science, Gwynedd Mercy University, Gwynedd Valley, Pennsylvania.
2014. BS. Allied Health Science, Widener University, Chester, Pennsylvania.
2016. MS. Environmental Studies, Green Mountain College, Poultney, Vermont.

2. Professional Experience

September 2022-Present. Physical Scientist. United States Environmental Protection Agency. Office of Water. Washington, DC.

September 2021-September 2022. Affiliate Faculty. Water Resources Research Center. University of Hawai‘i, Honolulu, Hawai‘i.

August 2021-September 2022. Water Resources Consultant. One World One Water, LLC. Honolulu, Hawai‘i.

August 2021-September 2022. Environmental Analyst V. State of Vermont. Department of Environmental Conservation. Montpelier, Vermont.

October 2020-August 2021. Faculty Affiliate/Visiting Virtual Scholar. Lake Champlain Sea Grant, University of Vermont, Burlington, Vermont.

February 2019-August 2021. Full-time Faculty. Water Resources Outreach Specialist, University of Hawai‘i Sea Grant College Program & University of Hawai‘i Water Resources Research Center, Honolulu, Hawai‘i.

June 2017-June 2018. International Joint Commission Environmental Science Fellow, Michigan Sea Grant College Program. Windsor, Ontario, Canada.

3. Volunteer Experience

August 2018-October 2018. Water Quality Sampling Volunteer. Connecticut River Conservancy, Springfield, Massachusetts.

May 2016-May 2017. Board Member. Mascoma River Watershed Conservation Council, Enfield, New Hampshire.

December 2015-May 2017. Board Member. Mascoma River Local Advisory Council, Lebanon, New Hampshire.

June 2014-May 2017. Lake Assessment Water Quality Sampler. New Hampshire Department of Environmental Services/Canaan Street Lake Association, Canaan, New Hampshire.

October 2014-May 2017. Board Member. Canaan Conservation Commission, Canaan, New Hampshire.

4. General Publications (e.g., peer-reviewed, technical reports, newsletters, posters, graphics)

Contributor to *Hawaii Cesspool Conversion Working Group: 2023 Report to the Regular Session Legislature*. November 2022. Hawai‘i Department of Health. https://health.hawaii.gov/wastewater/files/2022/11/ccwg_final_report.pdf

Mezzacapo, M., Shuler, C., and Lander, M. (2022). *Hawai‘i Cesspool Hazard Assessment & Prioritization Tool: Report and Technical Appendices.* Hawai‘i Department of Health Technical Report. https://health.hawaii.gov/wastewater/files/2022/11/prioritizationtoolreport.pdf

Graydon, R., **Mezzacapo, M.**, Boehme, J., Buckeridge, D., Foldy, S., Edge, T., Brubacher, J., Chan, L., Dellinger, M., Faustman, E., Rose, J., Takaro, T. (2022). *Associations between extreme precipitation, drinking water, and protozoan acute gastrointestinal illnesses in four North American Great Lakes cities (2009-2014)*. Journal of Water and Health. https://doi.org/10.2166/wh.2022.018

Bareford, K., Donohue, M.J., **Mezzacapo, M**. & Lerner, D.T. (2021). *Water Resources Extension: Empowering Action Through Knowledge.* Journal of Contemporary Water Research and Education. 174.

Clement S. & **Mezzacapo, M**. (2021). *Human Health in Vermont.* In Galford, G.L., Faulkner, J. et al. (Eds), The Vermont Climate Assessment 2021. Burlington, Vermont: Gund Institute for Environment at the University of Vermont.

Mezzacapo, M., Donohue, M., Smith, C., El-Kadi, A.I., Falinski, K., Lerner, D. 2020. *Hawai‘i’s Cesspool Problem: Review and Recommendations for Water Resources and Human Health.* Journal of Contemporary Water Research and Education. 170.

Voglesong-Zejnati, A. & **Mezzacapo, M.** 2020. *Selenosis: Signs, Symptoms and Causes of Toxic Selenium Exposure.* Windsor, Ontario, Canada: International Joint Commission Great Lakes Regional Office.

Mezzacapo, M. 2020. *Selenium: Too Much of a Good Thing.* Windsor, Ontario, Canada: International Joint Commission Great Lakes Regional Office.

Contributor to International Joint Commission: Health Professional Advisory Board Report. September 24, 2020. *A Review of Human Health Impacts of Selenium in Aquatic Systems.* Windsor, Ontario, Canada: International Joint Commission Great Lakes Regional Office.

Graydon, R., **Mezzacapo, M.**, Boehme, J., Buckeridge, D., Foldy, S., Edge, T., Brubacher, J., Chan, L., Dellinger, M., Faustman, E., Rose, J., Takaro, T. (2020). *Association between extreme precipitation, drinking water, and protozoan acute gastrointestinal illnesses in the Great Lakes*. August 2020. Poster. Virtual Conference: International Society of Environmental Epidemiology.

Shuler, C., **Mezzacapo, M.** 2020. *The Known Water Quality Impacts of Agriculture in American Samoa: A review of existing water quality studies and data as they relate to agricultural impacts on coastal and inland waters*, HydroShare, https://doi.org/10.4211/hs.023ceae766274f26a14206cc487b5281

Mezzacapo, M. 2020. *Identifying Potential Knowledge Gaps for Hawai'i's Cesspool Conversion Plan: A white paper reviewing research regarding wastewater indicator identification, modeling, policy, and pollution impacts to ecosystems and human health in the State of Hawai'i.* March 13, 2020. Prepared for the State of Hawai'i Cesspool Conversion Working Group & Hawai'i State Department of Health.

Mezzacapo, M. 2019. *A Multi-State Regulation and Policy Survey of Onsite Wastewater Treatment System Upgrade Programs.* September 30, 2019. Prepared for the State of Hawai'i Cesspool Conversion Working Group & Hawai'i State Department of Health.

Mezzacapo, M. 2018. *Could Dust Impact Water Management in the West?* August 20, 2018. International Joint Commission: Water Matters Newsletter.

Contributor to International Joint Commission: Health Professional Advisory Board. June 26, 2018. *Principles for selecting, designing, performing and communicating studies of human health issues involving border waters.* Windsor, Ontario, Canada: International Joint Commission Great Lakes Regional Office.

Mezzacapo, M. 2018. *US and Canada Have Been Slow to Address Chemical Pollution*. April 5, 2018. International Joint Commission: Great Lakes Connection Newsletter.

Mezzacapo, M. 2018. *Green Without Envy: Great Lakes Drown in Excessive Nutrient Pollution.* March 8, 2018. International Joint Commission: Great Lakes Connection Newsletter.

Mezzacapo, M. 2018. *Code Blue: Great Lakes Water Needs a Doctor*. Jan 11, 2018. International Joint Commission: Great Lakes Connection Newsletter.

Mezzacapo, M. 2017. *Greater Infrastructure Investments Needed to Reduce Combined Sewer Overflows*. December 8, 2017. International Joint Commission: Great Lakes Connection Newsletter.

Contributor to International Joint Commission: Health Professional Advisory Board & T3W. November 23, 2017. *A Proof-of-concept Pilot Study of Transboundary Monitoring of Environmental*

Factors and their Influence on Waterborne Acute Gastrointestinal Illness (AGI) in Cities that Source Water from the Great Lakes. Windsor, Ontario, Canada: International Joint Commission Great Lakes Regional Office.

Contributor to International Joint Commission. 2017. *Great Lakes Triennial Assessment of Progress.* Windsor, Ontario, Canada: International Joint Commission Great Lakes Regional Office.

Mezzacapo, M. 2017. *Western Wildfires Put Water Systems at Risk of Pollution*. October 18, 2017. International Joint Commission: Water Matters Newsletter.

Mezzacapo, M. 2017. *Geographic Information Systems: Resources from IJC*. August 6, 2017. International Joint Commission: Water Matters Newsletter.

5. Workshops, Meetings, and Conferences Planned/Conducted

Closing America's Wastewater Access Gap Pilot: Tri Cities Community Presentation. November 9, 2023. Benham Theatre, Benham, Kentucky.

Closing America's Wastewater Access Gap Pilot: Santo Domingo Pueblo Funding Workshop. August 8, 2023. University of New Mexico, Albuquerque, New Mexico.

Cesspool Risk-Factors Assessment Expert Workshop. March 2 & 23, 2022. University of Hawai‘i at Mānoa, Honolulu, Hawai‘i. Virtual Via Zoom.

2021 UCOWR/NIWR Annual Water Resources Conference. Session title: Water Resources Extension: Achieving Actionable Science to Inform Sustainable Community Actions. June 9, 2021. Universities Council on Water Resources. Virtual via Zoom.

Kahalu‘u Cesspool Town Hall Meeting. Organizers: WAI, Hawai‘i Sea Grant, Water Resources Research Center, USDA Rural Development. February 4, 2021 Virtual via Zoom.

2021 University of Hawai‘i Water Resources Research Center/ ‘Ike-Wai Seminar Series. Facilitator/Organizer for Spring 2021 Semester. University of Hawai‘i at Mānoa, Honolulu, Hawai‘i. Virtual via Zoom.

2020 Pacific Islands Climate Adaptation Science Summit. November 17, 2020. Facilitator: Changing Landscapes: Water Resources. Virtual via Zoom.

‘Ike-Wai / Water Resources Research Center Stakeholder Workshop. February 20, 2020. Hawai‘i Imin International Conference Center, East-West Center, Honolulu, Hawai‘i.

2019 O‘ahu Joint Government Water Conference. August 12, 2019. University of Hawai‘i Campus Center, Honolulu, Hawai‘i.

Land-Based Pollutants in Reef Fish. May 6, 2019. Partners: University of Hawai‘i Sea Grant College Program and Hawai‘i Institute of Marine Biology. University of Hawai‘i at Mānoa, Honolulu, Hawai‘i.

13th Meeting of the International Joint Commission Health Professional Advisory Board. April 18, 2018. IJC United States Section Office, Washington, DC.

12th Meeting of the International Joint Commission Health Professional Advisory Board. October 24, 2017. IJC Canadian Section Office, Ottawa, Ontario, Canada.

6. Conferences, Meetings, Workshops Attended

American Water Works Association: Hawai‘i Section, 2024 Pacific Water Conference. February 21-22, 2024. Hawai‘i Convention Center, Honolulu, Hawai‘i.

2023 U.S. EPA Decentralized Memorandum of Understanding Signing/Conference. December 5-6, 2023. EPA HQ Conference Center. Washington, District of Columbia.

2023 National Onsite Wastewater Recycling Association Mega Conference. October 22-25, 2023. Embassy Suites Conference Center, Hampton, Virginia.

Communicating Wastewater Workshop: Hosted by EFC West. October 17-18, 2023. Hawai‘i Department of Health, Pearl City, HI. Attended Virtually via Zoom.

NEIWPCC National State Revolving Fund Workshop. July 11-13, 2023. Sheraton Raleigh Hotel, Raleigh, North Carolina.

Water Environment Federation Wastewater-Based Disease Surveillance Workshop. March 7, 2023. Tempe Public Library, Tempe, Arizona.

2022 National Onsite Wastewater Recycling Association Mega Conference. October 30-November 2, 2022. University Plaza Hotel & Conference Center, Springfield, Missouri.

2021 UCOWR/NIWR Annual Water Resources Conference. June 8-10, 2021. Universities Council on Water Resources. Virtual via Zoom.

2021 National Stormwater and Watershed Conference. April 13-16, 2021. Center for Watershed Protection. Virtual via Zoom.

2021 Tropical Island Water Futures Conference: Water for People and Ecosystems in the Face of Change. April 12-15, 2021. Water Resources Research Center and Hawai‘i EPSCoR ‘Ike Wai. Virtual via Zoom

New Hampshire Sea Grant 2021 Research Symposium. January 28, 2021. New Hampshire Sea Grant. Virtual via Zoom.

Pacific Islands Climate Adaptation Science Center. 2020 Pacific Islands Climate Adaptation Science Summit. November 17-18, 2020. Virtual via Zoom.

Center for Watershed Protection. Coastal & Islands Workshop. November 16-17, 2020. Virtual via Zoom.

Pacific Center for Collaboration. Strategic Planning Workshop. November 21-22, 2019. Koʻolau Golf Club, Kaneohe, Hawaiʻi.

Building Pilina. October 23, 2019. Center for Teaching Excellence, University of Hawaiʻi at Mānoa, Honolulu, Hawaiʻi.

Bill & Melinda Gates Foundation: Innovations in Sanitation Workshop. October 10, 2019. Waikiki Prince Hotel, Honolulu, Hawaiʻi.

Hawaii Water Works Association 2019 Annual Conference. October 9-11, 2019. Ala Moana Hotel. Honolulu, Hawaiʻi.

NOAA Grant Writing Workshop. October 7-8, 2019. NOAA National Marine Fisheries Service: Pacific Islands Office. Honolulu, Hawaiʻi.

2019 Korea Sea Grant Week. August 28-30, 2019. POSCO International Center, Pohang, South Korea.

2019 Oʻahu Joint Government Water Conference. August 12, 2019. University of Hawaiʻi Campus Center, Honolulu, Hawaiʻi.

2019 Sea Grant Pacific Extension Academy. July 16-17, 2019. University of Hawaiʻi at Mānoa, Honolulu, Hawaiʻi.

2019 California Water Data Science Symposium: Community Water Science Workshop. July 2, 2019. California Environmental Protection Agency, Sacramento, California (Remote Participation).

Hawaiʻi Science Education for New Civic Engagements and Responsibilities. Third Annual Grand Challenges Summer Institute: Focus on Water. May 13-15, 2019. University of Hawaiʻi West Oʻahu, Kapolei, Hawaiʻi.

Pacific Center for Collaboration. Facilitation Skills Workshop. February 21-22, 2019. Koʻolau Golf Club, Kaneohe, Hawaiʻi.

American Water Works Association: Hawaiʻi Section, 2019 Pacific Water Conference. February 20, 2019. Hawaiʻi Convention Center, Honolulu, Hawaiʻi.

2018 International Association for Great Lakes Research. June 18-22. University of Toronto Scarborough, Scarborough, Ontario, Canada.

International Joint Commission Semi Annual Meeting. April 16-20, 2018. IJC United States Section Office, Washington, DC.

Great Lakes Executive Committee Meeting. December 5-6, 2017. Radisson Admiral Harbour Front, Toronto, Ontario, Canada.

International Joint Commission Semi Annual Meeting. October 23-27, 2017. IJC Canadian Section Office, Ottawa, Ontario, Canada.

Healing Our Waters- Great Lakes Coalition's 13th Annual Great Lakes Restoration Conference. October 17-19, 2017. Hyatt Regency Buffalo, Buffalo, New York.

Saving Special Places- 47th Annual New Hampshire Association of Conservation Commissions Conference. April 9, 2016. Alton, New Hampshire.

Saving Special Places- 46th Annual New Hampshire Association of Conservation Commissions Conference. April 11, 2015. Weare, New Hampshire.

7. Invited Presentations & Media Appearances

2023 National Onsite Wastewater Recycling Association Mega Conference: Closing America's Wastewater Access Gap Pilot: Lessons Learned. October 22-25, 2023. Embassy Suites Conference Center, Hampton, Virginia.

NEIWPCC National State Revolving Fund Workshop: Closing America's Wastewater Access Gap Pilot: Pilot Update. July 11-13, 2023. Sheraton Raleigh Hotel, Raleigh, North Carolina.

Ka Pili Kai, Vol. 5, No. 1. Rethinking Wastewater. Ho'oilo 2022. Magazine Article. University of Hawai'i Sea Grant College Program. https://online.fliphtml5.com/rblc/lnyz/#p=1

Drinking Water and Potable Water Supply Systems in Vermont. May 10, 2022. Presented virtually via Zoom. Lake Champlain Sea Grant/University of Vermont Extension.

Hawai'i State Legislature Environmental Caucus Update Meeting. March 31, 2022. Presented virtually via Zoom. Hawai'i Cesspool Conversion Working Group.

2021 UCOWR/NIWR Annual Water Resources Conference. Challenges in Paradise: Developing an Integrated Statewide Cesspool Conversion Program Through Evidence-Based Methods and Frameworks. June 10, 2021. Presented virtually via Zoom. Universities Council on Water Resources.

Sea Grant Water Resources Vision Team: Contaminants of Emerging Concern Webinar. May 26, 2021. Presented virtually via Zoom. National Sea Gant Network.

2021 National Stormwater and Watershed Conference. The Product of Two Negatives: COVID-19 and Cesspools as an Opportunity in Hawai'i. April 16, 2021. Co-presented virtually via Zoom. Center for Watershed Protection.

2021 Tropical Island Water Futures Conference: Water for People and Ecosystems in the Face of Change. Building Trust: Value in Place-Based Outreach. April 15, 2021. Presented virtually via Zoom. Water Resources Research Center and Hawai‘i EPSCoR ‘Ike Wai.

International Webinar: Understanding Sewage Impacts in Hawai'i. December 17, 2020. Presented virtually via WebEx. The Nature Conservancy & Reef Resilience Network.

Webinar: The Work-4-Water Initiative. Promoting Workforce Development and Infrastructure Investment. September 30, 2020. Presented virtually via Zoom. University of Hawai‘i at Mānoa, Water Resources Research Center, Honolulu, Hawai‘i.

Kaimuki Storm and Wastewater Challenges. September 16, 2020. Kaimuki Neighborhood Board Meeting. Presented virtually via Zoom. Kaimuki Christian Church, Honolulu, Hawai‘i

Webinar: Hanauma Bay Zoominar Series. Cesspool Issues Rising. August 13, 2020. Hanauma Bay Educational Series. Presented virtually via Zoom. Hawai‘i Sea Grant, Honolulu, Hawai‘i.

Cesspools in Hawai‘i (VOS7-5). March 27, 2020. Voice of the Sea TV Program. University of Hawai‘i Sea Grant Center for Marine Science Education and Curriculum Research and Development, Honolulu, Hawai‘i.

Cesspools in Paradise: The Scoop on Poop. December 13, 2019. University of Hawai‘i Sea Grant College Program: All Hands Faculty and Staff Meeting. University of Hawai‘i Institute of Marine Biology, Moku O Lo‘e, Kāne'ohe Bay, Hawai‘i.

State and Stakeholder Perspective on Cesspool Conversion. October 17, 2019. ERTH106/SUST116 Humans and the Environment. University of Hawai‘i at Mānoa, Honolulu, Hawai‘i.

Cesspools: A Problem in Paradise. August 28, 2019. 2019 Korea Sea Grant Week. POSCO International Center, Pohang, South Korea.

Water Education/Research Connection. August 12, 2019. O‘ahu Joint Government Water Conference. University of Hawai‘i Campus Center, Honolulu, Hawai‘i.

Cesspool Impacts to the State of Hawai‘i. June 18, 2019. University of Hawai‘i Sea Grant College Program. University of Hawai‘i at Mānoa, Honolulu, Hawai‘i.

Data Challenges for Environmental Factors and Gastrointestinal Illness in Great Lakes Cities. 2018 International Association for Great Lakes Research. June 21, 2018. University of Toronto Scarborough, Scarborough, Ontario, Canada.

Reducing Plastic Pollution in the Great Lakes. May 18, 2018. Clinton River Water Festival. Oakland University, Rochester, Michigan.

Great Lakes Chemicals. May 2, 2018. CBC Radio Windsor, Windsor, Ontario Canada.

Efforts to Identify Harmful Chemicals in Great Lakes Far Behind Schedule. April 24, 2018. WDET Detroit Public Radio, Detroit, Michigan.

Forest Biodiversity. August 13, 2016. Knights Hill Nature Park, New London, New Hampshire.
Forest Forensics. August 6, 2016. Knights Hill Nature Park, New London, New Hampshire.

Butterflies and Moths of Northern New England. July 30, 2016. Knights Hill Nature Park, New London, New Hampshire.

New England Pond Ecology. July 16, 2016. Knights Hill Nature Park, New London, New Hampshire.

New England Native Pollinators. June 25, 2016. Knights Hill Nature Park, New London, New Hampshire.

8. Research Experience

February 2022-July 2023. Co-Investigator. University of Hawai‘i Sea Grant College Program & University of Hawai‘i Water Resources Research Center. Project title: *Updating Hawai‘i’s Cesspool Prioritization and Timeline Strategy: Outreach, Public Toolkit, and Data Dashboard.* Project Period: 02/01/2022-07/31/2023.

September 2020-August 2021. Principal Investigator. University of Hawai‘i Sea Grant College Program & University of Hawai‘i Water Resources Research Center. Project title: *Updating Hawai‘i’s Cesspool Prioritization and Timeline Strategy.* Project Period: 09/01/2020-08/31/2021.

October 2019-July 2021. Secondary Contributor. Hawai‘i EPSCoR-‘Ike Wai. Project title: *Linking watershed and groundwater management to groundwater dependent ecosystems and their linked ecological, cultural, and socio-economic values.* PI: Leah Bremer. Co-I’s: Kimberly Burnett, ‘Anoilani Aga, Celia Smith, Henrietta Dulai, Greg Chun, Aly El-Kadi.

August 2019-March 2020. Principal Researcher. University of Hawai‘i Sea Grant College Program & University of Hawai‘i Water Resources Research Center. Author of: *Identifying Potential Knowledge Gaps for Hawai‘i’s Cesspool Conversion Plan: A white paper reviewing research regarding wastewater indicator identification, modeling, policy, and pollution impacts to ecosystems and human health in the State of Hawai‘i.* Performed under the Water Resources Research Center Sewage Contamination Study; Project No: 1200560; Project Period: 07/01/2019-01/14/2023; PI: Darren Lerner.

March 2019-September 2019. Principal Researcher. University of Hawai‘i Sea Grant College Program & University of Hawai‘i Water Resources Research Center. Author of: *A Multi-State Regulation and Policy Survey of Onsite Wastewater Treatment System Upgrade Programs*. Performed under the Water Resources Research Center Sewage Contamination Study; Project No: 1200560; Project Period: 07/01/2019-01/14/2023; PI: Darren Lerner.

July 2017-April 2018. Research Assistant. International Joint Commission Health Professional Advisory Board. Co-contributor to Board Report: *A Proof-of-Concept Pilot of Transboundary*

Monitoring of Environmental Factors and their Influence on Waterborne Acute Gastrointestinal Illness in Cities that Source Water from the Great Lakes.

November 2017-April 2018. Research Assistant. International Joint Commission Health Professional Advisory Board. Co-contributor to Board Report: *A Review of Human Health Impacts of Selenium in Aquatic Systems*.

9. Service

a. Public Service:

May 26, 2019. Volunteer Beach Clean Up. Surfrider Foundation Oʻahu. Makapuʻu Beach, Hawaiʻi.
April 22, 2017. Volunteer. Earth Day Roadside Clean Up. Canaan Conservation Commission, Canaan, New Hampshire.

June 4-6, 2016. Volunteer. Canaan New Hampshire Town Forest Elementary Education Workshop. Canaan, New Hampshire.

April 22, 2016. Volunteer. Earth Day Roadside Clean Up. Canaan Conservation Commission, Canaan, New Hampshire.

April 22, 2015. Volunteer. Earth Day Roadside Clean Up. Canaan Conservation Commission, Canaan, New Hampshire.

b. University Service:

November 2021-April 2022. Undergraduate Student Co-Thesis Advisor/Reviewer. Global Environmental Science Program. University of Hawaiʻi at Mānoa.

January 2022. Requested to serve as peer reviewer for Journal of Contemporary Water Research & Education manuscript. University Council on Water Resources.

June 2021. Requested to serve as reviewer for Biennial Contest of Applied Marine and Coastal Research 2022-2024. Puerto Rico Sea Grant.

January 2021-May 2021. Co-mentor student through the Undergraduate Research Opportunity Program. Water Resources Research Center, University of Hawaiʻi at Mānoa.

January 2021. Hawaiʻi Sea Grant College Program 2022-2024 Pre-Proposal Reviewer. University of Hawaiʻi at Mānoa.

December 2, 2020. Global Environmental Science (GES) Symposium Reviewer. Department of Oceanography, University of Hawaiʻi at Mānoa.

October 2020-April 2022. Member of the Ocean Sewage Pollution Alliance Group. The Nature Conservancy.

October 2020-Present. Requested by National Office to Serve on the Sea Grant Water Resources Visioning Team. National Sea Grant College Program.

October 23, 2020. 2020 Waipahu High School Virtual Career Fair. Presented virtually via Zoom. Waipahu High School, Waipahu, Hawai‘i.

September 2020-February 2021. Supervisor of Student Oyster Restoration Assistant with O’ahu Waterkeepers. Hawai‘i Sea Grant College Program.

May 18, 2020. Requested by the Director of the University of Hawai‘i Water Resources Research Center to serve on the 2020 L. Stephen Lau Water Research Scholarship selection committee.

May 11, 2020. Requested by the Hawai‘i Sea Grant College Program Leader and Research Coordinator to serve on the 2020 Gordon Grau Coastal and Marine Resource Management Fellowship selection committee.

April 2020- December 2021. Request by the Journal of Contemporary Water Research and Education to be co-editor of the Water Resources Extension Special Issue, December 2021.

February 24, 2020. Request by NOAA/ North American Association for Environmental Education to conduct peer review of the 2020 NOAA/NAAEE 21st Century Community Learning Centers Grant proposals.

February 19, 2020. Request by the Journal of Contemporary Water Research and Education to review the 2020 Universities Council on Water Resources and National Institutes for Water Resources annual conference abstracts.

February 2020-August 2020. Supervisor of Student Oyster Restoration Assistant with O’ahu Waterkeepers. Hawai‘i Sea Grant College Program.

March 2019-June 2020. Ocean Resource Management Plan Advisee. State of Hawai’i CZM Planning Office.

10. Professional Development

December 31, 2023. Contracting Officer Representative: Level 1 Certification. U.S. EPA.

November 25, 2022. Grant Project Officer Certification. U.S. EPA.

February 1, 2021. Bias Awareness and Intervention Training. University of New Hampshire PowerPlay Interactive Development/Incluxion Works. Hosted by University of Vermont, Virtual via Zoom.

November 5, 2020. Papakū Makawalu. University of Hawai‘i at Mānoa Center for Teaching Excellence. Virtual via Zoom.

May 2, 2019. Safe Zone Training: LGBTQ+ Safety and Inclusion. University of Hawai‘i at Mānoa, Honolulu, Hawai‘i.

July 6, 2017. ArcGIS 1: Introduction to GIS. ESRI. Windsor, Ontario, Canada.

July 20, 2017. ArcGIS 2: Essential Workflows. ESRI. Windsor, Ontario, Canada.

August 2, 2017. ArcGIS 3: Performing Analysis. ESRI. Windsor, Ontario, Canada.

11. Committees and Professional Organizations

January 10– April 30, 2024. EPA Grant Panel Chair for RFA: EPA-R-OW-OWM-23-02; Project Area # 6.

June 18, 2020-June 2021. State of Hawai‘i. Appointed to Chair the Outreach Subgroup of the Hawai‘i Department of Health Cesspool Conversion Working Group.

September 11, 2019-September 2022. State of Hawai‘i. Appointed as the Water Resources Research Center representative to the Hawai‘i Department of Health Cesspool Conversion Working Group. Working Group Chair: Dr. Elizabeth Char.

July 18, 2019-2021. University of Hawai‘i at Mānoa School of Ocean and Earth Science and Technology. Appointed as a Sea Grant representative for the Diversity, Equity, and Inclusion Council. Council Chair: Anita L. Lopez.

June 1, 2019-June 1, 2020. Committee member for the OCEANIA Marine Educators Association of Hawai‘i. Committee Chair: Joanna Philippoff.

12. Grants & Contracts (Pending, Awarded, and Unfunded): Awarded Funding $1,350,434

Submitted October 1, 2021. **Funded 04/01/2022.** *Updating Hawai‘i’s Cesspool Prioritization and Timeline Strategy: Outreach, Public Toolkit, and Data Dashboard.* PI: Chris Shuler, Groundwater Researcher, Water Resources Research Center. Co-I: **Michael Mezzacapo, Water Resources Outreach Specialist, Water Resources Research Center and Hawai‘i Sea Grant**; Melanie Lander, Coastal Planner Extension Agent, Hawai‘i Sea Grant. **$155,681**. 04/01/2022 - 07/31/2023.

Submitted May 21, 2021. **Funded 03/01/2022.** FY2022 Congressionally Directed Spending Request. *Workforce-4-Water*. Managed by Pacific International Center for High Technology Research (PICHTR). PI: Dennis Ternaishi, PICHTR. Co-I: Roger Babcock, Director, City & County of Honolulu; **Michael Mezzacapo, Water Resources Outreach Specialist**, Water Resources Research Center; Stuart Coleman, Executive Director, WAI. **$1,000,000**. 10/1/2022 – 09/30/2023.

Submitted May 4, 2021. Unfunded. Proposal title: *Leveraging a Fellowship Model to Build a Framework for Emerging Contaminants Research and Extension in the Great Lakes Region and Beyond*. Sponsor/Funding: National Sea Grant Program. PI: Tomas Höök, Director, Illinois-Indiana

Sea Grant. Co-Is: Michael Mezzacapo; Sarah Zack; Carolyn Foley. $800,000. 09/01/2021-08/31/2023.

Submitted April 1, 2021. Unfunded. Proposal title: *Addressing Barriers to Cesspool Replacements Through a Prioritization Framework and Vocational Training in American Samoa.* PIs: Christopher Shuler, Researcher, Water Resources Research Center; Michael Mezzacapo, Water Resources Outreach Specialist, Water Resources Research Center. Co-Is: Mia Comeros; Wallon Young, Executive Director, American Samoa Power Authority. $150,000. 08/01/2022 – 07/31/2023

Submitted January 15, 2021. Unfunded. Proposal title: *Tracing Human Impact on a Hawaiian Marine Protected Area: Using Anthropogenic Markers to Pinpoint Ecological Threats.* Sponsor/Funding: PADI. PI: Henrietta Dulai, WRRC & SOEST Associate Professor. Co-Is: Michael Mezzacapo, Water Resources Outreach Specialist, Water Resources Research Center; Marvin Heskett, Volunteer, Surfrider Oahu Group; and Daniel Amato, Blue Water Task Force Oʻahu Coordinator. $8,000. 06/01/2021 – 05/31/2021.

Submitted October 5, 2020. Unfunded. Proposal title: *Workforce for Water*. Sponsor/Funding: US DOL Strengthening Community Colleges Grant. PI: Roger Babcock, Jr., Associate Professor, University of Hawaiʻi at Mānoa. Co-Is: Michael Mezzacapo, Water Resources Outreach Specialist, Water Resources Research Center; Stuart Coleman, Director, WAI. $5,000,000. 01/21/2021 - 12/31/2023.

Submitted June 1, 2020. **Funded 08/25/2020.** *Updating Hawai'i's Cesspool Prioritization and Timeline Strategy.* PI: **Michael Mezzacapo, Water Resources Outreach Specialist, Water Resources Research Center and Hawai'i Sea Grant.** Co-I: Christopher Shuler, Assistant Researcher, Water Resources Research Center. **$194,753**. 09/01/2020 - 08/31/2021.

Submitted April 8, 2020. Unfunded. Proposal title: *Bridging the Gap to 2050: Prioritizing Pollutant Management to Improve Coastal Community Resilience, Water Quality, and Nearshore Coral Reef Habitat.* Sponsor: 2020 National Fish and Wildlife Federation. PI: Michael Mezzacapo, Water Resources Outreach Specialist, Water Resources Research Center; Co-Is: Melanie Lander, Coastal Planner, State of Hawaiʻi; Erica Perez, Director, Coral Reef Alliance. $200,000. 04/01/2021 - 04/01/2023.

Submitted December 12, 2019. Unfunded. Proposal title: *How's The Water!? Linking Human Actions on Land to our Water Resources.* Sponsor: National Oceanic and Atmospheric Association. PI: Michael Mezzacapo, Water Resources Outreach Specialist, Water Resources Research Center; Co-Is: Sayed Bateni, Associate Professor, Water Resources Research Center; Thomas Giambelluca, Director, Water Resources Research Center; Shawn Ford, Coordinator of the Second Language Teaching Program at Kapiolani Community College. $150,000. January 1, 2021- December 31, 2022.

13. Courses/Classes (Planned/Taught)

a. Undergraduate:

Transformative Research Experience (T-REx). Fall 2021. University of Hawaiʻi at Mānoa.

14. Awards

Cesspool Solutions. 2020. Bronze Telly Winner in Television: Social Impact. 2021. Produced by Hawai‘i Sea Grant and Kauai Sound and Cinema Media Corp., the UH Mānoa: SOEST, Hawai‘i Institute of Marine Biology, Wastewater Alternatives & Innovations, College of Engineering, and the Water Resources Research Center. Credits: Nelson, C., Schneider, J., Lemus, J., Coleman, S., Brown, A., Schlieder, P., Bennet, R., Poma, D., Vanderzyl, N., Tang, M, Babcock, R. Johnson, H., Benyshek, E., **Mezzacapo, M.**, Seraphin, T., and Duncan Seraphin, K. https://seagrant.soest.hawaii.edu/cesspool-solutions/.

A. What Action Is EPA Taking?

We are notifying the public of a final decision by the EAB on the Permit Amendment issued by EPA Region 10 and EFSEC (''Permitting Authorities'') pursuant to 40 CFR 52.21.

B. What Is the Background Information?

The Facility will be a 660-megawatt natural gas-fired combined cycle electric generation facility located in Sumas, Washington, about one-half mile south of the Canadian border. The Facility will combust only natural gas and will employ selective catalytic reduction (''SCR'') and catalytic oxidation technology.

Both the Province of British Columbia (''Province'') and Environment Canada, Canada's national environmental protection agency, filed petitions for review challenging the issuance of the Original Permit. On September 6, 2002, the Permitting Authorities jointly issued the Original Permit to SE2 pursuant to section 165 of the CAA, 42 U.S.C. 7475, 40 CFR 52.21, and the terms and conditions of EFSEC's delegation of authority from EPA Region 10 under 40 CFR 52.21(u).

On March 25, 2003, the EAB issued an order that denied the petitions for review in part and remanded in part to correct a typographical error that was inadvertently retained from the draft permit. The Original Permit subsequently became effective on April 17, 2003 and remained in effect until October 17, 2004.

On June 1, 2004, SE2 applied to the EFSEC for an extension of the Original Permit. On January 11, 2005, after providing an opportunity for public comments and holding a public hearing, EFSEC approved the Permit Amendment. On January 21, 2005, EPA approved the Permit Amendment. The Permit Amendment authorizes an 18-month extension of the Original Permit.

Subsequent to issuance of the Permit Amendment, the Province petitioned the EAB for review of the Permit Amendment.

C. What Did the EAB Decide?

The Province raised five main issues in its petition for review: (1) SE2's application for permit extension was untimely; (2) SE2's application lacked the required construction schedule; (3) the best available control technology (''BACT'') re-analysis for startup and shutdown emissions was incomplete; (4) the BACT analysis for nitrogen oxide (''NO_X'') emissions was inadequate; and (5) the Permit Amendment should not have been granted for an 18-month period.

The EAB denied review of the Province's petition for review in its entirety. First, the EAB concluded that the Permitting Authorities did not err in concluding that SE2's permit extension application was filed in a timely manner. Specifically, the EAB found that SE2 was not required to submit the permit extension application six months before expiration of the Original Permit. Second, the EAB found that the Province failed to demonstrate that the Permitting Authorities clearly erred in determining that SE2 provided a construction schedule in its application. Third, the EAB determined that the Permitting Authorities conducted a complete BACT re-analysis for startup and shutdown emissions by reviewing the Original Permit BACT analysis for these emissions and concluding that there was no new information that would warrant any changes to the analysis. Moreover, the EAB concluded that the Province failed to demonstrate why the Permitting Authorities' BACT analysis for NO_X emissions was in error. Finally, the EAB found that the Permitting Authorities had discretion to grant an 18-month extension of the Original Permit and the Provice failed to show why the Permitting Authorities' decision to grant an 18-month extension was in clear error. For these reasons, the EAB denied the Province's petition for review of the Permit Amendment in its entirety.

Pursuant to 40 CFR 124.19(f)(1), for purposes of judicial review, final agency action occurs when a final PSD permit decision is issued and agency review procedures are exhausted. This notice is being published pursuant to 40 CFR 124.19(f)(2), which requires notice of any final agency action regarding a PSD permit to be published in the **Federal Register**. This notice constitutes notice of the final agency action denying review of the Permit Amendment and consequently, notice of the Permitting Authorities' issuance of PSD Permit No. EFSEC/2001–02 Amendment 1 to SE2. If available, judicial review of these determinations under section 307(b)(1) of the CAA may be sought by filing of a petition for review in the United States Court of Appeals for the Ninth Circuit, within 60 days from the date on which this notice is published in the **Federal Register**. Under section 307(b)(2) of the Clean Air Act, this determination shall not be subject to later judicial review in any civil or criminal proceedings for enforcement.

Dated: August 1, 2005.

Ronald A. Kreizenbeck,

Acting Regional Administrator, Region 10.

[FR Doc. 05–17029 Filed 8–25–05; 8:45 am]

BILLING CODE 6560–50–M

ENVIRONMENTAL PROTECTION AGENCY

[FRL–7960–3]

Calculation of the Economic Benefit of Noncompliance in EPA's Civil Penalty Enforcement Cases

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of final action and response to comment.

SUMMARY: In a **Federal Register** notice issued on October 9, 1996, the Environmental Protection Agency (''EPA'') requested comment on how it calculates the economic benefit that regulated entities obtain as a result of violating environmental requirements. EPA makes this calculation as a part of establishing an appropriate penalty for settlement purposes. The Agency's policy is that any civil penalty should at least recapture the economic benefit the violator has obtained through its unlawful actions. Because enforcement staff typically use the BEN (short for benefit) computer model to perform the economic benefit calculations, the Agency requested comments on the BEN model as well as the larger benefit recapture issues. In a subsequent **Federal Register** notice issued on June 18, 1999, EPA responded to the comments on the October 1996 **Federal Register** notice; provided advance notice of the changes EPA proposed to make to its benefit recapture approach and the BEN computer model; and requested a second round of comment of those proposed changes. This notice responds to the comments on the June 1999 notice and contains the changes EPA will implement in its benefit recapture program.

ADDRESSES: The Agency has dedicated a page of its website to the computers models the enforcement program uses to addresses benefit recapture as well as ability to pay claims and the evaluation of the costs of supplemental environmental projects (SEP's). The web address for those models is: *www.epa.gov/compliance/civil/econmodels/index.html.*

FOR FURTHER INFORMATION CONTACT: For further information, contact Jonathan Libber, Office of Civil Enforcement, Special Litigation and Projects Division, at (202) 564–6102, or through electronic

mail at *libber.jonathan@epa.gov.* Government users (Federal, State, or local) can also obtain assistance with the model through the Agency's toll-free enforcement economics helpline at (888) ECONSPT or through electronic mail at *benabel@indecon.com.*

SUPPLEMENTARY INFORMATION: In EPA's October 1996 **Federal Register** notice, the Agency was considering changes in three areas: (1) Broad economic benefit recapture issues; (2) the BEN computer model's calculation methodology; and (3) improving the BEN model's user-friendliness. In regard to the broad economic benefit recapture issues, the Agency sought out any legitimate alternatives to BEN, but found none. In addition, EPA solicited comments on the best way to determine the economic benefit from the violator's illegal competitive advantage. The comments confirmed our initial thoughts that a model to handle such calculations was infeasible. The Agency has instead developed a draft conceptual framework document for such cases, and has initiated a peer review process by its Science Advisory Board to examine this type of benefit.

With regard to the BEN model's calculation methodology, the Agency is making eight sets of changes that should improve the model's precision and function. Although the combined effect of these changes will affect individual cases differently, the overall impact across all EPA's enforcement cases should be insignificant. The two most significant changes involve tailoring the discount/compound rate to the case and using a more precise inflation adjustment. The new BEN model tailors the discount rate to the period of violation through the present, which the prior version of the model was incapable of doing. The new BEN model also adjusts for inflation based on actual historical month-by-month inflation data, whereas the prior version simply applied one single average rate for both past inflation and projected inflation. All of these changes reflect the Agency's consideration of both rounds of public comments, as well as an academic peer review that the Agency completed in January of 2004. These reviews should be available by within the next few months on the Agency's computer models web page (see **ADDRESSES** section above). Electronic copies of the BEN computer model (which includes a comprehensive help system) can be downloaded from that same site.

The major change in improving the BEN model's user-friendliness is that EPA has moved the model from the old DOS operating system to the Windows environment. This should address those concerns that the model was cumbersome. We have also established a helpline to assist enforcement personnel from Federal, State and local governments in their use of the model.

This notice is organized as follows:

I. Background
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B. EPA Policy and Guidance on Recapturing the Economic Benefit of Noncompliance
1. Policy Background
2. BEN Calculates the Economic Benefit From Delayed and Avoided Pollution Control Expenditures
3. Current Model Usage and Applicability
C. How a Firm Obtains an Economic Benefit From Delaying and/or Avoiding Compliance Costs
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2. BEN and Cash Flow Analysis
II.Final Changes
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2. Illegal Competitive Advantage
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2. Tax Rates
3. Differences in On-Time and Delay Scenarios
4. Capital Equipment Replacement
5. Inflation Treatment
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8. Investment Tax Credit and Low-Interest Financing
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B. The BEN Model's Calculation Methodology
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C. Improving the BEN Model's User-Friendliness
1. Is BEN Too Complex to Operate?
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3. Other Issues Affecting Use of BEN
D. Procedural Issues Regarding the Public Comment Process

I. Background

A. Overview

One of EPA's most important responsibilities is to ensure that regulated entities comply with Federal environmental laws. These laws—and their implementing regulations—set minimum standards for protecting human health and achieving environmental protection and for achieving environmental protection goals, such as clean air and clean water. EPA upholds these laws through vigorous enforcement actions that seek to correct the violations and appropriately penalize violators.

A cornerstone of the EPA's civil penalty program is at least recapturing the economic benefit that a violator may have gained from illegal activity. Economic benefit recapture helps level the economic playing field by preventing violators from obtaining an unfair financial advantage over their competitors who make the necessary expenditures for environmental compliance. Penalties also serve as incentives to protect the environment and public health by encouraging prompt compliance with environmental requirements and the adoption of pollution prevention and recycling practices. Finally, appropriate penalties help deter future violations by both the penalized entity and by similarly situated regulatees.

EPA has promulgated a generic civil penalty policy, as well as specific penalty policies tailored to suit the needs of particular regulatory programs. For example, one civil penalty policy specifically addresses violations of the Clean Water Act. The civil penalties that EPA seeks usually embody two components: gravity and economic benefit. The gravity component reflects the seriousness of the violation and is generally determined through the application of the appropriate EPA civil penalty policy.

The economic benefit component, on the other hand, focuses on the violator's economic gain from noncompliance, *i.e.*, the extent to which the violator is financially better off because of its noncompliance. This economic benefit can accrue to the violator in three basic ways: (1) Delaying necessary pollution control expenditures; (2) avoiding necessary pollution control expenditures; and/or (3) obtaining an illegal competitive advantage. The term ''illegal competitive advantage'' is a broad catch-all category for economic benefit that goes beyond that derived from the mere delay and/or avoidance of pollution control expenditures. For example, the violator might have sold a product that is entirely illegal (and could not have been produced legally by incurring any pollution control expenditures).

The Agency designed the BEN computer model in 1984 to calculate the economic benefit from these first two

types of economic gain for settlement purposes. BEN may not be appropriate for all cases, and EPA's regional offices may use alternative approaches that produce reasonably accurate benefit calculations. For example, the pattern of necessary pollution control expenditures might be so complicated that a customized spreadsheet computation would be more appropriate than BEN. Alternatively, the pattern of expenditures might be so simple that a mere table in a word processing document would suffice. Nevertheless, the Agency believes that in the vast majority of cases BEN is by far the best approach available for calculating economic benefit derived from delayed and/or avoided costs.

The Agency does not have a computer model for calculating the benefit gained from an illegal competitive advantage. EPA considers such gains on a case-by-case basis.

B. EPA Policy and Guidance on Recapturing the Economic Benefit of Noncompliance

Since the BEN computer model's development in 1984, EPA staff have used BEN extensively in generating penalty figures for settlement purposes. These figures reflect the economic benefit a violator derived from delaying and/or avoiding compliance with environmental statutes.

1. Policy Background

Calculating a violator's economic benefit using the BEN computer model is usually the first step in developing a civil settlement penalty figure under the Agency's Policy on Civil Penalties (PT.1–1) February 16, 1984, and A Framework for Statute-Specific Approaches to Penalty Assessments (PT.1–2) February 16, 1984. The Agency developed the BEN computer model to assist in fulfilling one of the main goals of the Policy on Civil Penalties: to recover, at a minimum, the economic benefit derived from noncompliance.

The BEN computer model is a tool that is primarily intended to be used in calculating economic benefit for purposes of developing a settlement penalty. In presenting economic benefit testimony at a judicial trial or in an administrative hearing, the Agency relies on an expert in financial economics to provide an independent analysis of the economic benefit the violator obtained from its violations, reflecting the expert's own analytical approach as applied to the particular facts of that case. Use of an expert in a trial or hearing allows the parties the opportunity to examine more closely the analysis applied to the facts at issue, since a computer model itself cannot be deposed or cross-examined.[1]

2. BEN Calculates the Economic Benefit From Delayed and Avoided Pollution Control Expenditures

The BEN model calculates the economic benefit from delaying and/or avoiding required environmental expenditures. Delayed costs can include capital investments in pollution control equipment, remediation of environmental damages (*e.g.*, removing unpermitted fill material and restoring wetlands), or one-time expenditures required to comply with environmental regulations (*e.g.*, establishing a reporting system, or purchasing land on which to site a wastewater treatment facility). Avoided costs typically include operation and maintenance costs and/or other annually recurring costs (*e.g.*, off-site disposal of fluids from injection wells), but can occasionally include capital investments or one-time expenditures. BEN does not calculate the economic benefit that takes the form of illegal competitive advantage. For example, the BEN model is not the appropriate method for calculating the economic benefit derived from selling DDT on the black market to U.S. pesticide applicators.

3. Current Model Usage and Applicability

The BEN model can be used in all cases that have delayed and/or avoided compliance costs. (The only exception is Clean Air Act Section 120 enforcement actions, which require the application of a specific computer model.) EPA designed BEN to be easy to use for people with little or no background in economics, financial analysis, or computers, although it is also useful for those with such backgrounds. Because the program contains standard default values for many of the variables needed to calculate the economic benefit, BEN can be run with only a small number of required inputs from the user. The program also allows the user to replace those standard values with case-specific information. The table below lists the inputs to the BEN model, both the required inputs and also those inputs with standard default values that may be modified.

The BEN model can calculate economic benefit for many types of organizations: corporations, partnerships, sole proprietorships, not-for-profit organizations, federal facilities, and municipalities. BEN customizes its standard values to the entity type, as well as other aspects of the case. The BEN inputs listed in the table are discussed in detail in the model's help system.

Inputs for BEN

Required Inputs:

—Descriptive Information (case name, office/agency, analyst name)
—Entity Type and State
—Competitive Advantage Questionnaire
—Penalty Payment Date
—Capital Investment (cost estimate and estimate date)
—One-Time Nondepreciable Expenditure (cost estimate and estimate date)
—Annually Recurring Costs (cost estimate and estimate date)
—Date of Initial Noncompliance
—Date of Compliance

Inputs with Standard Default Values that May be Modified:

—Year-Specific Marginal Income Tax Rates
—Discount/Compound Rate
—Cost Index for Inflation (specified separately by compliance cost component)
—Consideration of Future Capital Replacement
—Useful Life of Capital Equipment
—Delayed v. Avoided (specified separately for capital and one-time nondepreciable)
—Tax Deductibility (of one-time nondepreciable expenditure)
—Specific Cost Estimates (for on-time and delay scenarios)

C. How a Firm Obtains an Economic Benefit From Delaying and/or Avoiding Compliance Costs

An organization's compliance with environmental regulations usually entails a commitment of financial resources, both initially (in the form of a capital investment or one-time expenditure) and over time (in the form of continuing, annually recurring costs). These expenditures should result in better protection of public health or environmental quality, but they are unlikely to yield any direct economic benefit (*i.e.*, net gain) to the organization. (Otherwise, and with the assumption of some measure of foresight, the organization should have already committed the financial

[1] EPA designed the BEN model as a flexible tool primarily for use in settlement negotiations; it is not used, nor was it ever intended to function, as a rule. An expert witness testifying for the government may use the new Windows version of BEN as appropriate, but the responsibility to determine the economic benefit—as well as explain and defend the results—still resides with the expert. That expert may choose to use whatever analytical tool (*e.g.*, customized computer spreadsheets, the BEN model, or even a calculator) deemed appropriate for the particular calculations necessary in the case.

resources, even in the absence of such environmental regulations.) If these financial resources are not used for compliance, then they presumably are invested in projects with an expected financial return to the organization. This concept of alternative investment—that is, the amount the violator would normally expect to make by investing in something other than pollution control—is the basis for calculating the economic benefit of noncompliance.

In implementing EPA's penalty policies, the Agency invokes its authority to assess penalties to remove or neutralize the economic incentive to violate environmental regulations. In the absence of enforcement and appropriate penalties, an organization's narrowly construed economic interest would usually dictate delaying the commitment of funds for compliance with environmental regulations and avoiding certain associated costs, such as operation and maintenance expenses.

1. The Economic Benefit Components That the BEN Model Measures

A violator may gain an economic benefit from either delaying and/or avoiding compliance costs. By delaying compliance, the violator can earn a return on the funds that should have been committed to the capital investment or one-time expenditure required for pollution control compliance. In other words, violators have the opportunity to invest their funds in projects other than those required to comply with environmental regulations. These other investments are expected to generate a financial return, as opposed to the required pollution control investments that typically generate no direct financial return for a company. Thus, by delaying compliance, the violator's economic benefit is the difference between investing in pollution control and investing in other projects.

A violator can also gain an economic benefit from avoiding pollution control costs. Avoided costs typically include the continuing, annually recurring costs that a violator would have incurred had it complied with environmental regulations on time (*e.g.*, the costs of labor, raw materials, energy, lease payments and any other expenditures directly associated with the operation and maintenance of pollution control equipment). Annual costs are thereby avoided entirely, as opposed to capital investments and one-time expenditures that are usually only delayed.[2] Thus, the violator's economic benefit from avoided costs is the sum of the total avoided annual costs plus the return that could be expected on the funds that were used for projects other than pollution control.

2. BEN and Cash Flow Analysis

The BEN model calculates economic benefit by focusing on the effect that delayed and/or avoided pollution control costs have on an entity's cash flows. Cash flow analysis is a standard and widely accepted technique for evaluating costs and investments. In essence, cash flow calculations focus on the real, ''out-of-pocket'' cash effects resulting from an expenditure.[3] Three important factors that enter into BEN's cash flow analysis are inflation, taxation, and the time value of money.

a. Inflation

BEN first requires users to enter a single cost estimate for the capital investment and another single cost estimate for the one-time nondepreciable expenditure. Then, to adjust for inflation, BEN extrapolates from this single cost estimate to create separate estimates for the hypothetical cost of complying on-time and the actual cost of complying in a delayed fashion. Similarly, BEN extrapolates from the user's annually recurring cost estimate to a complete set of cost estimates for every year during the noncompliance period. (The BEN model's help system provides a more detailed discussion of these inflation adjustments.) These adjusted cost estimates form the basis for the on-time and delay scenarios: The actions and associated costs that would have been necessary for hypothetical on-time compliance, and the actions and associated costs that were necessary for the actual delayed compliance.

b. Taxation

The BEN model computes economic benefit on an after-tax basis, since environmental expenditures can reduce income tax liability.[4] Depreciation (from capital investments), one-time expenditures, and annual costs all effectively reduce taxable income and thereby reduce income tax payments. To account for these tax effects, BEN calculates the economic benefit using after-tax cash flows for the on-time compliance and delayed compliance scenarios.

c. Time Value of Money

A third factor relates to the timing of the cash flows, because cash flows occurring in different years are not directly comparable. The fundamental financial concept of the time value of money is based on the principle that a dollar today is worth more than a dollar a year from now, since today's dollar can be invested immediately to earn a return over the coming year. (Alternatively, a dollar last year is worth more than a dollar today because investment opportunities existed for last year's dollar.) Therefore, the earlier a cost (or benefit) is incurred, the greater its economic impact.

BEN accounts for the time value of money by adjusting all estimated cash flows to their present value equivalents. BEN first discounts back to the initial noncompliance date all cash flows from the on-time and delay scenarios. The initial economic benefit as of this date is simply the difference in the present values of these two scenarios. Finally, BEN compounds the initial economic benefit forward from the noncompliance date to the penalty payment date.

To adjust the cash flows for both discounting and compounding, BEN uses a discount or compound rate (depending on the direction of the adjustment) that reflects the time value of money. The selection of the appropriate rate, and the structure of the discounting and compounding methodology, is a significant issue in the BEN model and will be addressed later in this notice. (The model's help system provides a more detailed discussion of the discounting and compounding that BEN performs for its present value adjustments.)

II. Final Changes

In its October 9, 1996, **Federal Register** notice, the Agency sought comment on three categories of issues: (1) Broad economic benefit recapture questions, (2) the BEN model's calculation methodology and assumptions, and (3) the model's user-friendliness. The June 18, 1999, notice provided responses to these comments, as well as advance notice of EPA's proposed changes to the BEN model. The June 1999 notice also invited a second round of public comments, especially on EPA's proposed changes. EPA also conducted a peer review by academic experts in financial economics during the spring of 2003 on the draft proposed changes to the model. This peer review of the model changes was

[2] Even capital investments and one-time expenditures may be avoided on occasion. The typical situation where this happens is when a violator shuts down a particular operation rather than install required pollution control equipment.

[3] Thus, noncash ''paper'' expenses, such as depreciation, are considered only to the extent that they affect cash flow.

[4] The term environmental expenditures refers to firms' compliance costs and does not include the payment of civil penalties. Civil penalties are in almost all cases not deductible.

specifically requested by the United States Senate.[5]

The first area in which we invited comment covered some fundamental questions that the benefit recapture approach has raised. Is there an alternative to the BEN model that would be both easier to use and at least as accurate in calculating the economic benefit of delayed and/or avoided pollution control expenditures? How should EPA evaluate the economic benefit that companies receive as a result of any illegal competitive advantage stemming from noncompliance?

Second, we invited comment on the BEN model's calculation methodology. While the Agency is confident that the BEN model's overall approach is theoretically sound, we welcomed constructive and documented comment on alternative methodologies. In particular, EPA has been aware of substantial differences of opinion with respect to inflation adjustments and discounting/compounding. EPA requested comment on the BEN model's calculation methodology, or any other aspect of the model's assumptions or methodology.

Third, we requested comment on the model's user-friendliness. The Agency had heard concerns that the model is too difficult to use, particularly regarding the necessary data acquisition. Because EPA had never been presented with any concrete evidence in support of these assertions, the Agency wanted either to substantiate the problems and address them or to put these issues to rest.

In the following sections, we address the final changes that EPA is making in each of the areas on which we requested comment. Note that final changes incorporate EPA's consideration not only of the public comments but also of the previously mentioned academic peer review that EPA completed in January of 2004.

A. Broad Economic Benefit Recapture Issues

1. Alternatives to BEN

a. Background

EPA requested comment on whether anyone had an approach that would be simpler and at least as accurate as BEN in calculating the economic benefit from delayed and/or avoided pollution control expenditures. EPA designed the BEN model to calculate the economic benefit of noncompliance in settlement of the vast majority of its civil penalty enforcement cases. Although BEN has served this purpose effectively, the Agency recognizes that it should be improved or even replaced if a better alternative exists or could be developed easily. This concern is particularly relevant because an increasing number of State and local government enforcement personnel use the BEN model regularly. Any alternative approach must meet EPA's policy objective of ensuring that violators are put on an even financial footing with those regulated entities that comply on time. Alternatives must also be reasonably accurate, simple to use, and readily understandable to the vast majority of the BEN model's users—Federal, State and local government enforcement officials who usually have limited knowledge of financial economics.

b. Final Changes

Many commenters expressed various criticisms on different aspects of the BEN model. But these criticisms focused on suggestions for improving BEN. No commenter proposed an alternative approach to a stand-alone computer model that performs net present value calculations. Therefore, the Agency will continue its use of BEN, although it will also implement significant revisions (see following sections).

On a related topic, two commenters questioned the entire benefit recapture framework. Although one comment along these lines was somewhat unclear, the other comment presented a comprehensive approach for basing penalties on the lesser of economic benefit or social cost (*i.e.*, environmental damages). Under this proposal, if a violator gained a significant economic benefit from its violations but caused only trivial environmental damage (as monetized through some unspecified economic methodology), then the penalty would be commensurately trivial. The Agency finds this approach entirely unacceptable in the context of enforcing regulatory requirements for individual violators. The appropriate context for considering social costs is in the process of formulating proposed regulations. Penalties based on social costs (when less than economic benefit) would provide an implicit yet clear incentive to violate the law if a company anticipated that its economic benefit would exceed the consequent measurable environmental damage. Further, such an approach would be fundamentally unfair to those firms that resisted the temptation to violate the law. In addition, quantifying environmental damages in a monetary measure is an exceedingly difficult analytical problem. Even if this fundamentally different approach was theoretically sound, it would be infeasible for the vast majority of enforcement cases.

2. Illegal Competitive Advantage

a. Background

Since the issuance of EPA's Policy on Civil Penalties in 1984, the Agency has maintained that any given penalty should be structured to recover—at a minimum—the economic benefit a violator has enjoyed as a result of its noncompliance. That 1984 policy recognized that the benefit would be based on delayed costs, avoided costs and illegal competitive advantage. In addition to this economic benefit component, EPA assesses a gravity component that reflects the seriousness of the violation. This gravity component is designed to ensure that the penalty puts the violator in a worse position than those in the regulated community who complied with the law. The economic benefit component of EPA's civil penalty policy focuses specifically on identifying and recovering the gain to a violator in order to remove any economic incentive to violate environmental regulations.

The BEN model calculates the economic benefit from delaying and/or avoiding required environmental expenditures. The economic benefit that arises from situations other than the delay and/or avoidance of pollution control expenditures is broadly termed ''illegal competitive advantage,'' which BEN is incapable of measuring. The essential distinction between these two types of economic benefit is that in the illegal competitive advantage situation, the violator's noncompliant actions have allowed (or will allow) it to attain a level of revenues that would have been unattainable had it always been in compliance. In delayed and avoided costs situations, the implicit assumption is that the revenues from a noncompliant and compliant state are identical. Consequently, BEN focuses exclusively on a violator's pollution control costs and does not require any data on the violator's revenues.

In either type of situation (BEN-type economic benefit or illegal competitive advantage), the fundamental definition of economic benefit is still the same: The economic benefit is the difference in the net present values of the compliant/on-time and noncompliant/delay scenarios (*i.e.*, the actions and cash flows—both historical and possibly also future—associated with the hypothetical compliance, and the actual noncompliance). But in the cases

[5] Senate Report No. 106–410 (2000) at page 81.

amenable to BEN, the violator's revenues from the compliant and noncompliant states simply cancel each other out, allowing BEN to measure economic benefit through a calculation involving only the costs that would have differed had the violator been in compliance. Illegal competitive advantage encompasses all situations in which the revenues do not cancel out each other. Since the revenues were higher in the noncompliant state than they would have been in a compliant state, more detailed research and analysis is necessary, going beyond the scope of the BEN model.

The BEN model's widespread application is made possible by its simplifying assumption regarding revenues, obviating the need for a detailed examination of a violator's business records or competitive market situation. But in some cases, this assumption is not valid.[6] In such cases, the violator would not have been able to generate a given level of revenues were it not for its noncompliance. In those cases, EPA's policy is to seek to recapture the economic benefit based on the violator's illegal competitive advantage.

b. Final Changes

The Agency received many comments on illegal competitive advantage. The first round of comments focused mainly on the feasibility of developing a stand-alone computer model analogous to BEN (or an add-on module to BEN) that could easily and reliably determine the economic benefit from the widely varying examples of illegal competitive advantage. The broad consensus was that no such model was feasible, and the Agency agrees. Without BEN's simplifying assumption that the violator's revenues from the on-time and delay scenarios cancel out each other, no ''one-size-fits-all'' computer model can analyze the range of likely situations.

The second round of comments the Agency received on illegal competitive advantage mainly focused on the June 1999 notice's proposed questions for BEN's module and the illegal competitive advantage examples. But since the ICA concept is currently under review by EPA's Science Advisory Board (SAB), OECA will not put any ICA questions in the revised BEN model.

After careful review of the comments, and in light of the fact that the SAB is currently reviewing the ICA issues, EPA has decided against publishing at this time any formal guidance delineating detailed analytical steps. While EPA remains committed to recapturing economic benefit based on illegal competitive advantage, if appropriate, quantifying illegal competitive advantage requires a careful examination of the facts of the particular case, and EPA believes it is premature to try to establish formal guidance in light of these case-specific issues. Similarly, the Agency does not envision providing a specific formula for calculating a benefit component in such cases.

In summary, EPA will continue to seek the recovery of illegal competitive advantage in cases where the BEN model is incapable of fully assessing the extent to which a violator is financially better off as a result of its noncompliance. The proper evaluation of illegal competitive advantage will involve verifying that the use of the BEN model alone is inappropriate to the case-specific facts, and then formulating an analytical approach that captures the extent of the violator's gain.

B. The BEN Model's Calculation Methodology

Over the years, BEN has received occasional criticism for alleged flaws in its calculation methodology, particularly regarding the model's inflation adjustments and discounting/compounding. The Agency requested substantive comments on how the BEN model handles these two issues. In addition, EPA invited comment on all aspects of BEN's calculation methodology. The Agency also asked commenters to address whether their proposed changes would add any complexity to the computer model and, if so, why the benefit of the change justified the added complexity.

1. Depreciation Method

a. Background

The BEN model calculates depreciation for capital investments, since the tax deduction for accounting depreciation charges provides a real after-tax positive cash flow to businesses.[7] BEN used to calculate depreciation using a five-year straight-line methodology for capital investments made before January 1, 1987, and a seven-year Modified Accelerated Cost Recovery System for capital investments made after January 1, 1987. These assumptions represent the most rapid depreciation periods available for typical pollution control investments, thereby producing the positive depreciation cash flow effects as early as possible. These particular depreciation methods generally result in a conservative economic benefit calculation (*i.e.*, lower than would otherwise be calculated) because they minimize out-of-pocket costs to the violator. Therefore, BEN is often producing economic benefit figures that are very conservative.[8]

For capital equipment that has a very short useful life, the selection of alternative depreciation schedules might be available and also more beneficial to a business. In unusual cases where the violator can demonstrate that an alternative depreciation schedule would be both available and beneficial, more detailed calculations by a financial analyst in lieu of the BEN model may be necessary.

b. Final Changes

EPA received no comments on its proposal in the June 1999 notice that although a revised BEN model could conceivably allow alternative depreciation schedules, the drawbacks of the added complexity and potential user confusion might outweigh the gains from addressing a rare circumstance. Nevertheless, EPA has devised a relatively simple means for BEN to apply shorter depreciation schedules when the user enters a capital equipment useful life less than 10 years (as opposed to the default 15 years).

The specification of shorter depreciation schedules will ensure that BEN does not overestimate economic benefit in the relatively rare cases that involve such short-lived capital equipment. Once the shorter useful life has been specified, the alternative depreciation schedule will not require any additional input from the user. BEN will also include a provision to account for legislation that allows for depreciation bonuses over certain periods. This provision will key off the previously required noncompliance and compliance dates, and it therefore will

[6] The Agency suspects that this relationship may be reversed for cases involving wetlands. Although the evidence is largely anecdotal, most wetlands cases encompass violations that allowed a violator to engage in operations that would not have been feasible but for the violation. Therefore, in evaluating wetlands cases, the Agency will be particularly sensitive to the possible presence of illegal competitive advantage.

[7] The IRS does not allow companies to write off completely a capital investment in the year of purchase. Companies must spread the expense of the investment over several years using the appropriate depreciation schedule.

[8] The IRS requires that many types of pollution control equipment be depreciated over a longer period than assumed in the BEN model. Were EPA to tailor the depreciation to account for that longer period, the result would be a higher economic benefit calculation.

not require any additional input from the user.

2. Tax Rates

a. Background

The DOS versions of BEN that were issued after 1993 used to apply three marginal tax rates: a rate for 1986 and before, one for 1987 through 1992, and one for 1993 and beyond. Users could accept the standard values—which incorporate national averages of State tax rates—or modify the inputs to reflect specific State values.[9]

b. Final Changes

EPA did not receive any objections to the June 1999 notice's proposal that the revised BEN model will require the user to enter the violator's State of operation, then automatically reference an internal database of State tax rates and perform the necessary calculations for the violator's combined Federal and State tax rate.[10] BEN will calculate the tax rate for each separate year of noncompliance, to allow for annual changes in the relevant State tax rate (even when the Federal rate remains constant). Users will have the additional option of entering year-by-year combined Federal and State rates in a spreadsheet-like format.[11]

Although these options may sound complex, the only data required of the user will be the violator's State. The other screens for additional data entry and modification will appear only to those users who selected such advanced options.

3. Differences in On-Time and Delay Scenarios

a. Background

The BEN model's baseline assumption is that the violator would have used the same technology and approach in the hypothetical on-time compliance as it did in the actual delayed compliance scenario. The only allowed differences are in the two scenarios' exact costs of compliance, which BEN adjusts for automatically in its inflation treatment. But technological, legal, or other relevant changes between the on-time and delay scenarios can conceivably alter the components of the compliance scenarios, increasing or decreasing the compliance costs by a rate other than general price inflation. Where the delay case costs are substantially less than the on-time case costs (*e.g.*, a technological breakthrough in control equipment), BEN will understate the benefit. Where the delay costs are substantially higher (*e.g.*, regulations become more stringent, but with ''grandfather'' clauses for already-compliant firms) BEN will overstate the benefit.

Where, in the unusual case, the on-time and delay compliance scenarios are significantly different, BEN's baseline assumption of two identical scenarios is inappropriate.[12] More sophisticated calculations are necessary.[13]

b. Final Changes

EPA received only one minor objection to the June 1999 notice's proposal that the revised BEN model allow users to enter separate on-time and delayed compliance costs. Although the standard operation of the revised model will still entail only a single compliance scenario, the new screens for additional data entry/modification of separate on-time vs. delay scenarios will be available to those users who select such advanced options. The availability of more advanced options will also enhance the model's ability to account for atypical situations such as valid pre-compliance expenditures and credits for salvaged capital equipment, thus decreasing the need for off-line calculations.

4. Capital Equipment Replacement

a. Background

One of the three components of compliance costs BEN analyzes is the capital investment, which represents depreciable pollution control equipment. As the name implies, depreciable equipment wears out with usage and the passage of time. BEN used to ask the user if the violator will need to replace the equipment at some point in the future. If the user specified that the investment in capital equipment is recurring, then the user could accept the standard value of 15 years for the useful life of the capital equipment, or enter another value.

If the capital equipment does need to be replaced in the future, then the violator is financially better off from its delayed compliance in two distinct yet related ways: the violator has received a benefit in the past from delaying the initial purchase of the capital equipment, and will receive a benefit in the future from delaying the replacement of the capital equipment when that initial purchase wears out. For example, if a steel mill delays installation of a $1,000,000 baghouse for 5 years, it first obtains a benefit from delaying the purchase of that baghouse for 5 years. But when that baghouse needs to be replaced 15 years later, the violator's second baghouse is purchased 5 years later than it should have because the initial purchase lasted five years later than if it had complied on time.

b. Final Changes

Some commenters characterized any consideration of future replacement cycles as ''speculative,'' as these cycles have yet to occur in the typical case (because the noncompliance period is almost always shorter than the capital equipment's useful life). EPA agrees only to the extent that BEN does make an assumption about the future, but this assumption is essentially a baseline one: BEN assumes that future pollution control requirements will be neither more stringent nor more lax than current requirements, and that the cost of the replacement equipment will increase by no more and no less than the projected rate of inflation. Therefore, the Agency will retain the BEN model's default consideration of capital equipment replacement.

Some commenters argued that BEN should not offer infinitely recurring replacement cycles. The Agency notes that although modeling infinite cycles might at first seem excessive, all future costs are ''discounted'' back to their present values (see following sections for an explanation of discounting). Thus, the first replacement cycle typically has a relatively small impact on the benefit calculation.[14] The impact

[9] Tax rate modification can also reflect a business whose low net income entails a tax bracket other than the assumed highest bracket. Note that BEN's assumption of the highest marginal tax rate produces a lower economic benefit calculation than assuming a lower tax rate because a higher tax rate decreases the compliance costs' after-tax value. Since the model employs an after-tax cost in its analysis, the lower the tax, the higher the BEN result.

[10] The model will also offer the option of the national average of all the State tax rates for cases where the State in which the violator pays taxes is unclear.

[11] This option would allow users to account for, among other situations, a company whose profitability (and hence tax bracket) was highly variable over different years. (As noted before, BEN's assumption of the highest marginal tax rate throughout the noncompliance period results in a lower economic benefit estimate than would be produced by a more precise calculation of the violator-specific marginal tax rate.)

[12] The inexperienced user will become aware that a more sophisticated analysis is needed because there are two sets of cost figures, but only one place to put them. The more experienced user will just go directly to the ''Specific Cost Estimates'' option during data entry.

[13] A similar problem arises when no technologically feasible method of compliance is available. If the only possible compliance method that the Agency would have allowed is to cease all production, then this falls under the category of illegal competitive advantage, which by definition is beyond the scope of the BEN model.

[14] If the initial capital investment is $1 million and the equipment lasts for 15 years, then the first replacement cycle is still $1 million (assuming, for now, the lack of any intervening inflation). But since it is purchased 15 years later, the $1 million is discounted to a present value at, for example, 10

of later replacement cycles is almost negligible.

Some commenters, as well as academic peer reviewers, favored the approach of a finite number of replacement cycles (which the Agency initially proposed to adopt). But one peer reviewer pointed out that this approach runs into problems when the noncompliance period is very long, especially when it approximates the useful life of the capital equipment. For example, assume a 10-year compliance delay, coupled with a 10-year useful life. If BEN were to use one replacement cycle, the on-time scenario would include two capital equipment installations, covering the years 1 through 20. The delay scenario would also include two capital equipment installations, but run from years 11 through 30. BEN would implicitly be stating that the violator would need to have functional equipment in place for years 21 through 30 (*i.e.*, the delay scenario's replacement cycle), but that a company complying on-time need not do so (*i.e.*, since the cash flow analysis for the on-time scenario runs out only to the year 20).

Therefore, the revised BEN model will adopt this peer reviewer's solution by implementing the concept of economic depreciation, which essentially calculates the lease value of pollution control equipment. In other words, instead of modeling the on-time replacement capital investment and the subsequent depreciation tax shields, and comparing that to delayed replacement, the calculation models leasing the equipment over the period when the on-time equipment would have required replacement yet the delay equipment is still functional. The avoided lease cost, therefore, serves as a reasonable approximation of the economic benefit from the delayed replacement equipment installation, and also allows the two scenarios to the modeled out to the same end point. Furthermore, projections far into the future are no longer necessary, as the imputed lease cost is calculated only for the interim period when the on-time equipment would have required replacement yet the delay equipment is still functional.

This approach will add a few new cells on one of the pages in the BEN detailed printouts, yet allow the elimination of another entire page of calculations. It will also simplify the previous 0–5 replacement cycles optional input to a simple ''yes/no'' choice for the consideration of future capital replacement (with the default set to ''yes''). The previously included optional input for the future inflation rate (which applied only to replacement cycles in addition to the first one) will be eliminated.

5. Inflation Treatment

a. Background

The first step in the economic benefit calculation is to determine the compliance costs—for both the on-time and delay scenarios—as of the year in which they were actually incurred (or should have been incurred). Therefore, BEN adjusts the compliance costs from the date they were estimated to the date the costs will be incurred to account for the effects of inflation.

To adjust for inflation, BEN previously used a standard-value rate calculated from the prior ten years of inflation data from the Plant Cost Index (PCI) in the magazine Chemical Engineering. (The PCI is generally the cost index most relevant to the types of costs typically associated with pollution control technology.) This simple inflation rate adjusted the initial compliance cost estimates. BEN applied this simple inflation rate to the compliance cost figures in order to determine what compliance would have cost at the noncompliance date. Then BEN applied the same simple inflation rate to determine what the costs actually were (or will be) at the compliance date. Finally, the model used the same rate to go well into the future to determine what those costs will be for the capital equipment replacement cycles.

b. Final Changes

Despite the Agency's specific request for comment on BEN's inflation adjustment, we received almost none. The issues that the few commenters did raise were:

(1) The use of a single inflation rate for both actual and projected inflation,

(2) The basis for the actual inflation rate, and

(3) The basis for the projected inflation rate.

For actual historical inflation, the revised BEN model will adjust each cash flow automatically from the date of the cost estimate to the date on which it is incurred by referencing a look-up table of cost index values.[15] The default cost index will be the PCI. This particular index may not be perfectly appropriate for every single case, but we have yet to encounter any other cost index that would form a better basis for a standard value, nor did any commenters submit any specific nominations for a more suitable index.

The revised BEN model will also allow the user to override the PCI and instead specify different cost indices for different compliance components. The table below describes the alternative cost indices.

Abbr	Full name	Description	Typical applications
2.5%	2.5-percent constant inflation rate		Sensitivity tests; model testing.
CCI ..	Construction Cost Index	Constructions costs; based on 1.128 tons Portland cement, 1,088 bd. ft. 2x4 lumber, 200 hrs. common labor.	General construction costs, especially where labor costs are a high proportion of total costs; often used for municipal wastewater projects.
ECI ...	Employment Cost Index	Employment costs	One-time nondepreciable expenditures or annual costs that are mainly labor
GDP	Gross Domestic Product price deflator	Economy-wide measure of price changes ...	A very broad, economy-wide measure of inflation is desired.
PCI ...	Plant Cost Index	Plant equipment and labor costs	Standard value.

percent, over 15 years. The first replacement cycle would only increase the benefit component by about 30%. The second replacement cycle is purchased 30 years later. Thus, the $1 million piece of equipment is discounted at the same 10 percent over 30 years. The economic benefit from the delay of that second replacement cycle would only increase the benefit component by about 7%.

[15] The model will not apply an explicit inflation *rate*, although an annualized rate could be imputed from the model's data. For example, suppose a $200 cost estimate from 1991 must be adjusted for inflation to the same day in 1992. The 1991 cost index value is 100, whereas the 1992 index value is 103. The calculation the model performs is $200 x 103 / 100 = $206 (*i.e.*, multiplying the original cost estimate by the ratio of the cost index values from the date on which the cost is actually incurred, and the date on which the estimate is made). The index change from 1991 to 1992 does represent an annual inflation rate of three percent (*i.e.*, 103 / 100 = 1.03 − 1 = 0.03), although the model would not directly apply this rate. The calculation that uses the ratio of the index values is both more precise and more simple than calculating multiple annual inflation rates over different periods for historical costs.

Abbr	Full name	Description	Typical applications
PPI ...	Producer Price Index	Representative producer costs	General costs for producers, not tied to industrial process equipment.

The user may also override BEN's inflation adjustments for the capital investment and one-time nondepreciable expenditure, and instead enter separate estimates for these compliance costs as of the noncompliance date and compliance date. This customized data entry could represent another alternative cost index, case-specific inflation assumptions, or entirely different actions for on-time and delayed compliance (as discussed in a previous section). For projected future inflation, the model will project all the cost indices forward in time at publically available, consensus-oriented forecasted rates.

The standard operation of the model will still entail absolutely no input whatsoever from the user who is satisfied with BEN's default values. The other screens for additional data entry and modification will appear only to those users who selected more advanced options.

6. Discount/Compound Rate

a. Background

Once the compliance cost estimates are adjusted for inflation and then for taxation, the BEN model must adjust these after-tax cash flows to a common present value as of the date of noncompliance. The difference between the two present values (of the on-time and delay scenarios) is the initial economic benefit as of the noncompliance date. BEN then compounds this initial economic benefit forward from the noncompliance date to the penalty payment date to determine the final economic benefit. A single rate adjusts all present values both backward and forward in time.[16] This section addresses only the calculation of BEN's standard value for this single discount rate, which was previously based upon a ten-year after-tax weighted average cost of capital (WACC), with the inputs representing averages across all industries.[17]

The WACC is the average of the cost of debt and the cost of equity, weighted by the portions of debt and equity out of total financing. The WACC is first calculated for each year, and then the prior version of BEN averaged these annual values over the most recent ten-year period. The (after-tax) cost of debt is the average return on corporate bonds averaged across all industries, and then multiplied by one minus the highest marginal corporate tax rate (Federal combined with an average of all States). The cost of equity is based upon the widely used Capital Asset Pricing Model (CAPM), and is equal to a risk-free rate component plus the expected equity risk premium (*i.e.*, the average since 1926 of each year's excess stock market return over the risk-free rate).

b. Final Changes

Based on the June 1999 notice's proposal and the lack of any objections, the revised BEN model will tailor the standard value discount rate to the period from the noncompliance date to the penalty payment date.[18] The standard value will reference a look-up table, averaging the annual values over the relevant years. Each individual annual calculation will be similar to the standard value's previous methodology.[19]

The model will also perform additional customizing in a similar automated fashion. Since BEN will have an input for the violator's State—thereby customizing the tax rate for compliance costs—that same customized tax rate will determine the after-tax debt cost component of the WACC. The model will even select the individual tax rate if the company is not organized as a C-corporation (as profits and losses from S-corporations, partnerships, and sole proprietorships flow through to the owners' individual tax returns).

The standard operation of the model will still entail absolutely no input whatsoever from the user who is satisfied with BEN's derived WACC for the discount/compound rate. Another screen to override BEN's derived rate will appear only to those users who selected such advanced options.

7. Discounting/Compounding Methodology

a. Background

As stated in the previous section, once the compliance cost estimates are adjusted for inflation, and then for taxation, the BEN model must adjust these after-tax cash flows to a common present value as of the noncompliance date. The difference between the two present values (of the on-time and delay scenarios) is the initial economic benefit as of the noncompliance date. BEN then compounds this initial economic benefit forward from the noncompliance date to the penalty payment date in order to determine the final economic benefit. BEN uses a single rate to adjust all present values both backward and forward in time. Because BEN uses the same rate for going both backward and forward, this calculation is computationally equivalent to bringing all cash flows—both past and future—directly to the penalty payment date at the WACC rate.

The comments fell into three categories. Some thought the WACC rate was too high and especially that the

[16] The Agency received many comments on the use of a single rate as opposed to two different rates. The notice addresses this issue in section II. B. 8, Discounting/Compounding Methodology.

[17] The discount rate standard value for not-for-profits is based upon municipal bond yields, averaged across the four investment-quality ratings of Aaa, Aa, A, and Baa. The only comment EPA received on the not-for-profit discount rate was a suggestion that municipal economic benefit be calculated using a discount rate for private entities that perform similar functions (*e.g.*, on a municipal Clean Water Act case, the discount rate would be the average WACC for privately owned wastewater treatment plants). However, because the Agency is trying to calculate the economic benefit that the municipality and its residents or rate payers have actually gained, the Agency prefers to use an estimation of the municipal government's opportunity cost of financing projects, which is equal to the interest rate on the municipality's bonds. This debt rate—which forms the basis for the BEN model's not-for-profit standard value discount rate—will almost always be substantially lower than the private-sector-equivalent cost of capital. The discount rate for Federal facilities is based upon the yields from five-year U.S. Treasury notes.

[18] Although the following discussion focuses on the for-profit discount rate, the tailoring of the discount rate to the relevant time period would also apply to not-for-profit entities.

[19] The revised BEN model will implement two relatively minor changes to the previous model's annual WACC calculation. First, the previous practice of applying the most recent figure for the expected equity risk premium to all prior years' calculations will be replaced with the figure that was actually available at the time for that specific year's calculation.

The second change is altering the horizon for the equity risk premium. The standard value previously combined the long-term Treasury security rate with the long-horizon equity risk premium, the latter being equal to the average of each year's stock market return minus the corresponding-maturity risk-free rate. Because the WACC calculation combines the equity risk premium with the risk-free rate of the same maturity that is used initially to calculate the premium, the issue of which horizon premium to use is largely moot. (The expected deviations of the resulting WACC will thereby be both small and nonsystematic.) The new calculation will switch to the intermediate-horizon risk premium (and the corresponding risk-free rate) as a simple compromise between the long-horizon and short-horizon.

compounding part of the calculation should be based on a risk-free rate. Some agreed with EPA's approach. Others commented that EPA's discount/compound rate was too low and should instead be based on financing pollution control investments with 100% equity.

The first group of commenters claimed that BEN's use of a WACC-based rate in all parts of the benefit calculation yielded inappropriately high economic benefit calculations. They posited that future cash flows represent uncertainty and risk, while past cash flows are known, certain, and riskless. Thus, they generally agreed that discounting future cash flows should be done with a WACC-based rate or some other risk-based rate, but felt that compounding past cash flows forward should be done with a riskless rate. They cited selected academic literature from economic and financial analysis of commercial damages in torts cases, proposing two alternative methodologies:

- (A) Use BEN's initial figure for the economic benefit as of the noncompliance date (*i.e.*, bring all cash flows, irrespective of when they occur, back to the noncompliance date at a rate reflecting risk), but then bring this intermediate economic benefit figure forward to the penalty payment date at a risk-free rate.
- (B) From the perspective of the penalty payment date, bring all future cash flows back in time at a rate reflecting risk (*e.g.*, the WACC) and bring all past cash flows forward in time at a risk-free rate (*e.g.*, the after-tax return on short-term U.S. Treasury securities).

Both of these methodologies produce significantly lower economic benefit estimates than the BEN model. A range for the magnitude of the typical differences is difficult to provide because of the many different types of cases. But while alternative A will generally produce significantly lower benefit analyses than EPA's BEN approach, alternative B is so extreme that it will often produce negative economic benefit estimates for the capital investment portion of the compliance scenario.

The second group of commenters agreed that the WACC was appropriate for discounting all future costs back to the noncompliance date, and then compounding the initial economic benefit forward to the penalty payment date.[20] The third group commented that BEN's use of the WACC is incorrect and leads to economic benefit estimates that are too low. These commenters instead favored a company's higher cost of equity capital, rather than the weighted average of the relatively higher-cost equity capital and the relatively lower-cost debt capital. Their rationale was that excess returns flow to a company's equity holders, not to a mixture of its debt and equity owners.

b. Final Changes

Regarding the first group of commenters, although both the conceptual bases and results of their two risk-free rate methodologies contradict each other, they share one similar rationale: Cash flows that have yet to occur in the future are uncertain and risky, whereas cash flows that have occurred in the past are certain and riskless. These methodologies, therefore, apply to future cash flows a rate that includes a risk premium (*e.g.*, a company's WACC or some other risk-adjusted rate) and apply to past cash flows a risk-free rate (*e.g.*, the return on short-term Treasury securities). As discussed below, the Agency believes that even if this approach were justified in the context of calculating damages owed to plaintiffs in certain types of tort cases, it is entirely inappropriate in economic benefit calculations for enforcement actions. The goal in the tort damages approach is to make the plaintiff whole by compensating him for his losses. The fundamentally different goal in enforcement actions is to deter future violations by both this particular violator and other potential future violators.

By contrast, the third group of commenters advocate the use of an equity-based discount rate. This approach is more reasonable than the risk-free rate alternatives, although the Agency still believes that using the WACC throughout all aspects of the calculation is the most reasonable and hence preferable approach.

(i) Risk-Free Rate Forward: Theoretical Issues

The goal in a tort action is to make the plaintiff ''whole.'' The settlement or court determination ultimately should place the plaintiff in the same financial position as if the wrong had not occurred. The first step in such a case is to calculate the necessary compensation at the time of the actual wrong. The next step is to adjust the compensation calculated at the time of the actual wrong to the time at which such compensation is to be made. Certain authors writing about tort damages have advocated bringing such compensation forward at a risk-free rate.[21] Otherwise, the plaintiff would be ''having-its-cake-and-eating-it-too'': The initial compensation has essentially been invested at the time of the actual wrong at a rate reflecting risk taking, yet the plaintiff is now granted the compensation which grew at that rate, without ever bearing the accompanying risk. (In contrast, the regular investor would have made the investment and then had to stand by nervously as the investment's value either grew or fell). This was the reasoning behind some of the commenters in the first group advocating that BEN employ such a risk-free rate approach.

While the appropriate focus in a tort damage action is on compensating the victim (*i.e.*, plaintiff), this is not appropriate in an enforcement action. The enforcement agency is not suing for damages it has suffered. The goal is not to make the plaintiff whole (*i.e.*, to restore to it the amount by which it was damaged). The goal of the economic portion of a civil penalty is to return the defendant to the position it would have been in had it complied, and thus disgorge from it the amount it wrongfully gained. If civil penalties, comprising the economic benefit and gravity components, effectively allow the violator to gain an economic advantage from its violations, other companies will see an advantage in similar noncompliance. This is a fundamentally different perspective from a tort case, and demands a fundamentally different view of adjusting cash flows to a present value.

The appropriate discount rate for economic benefit calculations is a company's opportunity cost of capital, reflecting the financing costs for pollution control investments or the value of investment opportunities foregone because of pollution control purchases. The opportunity cost of capital is the incremental expected rate of return a company must earn to pay back its lenders (*i.e.*, bond holders) and owners (*i.e.*, stockholders), which is the weighted-average cost of capital.

[20] One commenter agreed with compounding the initial benefit forward at the WACC rate, but only to the compliance date, after which a lower compounding rate would be appropriate. His rationale was that a company then must set aside specific funds to pay a penalty; therefore, the economic benefit estimate should be compounded either at the actual interest rate on an escrow account or at the company's debt rate (which reflects its risk of going out of business, resulting in an inability to pay a penalty). Even if EPA took this approach, it would make no difference in the calculation where compliance had not yet been achieved at the time of settlement or trial.

[21] No consensus exists, however, and many other authors have advocated other approaches. Judges in tort cases have arrived at rulings that mandate many different rates, with many different values and rationales.

The risk-free rate methodologies use short-term U.S. Treasury bill rates that are unrelated to a company's opportunity cost of capital. Only the Treasury of the United States of America is able to borrow at the U.S. Treasury bill rate.[22] Companies lack the advantage of such low financing rates. To finance additional projects, they must either issue debt at higher interest rates, and/or issue equity, which requires returns of even higher rates.

Applying the risk-free rate to a company's cash flows presumes an unattainably low borrowing rate and an insufficient return on investments. (With the exception of mutual funds, a company whose main business was investing in T-bills would not be in business for very long.) The true opportunity cost of capital for a company far exceeds the T-bill rate. The risk-free rate will therefore systematically understate the economic benefit of pollution control noncompliance. Penalties based solely on economic benefit calculated with a T-bill rate would allow a defendant to retain a potentially substantial gain. Because of the precedent of this retained gain, other regulated companies might see an economic advantage in similar noncompliance, and the penalties based on a risk-free rate approach will fail to deter potential violators.

(ii) Risk-Free Rate Forward: Practical Implications

Not only are the theoretical underpinnings of the risk-free rate forward methodologies flawed, but their practical implications are also troubling. Specifically, the use of the risk-free rate fails to achieve the overriding goal of economic benefit recapture: To make the violator financially indifferent between compliance and noncompliance, which in turn constitutes a critically important element of deterrence.[23] An example helps to illustrate this point.

Suppose a company is deciding whether to purchase pollution control equipment this year (*e.g.*, 2000), or to wait until the same month in the next year (*e.g.*, 2001). The company is not necessarily contemplating a willful violation of the law—perhaps the law's interpretation is unclear, and the company would like to know the financial consequences of not purchasing the equipment, and then later being found to be in noncompliance. The company, therefore, wants to know how much better or worse off it will be by delaying the purchase one year.

The company performs three sets of economic benefit calculations. First, it calculates the economic benefit as of the present time (*e.g.*, June 2000). This lets the company know how much better off it will be by delaying the purchase (*e.g.*, until June 2001), in the absence of any penalty. Second, it calculates the economic benefit as of one year later (*i.e.*, June 2001, when it would otherwise purchase the equipment, and also pay any penalty), and then discounts the calculated economic benefit back to the present (*i.e.*, June 2000). This lets the company know the present value of any economic benefit based penalty that is calculated and paid the following year in 2001. Third, it subtracts the second result from the first result to determine the net amount by which it is better or worse off (*i.e.*, the economic benefit of its noncompliance, minus the present discounted value of the economic-benefit-based penalty it can expect to pay in 2001).

The first economic benefit calculation yields the same result regardless of which economic benefit methodology is used, because all the cash flows occur in the future.[24] In this example, the only compliance measure is a one-time—*i.e.*, no replacement cycles—capital investment of $10 million.[25] The company calculates that it is financially better off now in 2000 by $519,767 from a projected one-year compliance delay.

The company also needs to know how much better off it will be on net should the enforcement agency assess a penalty in 2001 equal to the calculated economic benefit from its delayed compliance. Assuming that the agency uses BEN, the economic benefit is brought forward one year by an estimate of the company's WACC (in this case 10 percent), so the economic-benefit-based portion of the penalty the company will pay is $571,744.[26] But because the company will pay the penalty a year in the future, it must discount that amount back to the present. If it discounts the penalty at the same rate that BEN used to compound the penalty forward to the penalty payment date, the present discounted value of the future penalty will always be equal to the economic benefit the company calculates for itself (in this case, $519,767). The company can therefore expect to have any economic benefit disgorged from itself, which makes the company financially indifferent between compliance and noncompliance. The column in the exhibit below labeled ''BEN'' summarizes these calculations.

Economic benefit	BEN	Alternative A	Alternative B
1. Penalty Payment Date of 6/1/2000	$519,767	$519,767	$519,767
2a. Penalty Payment Date of 6/1/2001	571,744	533,281	(147,798)
2b. Result 2a discounted back to 6/1/2000	519,767	484,801	0
3. Net Result (*i.e.*, 1 − 2b)	0	48,480	519,767

Perhaps, however, the enforcement agency uses one of the alternative methodologies. Under alternative A, as described in Section II B(8)(a), above, the initial economic benefit as of the noncompliance date is calculated with BEN, but is then compounded forward at the after-tax risk-free rate. In this case, compounding the initial economic benefit forward from 2000 to 2001 at an illustrative risk-free rate of 2.6 percent yields $533,281. The company

[22] This is a very favorable rate, because of the U.S. Treasury's over two-century default-free record, its ability to create money, and also the State tax-free status of its debt instruments.

[23] Because benefit recapture by itself merely makes the violator indifferent between compliance and noncompliance, only a total penalty amount that exceeds the economic benefit (by incorporating a gravity component) can achieve actual deterrence. Therefore, a civil penalty should always be at least equal to the economic benefit calculation plus some non-trivial gravity component.

[24] The results might be slightly different depending on what ''risk-adjusted rate'' the risk-free rate forward methodologies use for the future cash flows in their calculations. Different practitioners have used different ''risk-adjusted rates'' in different cases, including the same WACC-based discount rate that the BEN model uses. Therefore, for the purposes of the examples that follow, we assume that the alternative methodologies also use the WACC for future cash flows. If, instead, they were to use a different rate, the exact figures for the results would be slightly different, but the overall implications would remain the same.

[25] Other inputs include a 40-percent tax rate, 1.8-percent inflation rate, and 10-percent WACC.

[26] Because the time between the noncompliance date and the penalty payment is only one year, the compounding takes the form of simply multiplying the initial economic benefit by the sum of one plus the discount/compound rate (*i.e.*, $519,767×(1 + 0.10)=$571,744).

discounts this future penalty back to the present (*i.e.*, 2000) at its WACC, and arrives at $484,801.[27] Because this is less than the current economic benefit of $519,767, the company realizes a net gain of $48,480. This approach fails to make the company indifferent between compliance and noncompliance and, in the absence of any additional gravity-based penalty components, the company will have an incentive to delay compliance.

If the enforcement agency instead uses alternative B, as described in Section II B(8)(a), the economic benefit as expected to be calculated a year from now in 2001 is a negative $147,798.[28] The company realizes that an enforcement agency using this approach will conclude a year from now in 2001 that no economic benefit has been gained, and therefore the economic benefit-based portion of the penalty will be zero. But the company currently calculates its economic benefit in 2000 to be a positive $519,767. At the time of initial noncompliance in 2000, the company concludes that delaying the equipment purchase will result in an economic gain, but that it will never have to pay any economic-benefit-based portion of the penalty. Once again, a risk-free approach fails to make the company indifferent between compliance and noncompliance and, therefore, in the absence of any additional gravity-based penalty components, the company will have a significant incentive to delay compliance.

(iii) Equity Rate Approach

By contrast, an approach that employs a company's equity rate focuses solely on the company's equity owners, as opposed to its other stakeholders (who hold the company's debt). Because the company's cost of equity capital will always exceed or at least be equal to a company's WACC, the economic benefit estimate—with all other assumptions held constant—will be higher or at least the same.[29] While the Agency believes that a reasonable argument supports the use of equity, we nevertheless prefer the WACC, because it better represents firms' total capital structures and their own typical business decision-making practices.

(iv) Final Change: Use WACC, Except for a Possible Early Penalty Payment

For the above reasons, the Agency believes that the current basic discounting methodology is appropriate and should not be changed, except a minor modification in certain contexts. The United States may consider allowing the violator to escrow funds for the economic benefit portion of the penalty demand (whether at the compliance date or at any other time). Then, when EPA runs the BEN model, it will use the date the funds were escrowed as the penalty payment date. The violator would have to furnish proof that it established the escrow account, as well as placed on the account appropriate restrictions (*e.g.*, all accrued interest would go to the Agency).[30] This modification, when applied to certain cases, may reduce some of the deviation in results between the competing discounting methodologies. BEN will incorporate this guidance into its help system.

8. Investment Tax Credit and Low-Interest Financing

a. Background

Economic benefit calculations for cases with noncompliance dates prior to the mid-1980s must account for two important tax-code effects: The investment tax credit (ITC) and low-interest financing (LIF).

Prior to 1986, the Federal government allowed companies an ITC on capital investments.[31] The ITC effectively reduced the after-tax cost of a capital investment. Complicated and changing rules governed the depreciation basis for a capital investment with an associated ITC.

Early versions of BEN used to account for the ITC that was available on projects completed before January 1, 1986, but did not do so for the transition years of 1986 and 1987. The transitional rules allowed companies to obtain an ITC for projects completed after December 31, 1985, if the project met one of three criteria regarding the level of planning and construction that had occurred by that date.[32] Because the allowance of the ITC in these years was far from automatic (although still possible), BEN warned the user about this issue for noncompliance dates between January 1, 1986, and June 30, 1987. If further research and analysis showed that the granting of an ITC was likely in a particular case, then a financial analyst could adjust the BEN result through an ''off-line'' calculation.

Prior to 1987, LIF was available for a business's investment in pollution control. A much earlier version of the BEN model included a variable that accounted for LIF. The 1993 version of BEN removed this variable because it was relevant only for cases with noncompliance dates before 1987. Once this variable was removed, BEN would then issue a warning to the user about LIF for noncompliance dates before January 1, 1987. If further research and analysis showed that LIF was probably available in a particular case, then a financial analyst could adjust the BEN result through an off-line calculation.

b. Final Changes

A few commenters suggested that EPA could revise the BEN model to allow an option for ITCs during the 1986–87 transition years, as well as to account for LIF in years prior to 1987. These revisions would, however, add considerable complexity to the model.

[27] Even if the company were to discount the future penalty back at a rate lower than its WACC, this rate would still exceed the risk-free rate that alternative A uses to compound the economic benefit forward, and therefore the discounted future penalty would still exceed the currently calculated economic benefit.

[28] A negative economic benefit result for the capital investment portion of compliance is typical for alternative B. In many recent cases, the violators' witnesses implementing this approach have arrived at negative economic benefit results for delayed capital investments, despite the fact that no changes occurred in technological or legal requirements over time between the dates of noncompliance and compliance. (In other words, the negative economic benefit result was derived from on-time and delay scenarios involving the same piece of capital equipment, with the passage of time affecting only inflationary adjustments for the cost estimate.) Applying the combination of an extremely low risk-free rate for past cash flows and a higher risk-adjusted rate for future cash flows to delayed capital investments (with their past cash outflows for the actual investment and their future cash inflows for depreciation tax shields) can produce aberrant results that defy common sense. These perverse negative economic benefit estimates do not reflect any real economic losses because of the expenditure delay. Furthermore, even if the parameters in this example were different, the economic benefit—although perhaps positive—would still be much smaller than even under alternative A, and would similarly fail to make the company indifferent between compliance and noncompliance.

[29] The WACC will equal the equity cost of capital if the company has no long-term debt. Note also that an economic benefit calculation using the equity rate should first net out any cash flows attributable to debt financing, as the focus in such a calculation is on the returns to the company's equity holders only.

[30] Should the escrowed amount exceed the benefit component, then the interest on the amount that exceeded the economic benefit component would accrue to the violator.

[31] Note that this and other tax-related adjustments are irrelevant for municipalities, federal facilities, and other not-for-profit entities because their marginal tax rate is equal to zero.

[32] The criteria are: ''1. It is constructed, reconstructed, or acquired under a written contract binding on December 31, 1985; 2. it is constructed or reconstructed by the taxpayer, construction was begun by December 31, 1985, and the lesser of $1 million or five percent of the cost was incurred or committed by December 31, 1985; or 3. it is an equipped building or plant facility, construction was begun by December 31, 1985, under a written specific plan, and more than one-half of its cost was incurred or committed by December 31, 1985.'' (Commerce Clearing House, Inc., Explanation of Tax Reform Act of 1986, page 328.)

Furthermore, the Agency did not receive any comments documenting recent instances in which an off-line calculation was necessary to account for ITCs or LIF. This is not surprising EPA Headquarters had received only one call in response to the older BEN model's previous warning about LIF. Furthermore, the already low likelihood of the need to account for ITCs or LIF continues to decline with the passage of time, as EPA is not likely to see many enforcement actions now in the mid-2000s for violations that began in the early to mid-1980s.

The June 1999 notice's proposal on this issue ''that the revised BEN model not accept noncompliance dates before July 1, 1987 ''did not receive any objections from commenters. This cut-off date will ensure that BEN's omission of ITCs and LIF is not leading to incorrect economic benefit estimates. EPA will provide assistance in performing the necessary calculations for cases that involve noncompliance dates before July 1, 1987.

C. Improving the BEN Model's User-friendliness

EPA understands that some users find the BEN model difficult to use. While that has not been EPA's experience, the Agency expressed interest in learning of any difficulties users encountered when running the model. The Agency particularly requested suggestions for realistic alternatives that would preserve the model's degree of precision.

1. Is BEN Too Complex To Operate?

a. Background

EPA invited comments on whether any aspect of BEN's operation or user's documentation is too complex. Although the Agency designed BEN to be straightforward and easy to use, we welcomed any suggestions to make the model easier to use without compromising BEN's degree of precision.

b. Final Changes

Many commenters thought that although the old BEN model was generally easy to use, certain aspects of the prior version's operation were cumbersome. The Agency agrees, given the model's origins as a mainframe computer application and then its prolonged existence in the DOS operating environment. Because essentially all computer users are now long accustomed to the Windows™ operating environment, the Agency has decided that the revised BEN model will continue to run in Windows (version 95 or higher). This makes basic data entry and benefit calculations much easier to perform, as well as allowing the addition of various advanced features without burdening the user with additional complexity.

EPA has also established a toll-free helpline for Federal, State, and local government enforcement staff who need additional assistance in using the BEN model. The helpline provides Federal, State, and local environmental enforcement agencies with advice regarding financial issues that impact enforcement cases. The main types of inquiries EPA is addressing with this helpline are:

- The calculation of a violator's economic benefit from noncompliance;
- The evaluation of a violator's claim that it cannot afford to comply, clean up, or pay a civil penalty, and the application of the three computer models—ABEL, INDIPAY, and MUNIPAY [33]—that address these issues; and
- The calculation of the actual costs of a supplemental environmental project, and the application of the computer model—PROJECT [34]—that addresses this issue.

Callers can obtain assistance in downloading the BEN model and the previously mentioned other models, as well as relevant policies and guidance documents. In addition, callers can obtain advice on how to access training courses on the models and related subjects. Inquiries regarding the interpretation of Federal statutes and EPA policies will be referred to the EPA, as will inquiries from nongovernment employees except for relatively straightforward technical inquiries (*e.g.*, installation problems).

The toll-free helpline phone number is 888–ECONSPT (326–6778), and is staffed by a contractor, Industrial Economics, Incorporated, located in Cambridge, Massachusetts. The helpline is in operation from 8:30 AM to 6:00 PM Eastern time and will accept voice mail messages when it is not in operation. In addition, the contractor has provided a companion e-mail address: *benabel@indecon.com.* When requesting help, enforcement staff should identify their governmental affiliation. As mentioned at the beginning of this notice, anyone can download the model through the EPA's Web site at: *www.epa.gov/compliance/civil/programs/econmodels/index.html.*

2. Is the Information BEN Needs Difficult or Expensive to Obtain?

a. Background

One of the main breakthroughs BEN achieved over its predecessor model was its streamlining of the data needed to operate the model. While the model requires a minimum of only seven data inputs (mainly just three dates and up to three cost estimates), some users apparently feel the data is difficult to obtain. This has not been EPA's experience, as most (if not all) of the required data inputs are based on facts that are already or should be known to the litigation team as the data are important to other parts of the settlement. Nevertheless, the Agency welcomed any suggestions on how to make this data easier to obtain as long as the model's degree of precision is preserved.

b. Final Changes

The Agency received a wide range of responses on this issue. Most users thought the necessary data was easy to obtain; others thought it was prohibitively difficult to obtain. EPA did not receive any specific suggestions on how to streamline the model's data requirements even further. The Agency did receive suggestions that the BEN model incorporate some basic, generic compliance data.

The Agency has cost information on its Web site for the UST (Underground Storage Tanks) and Clean Air Act (Stationary Sources) [35] programs. In addition, it produced a written manual on standardized RCRA (Hazardous Waste) costs. These information sources should assist users in determining compliance costs, and then using them in the BEN model to calculate an economic benefit figure. Although these information sources are not a substitute for case-specific data, they will at least provide a starting point and a reasonably accurate estimate when a violator refuses to provide any detailed cost information.

Also, as noted at end of Section II C (1)(b), above, EPA has established a toll-free helpline to provide assistance to government enforcement personnel regarding financial economics issues in environmental enforcement cases. Helpline staff can provide suggestions on how to obtain the necessary data to run the BEN model.

[33] ABEL, INDIPAY and MUNIPAY evaluate inability to pay claims from for-profit entities, individuals and municipalities, respectively.

[34] As most supplemental environmental projects (SEP's) are completed long after the cases are settled, any stated SEP cost is usually far above the ''real'' cost to the violator. Therefore, PROJECT calculates the SEP's actual costs to the violator.

[35] The web address for the Clean Air Act Stationary Source information is: *http://www.epa.gov/ttn/catc/products.html.*

D. Procedural Issues Regarding the Public Comment Process

Although the Agency did not request any comment on the public comment process itself, the Agency did receive several comments regarding procedural issues. EPA's responses to the major requests are as follows:

• *Extend the initial public comment period:* In response to such concerns, the Agency extended the deadline for the initial round of public comments from the originally stated January 1, 1997, to a significantly later March 3, 1997 (*see* **Federal Register** notice on December 12, 1996, at 61 FR 65391).

• *Follow up on the public comment period by first drafting the findings, then requesting and evaluating further public comment, and finally publishing a formal draft on the final decision:* In response to such concerns, the Agency has done exactly that. The June 1999 notice responded to the comments, came out with a proposal, and then requested further comment on that proposal. This notice contains the final findings.

• *Provide a separate public comment process for the illegal competitive advantage guidance document:* Since the Agency has already solicited public comment on illegal competitive advantage issues, a separate public comment process would be duplicative. But as was mentioned earlier in this notice, the EPA's Science Advisory Board has initiated a peer review of the draft illegal competitive advantage guidance document.

• *Submit the BEN model to a formal peer review process:* As noted earlier, EPA submitted its draft BEN model changes to an academic peer review in the spring of 2003. The process concluded at the beginning of 2004.

III. Response to Comments

A. Broad Economic Benefit Recapture Issues

1. Alternatives to BEN

Comment: One commenter challenged the economic rationale of the entire benefit recapture ideology, concluding that EPA's current approach encourages compliance disproportionate with resultant social benefits. The alternative recommendation was to base penalties on violations' social costs rather than the private gains, thus providing the possibility of an ''efficient breach,'' a concept from contract law. The illustrative example was an individual lost in the woods who steals food from a cabin to avoid starvation. Under the social cost approach the individual would be required to repay the cost of the stolen food. The commenter argues that EPA's approach in this context would be analogous to attempting to recover the private gain, presumably the value of the individual's life.

Response: As discussed in the main text of this notice, the Agency finds this approach unacceptable, inconsistent, and infeasible with regard to its objectives to enforce regulatory requirements. More specifically, in the example of the starving person, society has implicitly agreed that the individual may violate the normal respect for private property and steal the food, being required later to repay only the cost of the food. By contrast, society has not agreed that companies may violate environmental statutes at will whenever they expect their private gain to exceed the social costs. To use another example at the individual level, motorists are required to stop at red lights even at deserted intersections. If a driver is caught running a red light, financial compensation to other parties may not be necessary if no accident has occurred, but a regulatory penalty in the form of a moving violation ticket is still appropriate. A police officer is generally not convinced by a violator's argument that the lack of social damage is outweighed by the violator's gain (in terms of time saved in this example), and EPA is similarly not convinced by such an analogous argument.

2. Illegal Competitive Advantage

Comment: Several commenters felt that EPA has not demonstrated a clear need to broaden the benefit recapture framework to consider illegal competitive advantage, and questioned whether the scenarios described in the June 1999 notice were realistic and supported by actual data. These commenters felt that consideration of illegal competitive advantage is appropriate only under rare and limited circumstances.

Response: The Agency agrees that consideration of illegal competitive advantage will occur far less frequently than the typical BEN-type of benefit, but it does not agree that such occurrences will be rare. As the main text of this notice explains, specifically those situations are where revenues in both the actual noncompliant and hypothetically compliant states are not identical (as BEN implicitly assumes). As previously noted, the Agency is not planning to issue any guidance on the subject of illegal competitive advantage at this time. Therefore it is premature to address the comments that were directed at the scenarios that appeared in the June 1999 notice.

Comment: Two commenters recommended that the Agency adopt alternative terminology for ''competitive advantage,'' because the scenarios described in the June 1999 notice do not necessarily involve ''competition,'' as in antitrust cases.

Response: The Agency agrees that the term may not be ideal, and has been open to alternative suggestions. Unfortunately, no commenter proposed any. The underlying concept is economic benefit that goes beyond the BEN model's simplifying paradigm of delayed and/or avoided pollution control costs, but unfortunately this is difficult to convey in merely two or three words.

Comment: Many commenters expressed concern over the additional resources necessary for the data and analysis associated with illegal competitive advantage. One commenter questioned whether such analyses were feasible altogether, and another questioned whether EPA staff was sufficiently qualified to undertake them. Finally, one commenter suggested that attempts to calculate illegal competitive advantage should not be made until EPA has issued formal guidance.

Response: Illegal competitive advantage cases may involve more detailed financial data and analysis than typical BEN cases, although in some cases they will involve less. When such cases do arise, the Agency will rely heavily on expert support, just as it currently does for much of its more complex economic benefit recapture work. Moreover, the absence of formal guidance in the interim should not preclude staff from identifying and analyzing illegal competitive advantage. Recapture of economic benefit based on illegal competitive advantage has been EPA's position since the inception of the policy in 1984 to recapture all the economic benefit from noncompliance. There are now a series of case decisions that have already based 100 percent of the violator's economic benefit on illegal competitive advantage. It is worth noting that in one of the cases, the benefit calculation was so simple that the Agency did not even need to present expert testimony on illegal competitive advantage.

Comment: One commenter disagreed with the June 1999 notice's characterization of the role of marginal production costs regarding illegal competitive advantage from increased market share. Figure 1 below reproduces the graph that the commenter attached. As in the classic textbook example of a ''price-taking'' firm facing a competitive market, the firm produces up to the point where its marginal cost of

production (as depicted by the line MC_c for a compliant firm) is equal to the market equilibrium price (as depicted by the horizontal line, P). The firm produces quantity Q_c, with a profit equal to the triangle described by the points P–A–B (*i.e.*, the area lying below the market price but above the marginal cost curve). Although noncompliance may alter marginal costs such that the firm is at the lower MC_{nc}, if it anticipates with 100-percent certainty the imposition of and magnitude of a BEN-based penalty, then it will continue to produce at Q_c (not the higher Q_{nc},) since the marginal costs will eventually be retroactively incurred in the form of the penalty. Therefore, the BEN model captures the entire economic benefit.

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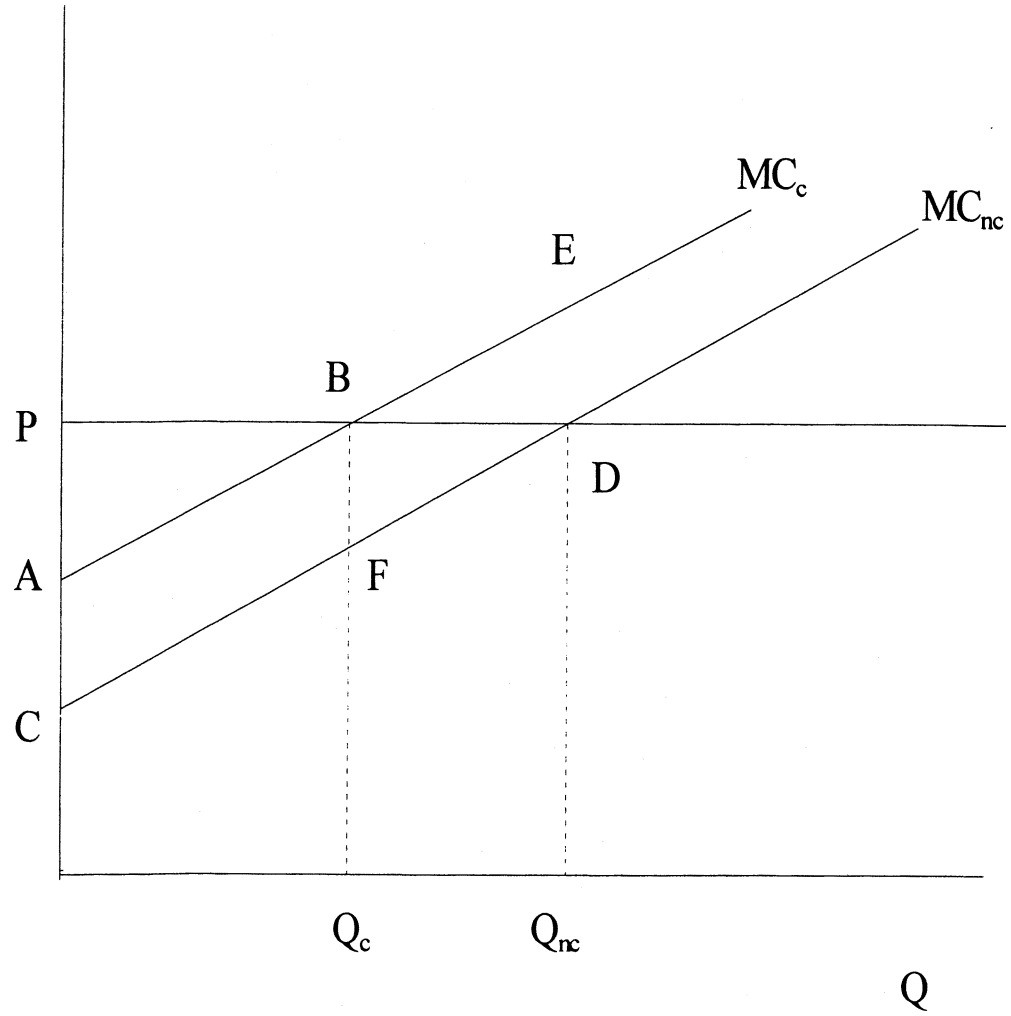


Figure 1: Marginal Costs and Economic Benefit

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Response: If the many economic assumptions necessary for this hypothetical scenario are accepted (particularly the certain anticipation of the size of the BEN component of a penalty), then the conclusion is correct. But the complicated analysis necessary to arrive at this conclusion is moot: if the firm has not altered its behavior and not gained any market share, then market share from illegal competitive advantage is not an issue.

Comment: The same commenter continued with this example, but assumed alternatively that the noncompliant firm does not anticipate a BEN-based penalty, for whatever reason. With the lower marginal cost of production MC_c it produces at the higher Q_{nc}. A BEN-type calculation would be based on the difference between MC_c and MC_{nc} (*i.e.*, the per-unit compliance cost), multiplied by the number of units (*i.e.*, Q_{nc}), and therefore equal the area described by the points A–C–D–E. But this overestimates the economic benefit the company has actually received, which is A–C–D–B (*i.e.*, the actual profit P–C–D, minus the compliant profit P–A–B). Therefore, even if the firm does gain market share from its noncompliance, BEN would overestimate the economic benefit, not underestimate it.

Response: The Agency has never encountered such a situation, especially

since such textbook graphs—while helpful for understanding broad economic concepts and aggregate market behavior—may not be very relevant for many individual firms. For example, marginal cost curves for individual firms are often not smooth curvilinear functions, but rather approximate more crude step functions. Combined with the relatively small magnitude of typical compliance costs compared to total variable production costs, the Agency is unaware of any violator claiming that it would have produced less had it incurred the compliance costs on-time. Nevertheless, this graph does illustrate the theoretical possibility that a BEN-type calculation could overestimate the economic benefit if all these conditions were present. The opposite, however, is also possible: if the compliance costs calculation is based upon a compliant level of production (*i.e.*, Q_c), then the resulting area A–C–F–B will underestimate the actual economic benefit (*i.e.*, A–C–D–B). This further emphasizes the need for a detailed examination of the company's actual noncompliant and hypothetically compliant behavior (and cash flows), if the noncompliance is reasonably believed to have increased a violator's market share.

Comment: One commenter suggested that a warning message be incorporated in the BEN module that advises the user that an affirmative answer to any of the questions regarding illegal competitive advantage indicates only the possibility that such a situation exists and that any presumed illegal competitive advantage may reduce the conventional BEN result.

Response: The Agency agrees with the goals of this comment. The Agency has requested the Science Advisory Board to look at this issue as part of its review of the ICA type of economic savings. Thus for the immediate future, the BEN model will not contain any questions, references or guidance regarding ICA.

Comment: Many commenters expressed concern over the potential for double counting in situations where illegal competitive advantage is considered. In particular, several commenters indicated that conventional BEN calculations and those related to illegal competitive advantage should be mutually exclusive options for penalty arbitration. One commenter suggested that a penalty that incorporated both would constitute double counting because the violator would have forgone some profits that are captured in the BEN calculation. Another commenter suggested that an illegal competitive advantage component should not be considered unless evidence suggests that it is likely to outweigh the conventional BEN result.

Response: The Agency agrees that simply adding an estimate of illegal competitive advantage to the BEN model's result would create the potential for double counting. But this is only a potential. In some cases it will be appropriate to seek benefit recapture based upon both types of benefit. In *In re: Lawrence John Crescio III,* No. 5–CWA–98–004, 2001 WL 537494 (May 17, 2001), an administrative law judge assessed a civil penalty that recaptured both types of benefit. Nevertheless, the emphasis for illegal competitive advantage is on a unified approach, laying out all the relevant cash flows associated with the on-time and delayed compliance scenarios. The economic benefit is then equal to the difference between the two scenarios' after-tax net present values. This is the same approach that the BEN model follows, although the scenario construction under illegal competitive advantage will—almost by definition—be more complex than under the BEN model.

Comment: Several commenters referred to the language of the penalty provisions of many of the statutes that EPA is responsible for along with the legislative history of those provisions. They claimed that those provisions authorize neither the recovery of illegal competitive advantage nor the mandated recovery of economic benefit as a necessary penalty minimum. Similarly, another commenter questioned EPA's position that the recovery of economic benefit is ''no fault'' in nature and suggested that it would be incorrect to assert that it must be recovered in every enforcement case.

Response: The passages these commenters cite clearly show that various members of Congress were often equating economic benefit with delayed/avoided compliance cost savings. But they made this association only because economic benefit typically results from delayed and/or avoided expenditures. There is nothing in the legislative history cited by these commenters to suggest that Congress intended to exclude the possibility of other kinds of economic benefit accruing from noncompliant actions (*i.e.*, illegal competitive advantage). Furthermore, the minimum recovery of economic benefit in a penalty—regardless of the violator's motives or the violation's impacts—is a common-sense notion that need not rely entirely on the legislative record for its support. Even if the argument is confined to statutory interpretation, the trier of fact, in imposing a civil penalty, is not limited to consider only those factors present in the applicable statute's penalty provisions. For example, judges have recaptured economic benefit in RCRA cases even though RCRA is silent as to the consideration of economic savings.

3. Other Broad Economic Benefit Recapture Issues

Comment: Several commenters asserted that in cases of technological infeasibility, shutdown as a means of compliance is an inappropriate suggestion, both because EPA does not have the statutory authority to mandate shutdowns and because of the consequential economic and social displacement.

Response: The issue of whether the enforcement agency should request a judge to order a violating firm to shut down is not germane to the discussion of how to calculate the economic benefit of noncompliance. What is relevant is that the economic benefit analysis should as a general rule (though with reasonable exceptions) be modeled on the actual or anticipated means of compliance. If the facility has complied (or will comply) by shutting down, then the baseline assumption for the economic benefit analysis is that the violator should have complied on-time by shutting down at an earlier date.

Comment: Several commenters stated that penalties should not be assessed in cases of industry-wide noncompliance. In particular, some commenters argued that penalties should not be assessed in situations where EPA has re-interpreted relevant regulations or failed to provide ''fair notice''.

Response: If an entire industry has failed to comply, then all of the firms in that industry have gained an economic benefit that should be disgorged. Otherwise, firms in a given industry would have an incentive to collude in noncompliance. In addition, one industry may be competing against another (hydroelectric power versus fossil fuel based electric power) such that the industry that fails to comply obtains a significant advantage in that competition. Finally, if for some reason all the firms in a particular industry are out of compliance, each violating firm still obtains an economic benefit. By delaying and/or avoiding compliance expenditures, each of the firms is saving money even if the playing field is level. The Agency needs to recapture that benefit from any violating member of that industry if it wants to produce deterrence.

EPA's perspective is that the economic benefit gained is ''no fault'' in nature. By this the Agency means that a company need not have intentionally

violated the law, or been aware of the violation, to have accrued economic benefit. Nevertheless, the concept of ''fair notice'' can be relevant to penalty assessment and may be an exception to this ''no fault'' approach. Some courts have found that fair notice is a defense to a penalty action if established by the defendant. This is not saying that the violator failed to obtain an economic benefit from its noncompliance. Fair notice is thus a legal defense, not an economic one. As a policy matter, the Agency generally does not seek any penalties where that defense has been clearly established.

Comment: Two commenters stated that the BEN model does not accurately measure regulated utilities' economic benefit. Specifically, one commenter noted that because regulated utilities are able to recover their compliance expenditures and earn a rate of return on those investments, the timing of periodic rate adjustments should be considered. For example, if compliance expenditures associated with a new facility are delayed until after a rate assessment, the utility forfeits returns on that investment until the subsequent rate assessment, a tacit loss that is not reflected in BEN model calculations

Response: The Agency generally agrees that the BEN model does not reflect that potential loss in some situations, but it does not agree with the implications. Specifically, the violator has created an economic benefit, which, depending upon the particular circumstances, has accrued either to the utility or to its customers in the form of lower rates. In some cases, both the utility and the customers obtain the benefit. Either way, this economic benefit should be recaptured. Otherwise, given the joined-at-the-hips relationship between a traditional rate-of-return regulated utility and its ratepayers, the financial incentive would arise to avoid compliance and thus create goodwill among ratepayers (knowing that the economic benefit would not be recaptured) that could help the utility in the next rate hearing. To ignore this benefit generated by such a regulated utility creates a very strong incentive to evade compliance responsibilities.

The analogy of a landlord-tenant relationship helps to illustrate this concept. Suppose that the lease conditions allow pollution control costs to be passed through to the tenant, and suppose that the regulatory agency agrees that the economic benefit that the landlord created through its violations should not be recaptured via a civil penalty since the economic benefit was passed through to the tenant (in the form of lower rent payments). The landlord now has an incentive to avoid compliance, since and thus create goodwill with its tenant (knowing that the economic benefit will not be recaptured) that could help the landlord in the next round of lease renegotiations.

Comment: Two commenters questioned whether economic benefit was appropriate for Federal agencies and facilities.

Response: Federal agencies and facilities are no different from local, regional, and State governmental jurisdictions in the context of economic benefit. Although governmental entities do not have the same profit motive as for-profit businesses, they may still benefit economically from their noncompliance, and that benefit must be recaptured.

Comment: One commenter suggested that by increasing focus on the recovery of economic benefit, EPA will in fact create an ''unlevel playing field'' because it will limit the extent of the gravity component it can assess given the statutory penalty maximum of $25,000 per day.

Response: The Agency has not seen many cases in which the economic benefit exceeds (or is very close to) the statutory maximum, but concedes that in those cases even the statutory penalty maximum may not be sufficient for optimal deterrence. Ignoring or reducing the economic benefit in all our penalty actions in order to address this situation would make little sense. The solution required is probably a legislative issue.

Comment: One commenter felt that EPA's abilities to recover economic benefit should not be permitted to supercede the statute of limitations.

Response: The application of the statute of limitations to a benefit calculation is a legal issue and is well beyond the scope of this notice. The purpose of this notice is to determine the best economic methodology for the Agency employ when calculating the economic benefit of noncompliance. From a financial economics perspective, the statute of limitations issue is irrelevant. The benefit accrues to the violator regardless of whether the first day of noncompliance was two years ago or ten years ago.

B. The BEN Model's Calculation Methodology

1. Discounting/Compounding

Comment: Many commenters indicated that the risk-free rate is the appropriate compounding rate for BEN calculations. This is because investments in pollution control carry very little, if any, systematic risk and do not add value to a firm. Similarly, the probability of the violation attracting an enforcement action and the subsequent penalty not being paid is not a relevant risk for the present value adjustments. Because penalty payment cash flows are certain, a risk-free rate is the appropriate compounding rate.

Response: The Agency is puzzled by the critical assertion in this line of reasoning that pollution control investments do not add value to a firm: would these commenters pay the same price to purchase two firms that were identical but for their investments in required control equipment? As discussed in this notice's main text, a risk-free rate does not accurately reflect the benefit a company could gain through alternative use of compliance funds. For these reasons, the Agency maintains that an estimate of a violator's cost of capital is appropriate for both discounting and compounding purposes in the BEN model.

Comment: Two commenters criticized EPA's distinction between tort damages and economic benefit and advocated the adoption of a risk-free compounding rate.

Response: The Agency maintains that tort damages and economic benefit differ fundamentally in that the goal of the former is to restore to the plaintiff the amount by which it was damaged, while that of the latter is to return the defendant to the position it would have been in had it complied, and thus remove from it the amount it wrongfully gained. Therefore, the relevant rate to apply to the violator's cash flows is its cost of capital, which reflects the minimum rate of return it can expect to earn on average from funds not invested in pollution control.

Comment: One commenter suggested that a risk-free interest-forward rate be used in BEN model calculations because a violator would have to place funds in a risk-free vehicle to pay the required penalty.

Response: Outside of cases in which a violator formally agrees during settlement negotiations to escrow penalty funds, the Agency is unaware of any violator that has ever done so, and therefore feels that this suggested theoretical construct is highly unlikely.

Comment: One commenter pointed out that a risk-based discount rate, specific to the project in question, should be utilized in BEN model calculations.

Response: Because the project is an investment in required pollution control equipment, it is essentially an investment in the continuing operations of the firm as a whole (or the relevant

operations division). Thus, the WACC accurately reflects the risk of the project.

2. Inflation Adjustments

Comment: One commenter felt that the cost indices relied upon in the BEN model should include an installation component.

Response: The BEN model's default cost index, the Plant Cost Index (PCI), includes such an installation component.

Comment: One commenter believed that future inflation rates should not be linked to the Consumer Price Index (CPI).

Response: Publicly available forecasts are available only for the CPI and the GDP price deflator. Both forecasts are fairly close to one another, plus the chosen value has a very small impact upon the economic benefit result. The Agency plans to evaluate all available information during each year's update of the projected cost indices.

Comment: One commenter felt that future inflation rates should be adjustable or, at a minimum, EPA should recognize analyses that incorporate a more complex future inflation scenario.

Response: The revised BEN model allows the user to specify estimates of compliance costs as of the noncompliance and compliance dates to reflect an alternative cost index, case-specific inflation assumptions, or entirely different actions for on-time and delayed compliance.

3. Other Technical Aspects

Comment: Two commenters commended EPA's proposal to allow for differences in delayed and on-time compliance scenarios. A third commenter suggested that only in cases where the technology necessary for compliance was unavailable at the time of noncompliance should such adjustments be allowed. Otherwise, in the on-time scenario, violators will be encouraged to seek lower penalties by searching for and advocating less costly compliance measures.

Response: The Agency recognizes that certain technological, legal, or other circumstances may occasionally cause on-time and delay compliance scenarios to differ significantly. The revised BEN model still maintains the default assumption that the on-time and delay scenarios are identical (but for inflationary effects), reserving more complicated scenarios only as an advanced option. The burden is implicitly always upon the violator to provide convincing evidence that: (1) A less-costly compliance method was available as of when timely compliance was required; and, (2) the only reason the violator invested in the more expensive equipment was to improve the environment. If, as we usually find, that the motivation to purchase the more expensive equipment was business-related (*e.g.*, the more expensive equipment was more reliable, fit better with on-board equipment, allowed for expansion, etc.) the Agency assumes that the company would have chosen that more expensive system as its compliance option had it decided to comply on time. Thus the cost entry for BEN would be based on the actual option selected by the violator for its delayed compliance.

Comment: One commenter urged EPA to maintain the BEN model's previous assumption of infinite replacement cycles, suggesting that it is essential when the delay period is longer (or shorter) than the useful life of the control equipment or when compliance involves controls with different life expectancies.

Response: As noted earlier in section III.B.5, the revised BEN model will solve this problem by implementing the concept of economic depreciation, which essentially calculates the lease value of pollution control equipment. In other words, instead of modeling the on-time replacement capital investment and the subsequent depreciation tax shields, and comparing that to delayed replacement, the calculation models leasing the equipment over the period when the on-time equipment would have required replacement yet the delay equipment is still functional. The avoided lease cost therefore serves as a reasonable approximation of the economic benefit from the delayed replacement equipment installation, and also allows the two scenarios to the modeled out the same end point.

Comment: One commenter felt that the BEN model default should not consider capital replacement because (with rare exceptions) process and control equipment are typically matched in terms of life expectancy.

Response: The Agency disagrees. The control equipment will still have to be replaced in the future, and then the violator will benefit again as its control equipment will still be functional whereas the equipment would have already required replacement had the company complied on time.

Comment: Two commenters felt that the BEN model should provide for a broader range of costs, such as those additional costs that would not have been incurred given timely compliance and precompliance expenditures.

Response: The revised BEN model's ability to accommodate different on-time and delayed compliance cost scenarios, when justified, allows for incorporation of supplementary costs, as this comment suggests.

Comment: One commenter proposed that when a defendant can justify doing so, EPA should allow for alternative depreciation strategies.

Response: The BEN model's current depreciation schedule reflects the most rapid recovery available for typical pollution control investments, resulting in a conservative estimate of economic benefit. The revised BEN model will default to shorter schedules when the useful life is less than 10 years. BEN will also include a provision for the Job Creation and Worker Assistance Act of 2002 depreciation bonus, which will be keyed off the previously required noncompliance and compliance dates, and therefore will not require any additional input from the user.

Comment: Many commenters endorsed EPA's proposed changes with respect to investment tax credits and low interest financing, specific tax rates, and increased flexibility with respect to depreciation assumptions and inflation indices.

Response: The Agency appreciates these comments, and hopes both regulators and the regulated community will find the revised BEN model a more useful and accurate tool.

Comment: One commenter felt that many of the changes described in the June 1999 notice reflected *ex post* factors and recommended that EPA maintain its *ex ante* perspective in calculating economic benefit.

Response: The Agency feels that the distinction between an *ex post* (*i.e.*, known only today, looking back in time) and *ex ante* (*i.e.*, restricted to what was known at the time) perspective is not an important one, and that almost all models necessarily use a mixture of *ex ante* and *ex post* data. The BEN model has always used a mixture of *ex ante* and *ex post* data, the latter of which can be viewed as reasonable approximations for the *ex ante* data that was actually available at the time. The changes described in the June 1999 notice merely make the *ex post* data more precise (*e.g.*, month-by-month inflation data, rather than a simple 10-year average).

C. Improving the BEN Model's User-Friendliness

1. Is BEN Too Complex To Operate?

Comment: One commenter noted that BEN is easy to use, requires minimal data and expertise and is well supported.

Response: The Agency similarly feels that BEN's ease of use and technical

support are attractive features of the model.

2. Is the Information BEN Needs Difficult or Expensive to Obtain?

Comment: One commenter doubted that reliable information will be readily available regarding on-time compliance costs that differ from delayed costs.

Response: The use of different on-time and delayed compliance scenarios is valid only in exceptional cases. In these situations, the violator's best interest will be to provide complete information. Otherwise, the default assumption is that the scenarios are identical, except for inflationary effects over time.

3. Other Issues Affecting Use of BEN

Comment: One commenter encouraged EPA to abandon its position that the intended use of the BEN model is primarily for settlement purposes.

Response: An expert witness in litigation may use any analytical tool the expert deems appropriate, which may include the BEN model. But the reality is that the Agency designed BEN with the goal of assisting its staff for settlement purposes. This is not a policy position, but rather a statement of fact, although BEN users are free to use BEN for whatever purposes they deem appropriate. Should a witness in a case wish to use the BEN model in court, that witness is free to do so, but the Agency's position is that the model is primarily intended for calculating the economic benefit for settlement purposes.

Comment: One commenter asserted that information regarding the BEN methodology, assumptions and applications should be shared with the regulated community. In addition, all parties should have access to EPA's helpline. Finally, EPA should provide all of BEN's equations and assumptions.

Response: The Agency has made precisely this information regarding how the model functions available to the public for almost twenty years. EPA does not necessarily share all of its case-specific calculations with a violator as that information is enforcement sensitive, but all of the BEN model's formulas and databases are completely transparent to the user. In regard to the helpline, the regulated community's access to this service is restricted to straightforward issues regarding software installation and execution. For resource and policy issues, EPA feels that it would be inappropriate to provide free consulting advice to regulatees who are usually the subject of enforcement actions.

Comment: One commenter felt that to ensure consistency in penalty calculations, EPA should provide detailed guidance on economic benefit calculations to its enforcement staff.

Response: In addition to the BEN model's user documentation and assistance through the helpline, the Agency has provided extensive on-site in-person training to Federal, State and local enforcement personnel. Since, 1988 EPA has presented over 80 BEN courses. The Agency has conducted over 42 ''live'' BEN training courses at EPA facilities and invited State enforcement staff to attend nearly all of them. In addition, EPA has conducted 45 BEN training courses primarily for State and local government personnel in: Hartford, Connecticut (three times); Indianapolis, Indiana (three times); Little Rock, Arkansas; Baton Rouge, Louisiana (twice); Trenton, New Jersey; Boise, Idaho (three times); Ft. Lauderdale, Florida; El Monte, California; Baltimore, Maryland; Richmond, Virginia (twice); Phoenix, Arizona (twice); Lacey, Yakima and Seattle, Washington (for State of Washington personnel); Anchorage, Alaska (twice); Atlanta, Georgia (for State of Georgia personnel); Miles City, Montana (for the State enforcement staffs of Montana, North Dakota, and South Dakota); Frankfort, Kentucky; Montpelier Vermont; Raleigh, North Carolina; Charleston, West Virginia; Columbus, Ohio; St. Paul Minnesota; Nashville, Tennessee; Denver, Colorado (for the State enforcement staffs of Utah, Colorado and Wyoming); Santa Fe, New Mexico; Yakima and Seattle, Washington (for State of Washington personnel) Boston, Massachusetts (for State of Massachusetts personnel) (twice); Lansing, Michigan; Concord, New Hampshire; Providence, Rhode Island; Austin, Texas; and Honolulu, Hawaii (twice). EPA also presented a BEN course via satellite in 1994, and made videotapes of that broadcast available to government enforcement staff on request. In addition, EPA will soon be delivering this training to enforcement personnel at their desks through WebEx presentations.

Comment: One commenter recommended that EPA assemble an ''internal appeal board'' of experts to resolve disputes over economic benefit issues in settlement negotiations.

Response: Creation of such a board is not feasible. The Agency's view is that the decision on the appropriate civil penalty is best worked out between the Agency and the violator. Where appropriate, the negotiations may involve experts. If an agreement on the appropriate penalty cannot be worked out, then the matter must be resolved by a trier of fact.

Comment: One commenter felt that EPA should disclose its methods for calculation of economic benefit in litigation settings (as opposed to settlement negotiations) and that the regulated community should be allowed to comment on these methods.

Response: The methods employed in litigation follow the same general principles of the BEN model, but the Agency is unable to predict what each independent expert may do in each case. Experts must testify as to their own expertise regarding the economic benefit of noncompliance, not as to an Agency methodology designed to produce settlements. In addition, parties in litigation have very limited amounts of time in which to produce expert reports, depose experts, etc. It would therefore be impossible to put these independent experts' testimony through some sort of public review in the middle of litigation. In addition, it would also be superfluous, since such testimony is already subject to legal discovery, and also the focus of considerable scrutiny in each case by the violator's counsel and experts.

D. Procedural Issues Regarding the Public Comment Process

Comment: Many commenters expressed concern over the form and substance of the proposed guidance document on illegal competitive advantage and felt that the document should be made available for public comment.

Response: As stated previously, the Agency feels that a separate public comment process would be redundant. Instead, it has initiated a peer review process by the Agency's Science Advisory Board.

Comment: Two commenters advised EPA to subject the BEN model to expert review. In addition, one commenter suggested that EPA should open its broader civil penalty policy to public comment.

Response: As noted earlier, the Agency submitted the draft BEN model changes to an academic peer review in spring of 2003. With respect to broader policy issues, the Agency has attempted to solicit relevant comments through this current informal notice and comment effort. This has given the public and interested experts extensive opportunities to comment on these issues. We would note that this eight-year effort was not required by law.

Comment: One commenter alleged that the BEN model has no history of peer review.

Response: The BEN model is exempt from peer review because the Agency's peer review policy, issued in 1994,

applies only prospectively, not retroactively. Nevertheless, the Agency put the BEN model through two peer reviews in 1988 and 1991. As mentioned in the June 1999 **Federal Register** notice, copies of those peer reviews are available to the public. In addition, since that comment was made, the Agency has put the model through a third peer review. That review focused on the changes to the model that we were proposing as part of this **Federal Register** process.

Comment: One commenter felt that EPA should publish any final decisions on economic benefit issues arising from the current public comment process.

Response: All the final decisions are detailed in the main text of this notice. Of course, as stated previously, the illegal competitive advantage guidance document is not final and has instead been submitted to a peer review by the Agency's Science Advisory Board.

Dated: August 18, 2005.

Granta Y. Nakayama,

Assistant Administrator, Office of Enforcement and Compliance Assurance.

[FR Doc. 05–17033 Filed 8–25–05; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

[ER-FRL–6666–8]

Environmental Impact Statements and Regulations; Availability of EPA Comments

Availability of EPA comments prepared pursuant to the Environmental Review Process (ERP), under section 309 of the Clean Air Act and Section 102(2)(c) of the National Environmental Policy Act as amended. Requests for copies of EPA comments can be directed to the Office of Federal Activities at 202–564–7167. An explanation of the ratings assigned to draft environmental impact statements (EISs) was published in FR dated April 1, 2005 (70 FR 16815).

Draft EISs

EIS No. 20050165, ERP No. D–NPS–L61228–AK, Denali National Park and Preserve Revised Draft Backcountry Management Plan, General Management Plan Amendment, Implementation, AK

Summary: EPA expressed environmental concerns due to potential adverse impacts to water quality, wetlands, permafrost soils and wildlife from increased snowmobile use. EPA requested that the final EIS include additional monitoring plans and contingent mitigation measures that can be used with adaptive management plans to minimize adverse impacts or unexpected outcomes. Rating EC2.

EIS No. 20050186, ERP No. D–AFS–C65005–NY, Finger Lakes National Forest Project, Proposed Land and Resource Management Plan, Forest Plan Revision, Implementation, Seneca and Schuyler Counties, NY.

Summary: EPA expressed environmental concerns due to potential adverse impacts to water quality, riparian areas, wetlands, vernal pools and perched oak swamps. EPA suggests the final EIS include specific forest wide standards and guidelines or special resource area designations to protect these resources. In addition, the final EIS should consider impacts to these areas from hydrological changes caused by management actions on adjacent or near by parcels. Rating EC2.

EIS No. 20050234, ERP No. D–FHW–G40185–LA, Interstate 69, Section of Independent Utility (SIU) 15 Project, Construct between U.S. Highway 171 near the Town of Stonewall in DeSoto Parish, and Interstate Highway 20 (I–20) near the Town of Haughton in Bossier Parish, LA.

Summary: EPA has environmental concerns due to the proposed project regarding air quality impacts and transportation conformity. Rating EC2.

EIS No. 20050236, ERP No. D–AFS–J65445–MT, Rocky Mountain Ranger District Travel Management Plan, Proposes to Change the Management of Motorized and Non-Motorized Travel, Lewis and Clark National Forest, Glacier, Pondera, Teton and Lewis and Clark Counties, MT.

Summary: EPA expressed environmental concerns due to adverse impacts from motorized uses on watersheds and water quality, wildlife habitat and cultural resources. EPA believes alternative 3 best balances conserving and protecting water quality, fisheries and reducing impacts from road sedimentation.

Rating EC2.

EIS No. 20050239, ERP No. D–CGD–G39043–00, Main Pass Energy Hub Deepwater Port License Application, Proposes to Construct a Deepwater Port and Associated Anchorages, U.S. Army COE Section 10 and 404 Permits, Gulf of Mexico (GOM), southeast of the coast of Louisiana in Main Pass Lease Block (MP) 299 and from the Mississippi coast in MP 164.

Summary: EPA expressed objections to the open rack re-gasification system due to adverse environmental impacts to Gulf waters and habitat. EPA believes that these impacts can be corrected by the project modifications or other feasible technology, and requested additional information to evaluate and resolve the outstanding issues.

Rating EO2.

EIS No. 20050248, ERP No. D–COE–G39044–TX, Upper Trinity River Basin Project, To Provide Flood Damage Reduction, Ecosystem Improvement, Recreation and Urban Revitalization, Trinity River, Central City, Forth Worth, Tarrant County, TX.

Summary: EPA expressed concerns regarding the proposed project, with a focus on potential air quality impacts. EPA requested additional information regarding emissions from construction activities and how the proposed project relates to the State Implementation Plan.

Rating EC2.

EIS No. 20050251, ERP No. D–AFS–K65286–CA, Watdog Project, Proposes to Reduce Fire Hazards, Harvest Trees, Using Group Selection Methods, Feather River Ranger District, Plumas National Forest, Butte and Plumas Counties, CA.

Summary: EPA expressed environmental concerns due to the potential for adverse impacts from timber harvest and increased road density to watersheds. The final EIS should address impacts to soils, aquatic and riparian resources, wildlife habitat and the increased potential for noxious weed proliferation.

Rating EC2.

EIS No. 20050264, ERP No. D–NPS–L65491–ID, Minidoka Internment National Monument (Former Minidoka Relocation Center), General Management Plan, Implementation, Jerome County, ID.

Summary: EPA has no objections to the proposed action.

Rating LO.

EIS No. 20050268, ERP No. D–NOA–A91072–00, Programmatic—Codified Regulations at 50 CFR 300 subparts A and G Implementing Conservation and Management Measures Adopted by the Commission for the Conservation of Antarctic Marine Living Resources.

Summary: EPA expressed a lack of objections to the proposed project.

Rating LO.

EIS No. 20050253, ERP No. DS–COE–D35057–MD, Poplar Island Restoration Project (PIERP) To Evaluate the Vertical and/or Lateral Expansion, Dredging Construction and Placement of Dredged Materials, Chesapeake Bay, Talbot County, MD.

Summary: EPA had no objections to the proposed project.

Preliminary Deterrence Figure = **[Economic Benefit]** + **[Gravity]**
where Gravity = 50% of the remaining statutorily allowable penalty
and where the statutorily allowable penalty = $348,671

= **[Economic Benefit]** + **[(($348,671) – (Economic Benefit)) x (0.5)]**
where Economic Benefit = $4,317.98

= **[$4,317.98]** + **[(($348,671) – ($4,317.98)) x (0.5)]**

= **[$4,317.98]** + **[$172,176.51]**

Penalty	**=**	**[Economic Benefit]**	**+**	**[Adjusted Gravity]**
		where Economic Benefit = $4,317.98;		
		where Gravity = $172,176.51;		
		and where the gravity adjustment is a 25% reduction		
	=	**[$4,317.98]**	**+**	**[$172,176.51 + (- 0.25 x $172,176.51)]**
	=	**[$4,317.98]**	**+**	**[$129,132.38]**
Penalty	**=**	**$133,450.36**		

~~8~~

TANK	8,010.
CHAMBERS	6,570.
GEOTECH	1,880.
ENG	2,800.
PIPE	670.
SAND	730.
ROCK	1,140.
JOHN HAUL DIRT	600.
	22,400.
	155
SAW	
@ 2 LOAD ROCK + HAUL ACOUT	1,355.

IDEAL DAY 1 2 LOADS

IDEAL DAY 2 LAST LOAD OUT

1,228,51

NEW SYS.
~~$~~25,800.

TRUCK + SAND
#425 + 240 = #665.

FILED OLD [redacted] TANK
12/2/21

X + 571
400
478
1,459.