

Environmental Condition of Property Report

Kahuku Properties, O'ahu, Hawai'i
TMKs 5-8-02-02 and 5-9-06-26

MARCH 2017



PREPARED FOR | DIRECTORATE OF PUBLIC WORKS,
U.S. ARMY GARRISON, HAWAII

PREPARED BY | U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
UNDER CONTRACT W9128A-12-D-005

FOR OFFICIAL USE ONLY

DISTRIBUTION OF THIS DOCUMENT, OR ANY PORTION THEREOF, MUST BE COORDINATED WITH
THE DIRECTORATE OF PUBLIC WORKS, U.S. ARMY GARRISON-HAWAII

Environmental Condition of Property Report

Kahuku Properties, O'ahu, Hawai'i

TMKs 5-8-02-02 and 5-9-06-26

Prepared for

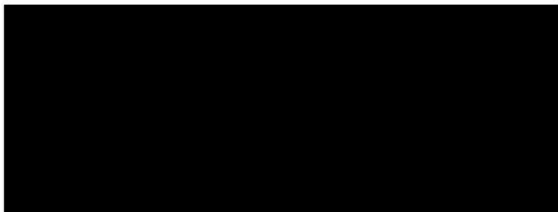
Directorate of Public Works

U.S. Army Garrison, Hawaii

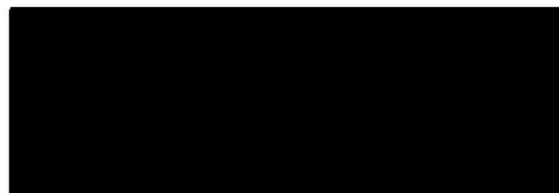
March 2017

Contract W9-128A-12D-005

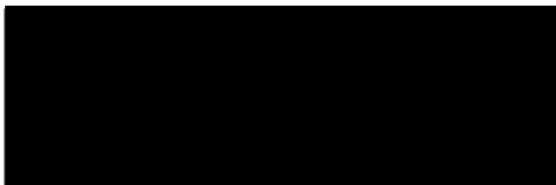
Prepared by



Principal
Group 70 International, Inc.



Senior Geologist
Masa Fujioka & Associates



Principal Environmental Scientist
Hart Crowser, Inc.

Executive Summary

This Environmental Condition of Property (ECoP) investigation was conducted to evaluate the current environmental condition of the subject properties by examining current and historical uses of the property and adjoining properties. The potential for environmental contamination of a property from hazardous substances, petroleum products, or other environmental concerns is determined through an ECoP investigation.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 requires Federal agencies to evaluate the environmental condition of property and to take remedial actions as necessary to protect human health and the environment before transferring property. Section 120(h) of CERCLA establishes a regulatory process for documenting the suitability of property for acquisition or divestment. Army Regulation (AR) 200-1 (Chapters 15-5 and 15-6) requires preparation of ECoP documents for Army Federal real property transactions.

The planned ECoP scope of work consisted of three parts: (1) a Phase I Environmental Site Assessment, (2) a Phase II Environmental Site Assessment, and (3) Property Characterization. The purpose, process, and findings for each investigation phase are summarized below:

Part 1: Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment (ESA) is performed for acquisition actions when the property is not Federally owned¹. Phase I ESAs are conducted in accordance with the United States Environmental Protection Agency (EPA) All-Appropriate Inquiry (AAI) rule (40 CFR, Part 312) as described in the American Society for Testing and Materials Standard E1527-13. The purpose of a Phase I ESA is to document the existing environmental condition of the property in a manner that demonstrates “AAI.” The investigation includes researching historical land uses, reviewing historical environmental database information, and conducting field surveys and interviews.

The Kahuku Properties are comprised of two parcels of real estate, both owned by the State of Hawai‘i. Parcel A holds a motocross facility, managed by Hawai‘i Motorsports Association, used on weekends through a lease with the State. Parcel B is part of the Pūpūkea-Paumalu Forest Reserve. Both Parcels are situated within the Army’s Kahuku Training Area (KTA), have been used for military training since 1964, and are under Army lease until August 2029. The lease agreement limits the Army from using the Properties “as an impact area for explosive or incendiary munitions of any type and shall limit firing on the premises to weapons not larger than .50 caliber provided; however, the Army may also fire inert 3.5-inch rockets or weapons of similar size or purpose provided such training will not cause fires.” Both parcels contain a helicopter landing zone. Range Control personnel reported that, although only blank ammunition is currently used in the KTA, old unexploded ordnance (UXO) has been found (specific locations not identified) during training and surveys.

¹ US Army Public Health Command (undated), Environmental Condition of Property (ECoP) Investigations, Technical Information Paper No. 380001-0312.

No structures or former agricultural use were indicated in historical records for Parcel A. Field observations for Parcel A included a structure within the Hawai'i Motorsports maintenance area utilized as a registration building, and a water pump station constructed by the Hawai'i Motorsports Association. A picnic pavilion has been constructed by Boy Scouts of America on Parcel B, in partnership with DLNR's Division of Forestry and Wildlife (DOFAW).

Surrounding properties are also rugged conservation land; nearby sites are used for agricultural, military and residential purposes. There is no indication that offsite land uses have impacted the subject property.

The Phase I ESA requires review of environmental regulatory databases to assess historical environmental concerns on the properties and nearby properties. EDR, a database search service, acquires data from government agencies and reviews proprietary database lists of historical polluters. The EDR report was augmented with additional targeted searches of Hawai'i regulatory databases. No regulatory database listings were found near the Kahuku Properties.

The site reconnaissance for Parcel A was conducted by accessing the Hawai'i Motorsports Association entrance; the parcel contains numerous tracks and dirt roads used by the organization for weekend riding and racing. Most Kahuku Parcel B was inaccessible due to topography and dense vegetation. Access was limited to a paved road along the southern boundary and a foot trail on the east boundary (Figure 2). Trails were accessed by foot and overlook areas were utilized to view interior areas of the parcel. No indications of environmental concern were identified during the site reconnaissance.

One staff member from the DLNR Nā Ala Hele Trail & Access program, which maintains the agreement with the Hawai'i Motorsports Association (Parcel A) and also manages the trail on Parcel B, was interviewed. He reported that DLNR knows of no environmental issues along the trail or associated with Hawai'i Motorsports Association's management of the property. An interview was also conducted with the Treasurer and Secretary of Hawai'i Motorsports Association. She stated that the parcel has been used for motor sports since the late 1960s and early 1970s.

The Phase I ESA revealed no evidence of recognized environmental conditions associated with the Properties. Past use of both Parcels for military training represents a notable finding for the possible presence of UXO; however, no specific locations of potential UXO were identified. Herbicide usage and poor housekeeping practices represented notable findings for Parcel A; however, releases of chemicals or inappropriate use of pesticides was not identified.

Part 2: Phase II Environmental Site Assessment

The purpose of a Phase II assessment is to obtain a better understanding of the potential environmental concerns associated with a property. If suspected contaminants are identified during a Phase I ESA, environmental and/or geophysical sampling is conducted to determine the absence or presence, or assess the extent of contamination. Because no indication of RECs was found during the Phase I ESA, a Phase II ESA was not conducted.

Part 3: Property Characterization

Based on the findings of the Phase I and Phase II ESAs, one of seven ECoP categories is assigned to the property, or the property may be divided into parcels and an ECoP category assigned to each parcel. ECoP Environmental Condition of Property (ECoP) guidance² provides for properties to be categorized into one of seven categories:

- Category 1: Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).
- Category 2: Areas where only release or disposal of petroleum products has occurred.
- Category 3: Areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response.
- Category 4: Areas where release, disposal, and/or migration of hazardous substances has occurred, and where all remedial response actions necessary to protect human health and the environment have been taken.
- Category 5: Areas where release, disposal, and/or migration of hazardous substances has occurred, and where all remedial response actions necessary to protect human health and the environment have not yet been taken.
- Category 6: Areas where release, disposal, and/or migration of hazardous substances has occurred, but where required actions have not yet been implemented.
- Category 7: Areas that are not evaluated or require additional evaluation.

Based on the results of the Phase I ESA, **the Kahuku Properties are categorized as Category 1**, i.e., areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).

TABLE ES-1: SUMMARY OF PROPERTY CHARACTERIZATION

TMKs:	5-8-02-02	5-9-06-26
Report Parcel Designation:	A	B
Land Area:	450	700
State Land Use Classification	Agricultural	Preservation
Current Occupants/ Tenants:	State of Hawai'i (Owner) United States of America - Army (Lessee) Hawai'i Motorsports Association (Lessee)	State of Hawai'i (Owner) United States of America - Army (Lessee)
ECoP Category	1	1

² US Army Public Health Command (undated), Environmental Condition of Property (ECoP) Investigations, Technical Information Paper No. 380001-0312.

PART 1:

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Table of Contents

<i>List of Tables</i>	<i>iii</i>
<i>List of Figures</i>	<i>iii</i>
<i>List of Appendices</i>	<i>iii</i>
<i>Acronyms</i>	<i>iv</i>
 Section 1: Summary	 1
 Section 2: Introduction	 3
2.1 Purpose.....	3
2.2 Scope of Services	4
2.3 Significant Assumptions	4
2.4 Limitations and Exceptions	5
2.5 User Reliance.....	6
 Section 3: Subject Properties Description.....	 7
3.1 Location and Legal Description.....	7
3.2 Subject Properties and Vicinity General Characteristics.....	8
3.3 Current use of the Subject Properties	8
3.4 Descriptions of Structures, Roads and Other Improvements.....	8
3.5 Current Uses of the Adjoining Properties.....	9
 Section 4: User Provided Information	 10
4.1 Title Records	10
4.2 Environmental Liens or Activity and Use Limitations	10
4.3 Specialized Knowledge	10
4.4 Commonly Known or Reasonably Ascertainable Information	10
4.5 Valuation Reduction for Environmental Issues	10
4.6 Owner, Property Manager, and Occupant Information	10
4.7 Reason for Performing Phase I.....	10
4.8 Other Information	11
 Section 5: Records Review.....	 12
5.1 Standard Environmental Record Sources.....	12
5.2 Environmental Records Review Findings	13
5.3 Additional Environmental Record Sources.....	15
5.4 Physical Setting Record Sources.....	16
5.4.1 Current USGS 7.5-Minute Topographic Map	16
5.4.2 Geology/Soils	16
5.4.3 Hydrology and Hydrogeology	17
5.5 Historical Record Sources.....	17
5.5.1 Sources of Historical Information	17
5.5.2 Site and Vicinity History.....	18
5.5.3 Site Historical Concerns	20

Table of Contents (cont'd)

Section 6:	Subject Properties Reconnaissance.....	21
6.1	Methodology and Limiting Conditions	21
6.2	General Site Setting	21
6.2.1	Current Use(s) of the Subject Properties	21
6.2.2	Indications of Past Use(s) of the Subject Properties	22
6.2.3	Current Use(s) and Indications of Past Use(s) of Adjoining Properties	22
6.3	Exterior and Interior Observations	22
Section 7:	Interviews	27
7.1	Interviews with Owners	27
7.2	Interviews with Site Managers	27
7.3	Interviews with Occupants	27
7.4	Interviews with Local Government Officials	28
7.5	Interviews with Others.....	28
Section 8:	Findings and Opinion	29
Section 9:	Conclusions	30
Section 10:	Deviations & Data Gaps	31
Section 11:	References.....	32
Section 12:	Signatures of Environmental Professionals	34
Section 13:	Qualifications of Environmental Professionals	35

Table of Contents (cont'd)

List of Tables

Table 1:	Summary of Subject Properties Description.....	1
Table 2:	Property Legal and Ownership Information	7
Table 3:	Standard Regulatory Sources and Search Distances	12
Table 4:	Historical Sources	18
Table 5:	Summary of Reconnaissance Observations	23

List of Figures

Figure 1:	Property Location Map
Figure 2:	Subject Property Natural Features
Figure 3a:	Army Operational Areas
Figure 3b:	Army Training Areas
Figure 4:	C. odorata Incipient Control Areas
Figure 5:	Kahuku Parcel A Field Observations
Figure 6:	Kahuku Parcel A Maintenance Area Housekeeping Observations

List of Appendices

Appendix A: Environmental Database Review
EDR DataMap™ Area Study Report
Table of EDR “Orphan Sites”
EDR Environmental LienSearch™
EDR DataMap™ Well Search Report
Appendix B: Historical Records
Aerial Photographs
Topographic Maps
Kahuku Training Area Information
OISC Herbicide Application Information
CACTF at KTA Map
Appendix C: Site Reconnaissance Photographs
Appendix D: Interviews and Correspondence

Acronyms

AAI	All Appropriate Inquiry
ASTM	American Society for Testing and Materials
AUL	Activity and Use Limitation
BWS	Board of Water Supply
CACTF	Combined Arms Collective Training Facility
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
CORRACTS	RCRA facilities subject to Corrective Action
CREC	Controlled Recognized Environmental Conditions
DLNR	Department of Land and Natural Resources
DOFAW	Division of Forestry and Wildlife
EDR	Environmental Data Resources, Inc.
EC	Engineering Control
ECOP	Environmental Condition of Property
EPA	Environmental Protection Agency (United States)
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
FINDS	Facility Index System
GIS	Geographic Information System
HDOH	Hawaii Department of Health
HEER	Hazard Evaluation and Emergency Response (office of HDOH)
HMA	Hawai'i Motorsports Association
HoLIS	Honolulu Land Information System (CCH)
HREC	Historical Recognized Environmental Conditions
HRS	Hawaii Revised Statute
IC	Institutional Control
ICA	Incipient Control Area
KTA	Kahuku Training Area
LLP	Landowner Liability Protection
MOUT	Military Operations on Urbanized Terrain
MSL	Mean sea level
N/A	Not applicable
NFRAP	No Further Remedial Action Planned
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List (Superfund sites)
OANRP	O'ahu Army Natural Resources Program
OHV	Off Highway Vehicle
OISC	O'ahu Invasive Species Committee (OISC)
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
REC	Recognized Environmental Condition
SHWB	Solid and Hazardous Waste Branch (of HDOH)
SHWS	State Hazardous Waste Site
SOP	Standard Operating Procedure
TMK	Tax Map Key
TSD	Treatment, Storage, or Disposal (RCRA classification)
USDA	United States Department of Agriculture
USGS	United States Geological Survey (U. S. Dept. of the Interior)
UST	Underground storage tank
VRP	Voluntary Response Program

Section 1: Summary

A Phase I Environmental Site Assessment (ESA) has been prepared for two parcels of real estate, Tax Map Keys (TMKs) 5-8-02-02 and 5-9-06-26 (Figure 1, Table 1), collectively referenced as the “Kahuku Properties,” also referred to as the “Subject Properties”, or individually as “Parcel A and Parcel B” respectively throughout this Phase I ESA report (Report).

TABLE 1: SUMMARY OF SUBJECT PROPERTIES DESCRIPTION

TMKs:	5-8-02-02	5-9-06-26
Subject Parcel:	A	B
Land Area (acres approx.):	450	700
Number of Buildings:	2 (1 storage and 1 pump house)	0
Number of Floors:	Single floor	N/A
Building Square Footage:	Approximately 400 square feet each	N/A
Type of Construction:	Concrete block	NA
Date of Construction:	unknown	N/A
Nature of Use:	Recreational motocross and Army training	Preservation, hunting, hiking and mountain bike trail access Army training
Other Improvements:	Electrical transmission easement on the western side of Parcel A	Electrical transmission easement
Current Occupants/ Tenants:	State of Hawai'i (Owner) United States of America - Army (Lessee) Hawai'i Motorsports Association on weekends through Dept. Land and Natural Resources (DLNR) agreement to manage Kahuku Off Highway Vehicle (OHV) Park	State of Hawai'i (Owner) United States of America - Army (Lessee)

This ESA was conducted in general conformance with the scope of work and limitations of the American Society for Testing and Materials' (ASTM's) Standard Practice for Environmental Site Assessments (ASTM E1527-13), modified as appropriate by ASTM E2247-08, “Phase I Environmental Site Assessment Process for Forestland or Rural Property.” Any exceptions to or deletions from this practice are described in Section 2.4 of this report.

Independent conclusions presented in this report represent professional judgment based on standard practice, with respect to conditions that existed at the time of the assessment. Detailed

information regarding methodology and findings is presented in the main body and appendices of this report. This Summary and the following report are subject to the limitations of non-scope and other considerations as detailed in Section 2.4. This report should be read in its entirety to understand the coverage of the ESA and to better evaluate the information provided.

The Subject Properties are comprised of about 40 percent agricultural-zoned land and 60 percent preservation-zoned land. Both properties are included in the Army's Kahuku Training Area boundary.

Parcel A — TMK 5-8-02-02

Parcel A has a State Land Use District classification of "Agricultural"; however, active crops were not observed. Parcel A has limited access and is characterized by dense vegetation, forested higher elevations, streams in the valleys, rugged terrain and heavily graded areas for motocross trails and tracks (Figures 1 and 2). Access to the Parcel is restricted and limited with exception to the Kahuku Motocross areas, providing little opportunity for fugitive dumping.

Parcel B — TMK 5-9-06-26

Parcel B is located in the Pūpūkea-Paumalu Forest Reserve has a State Land Use District classification of "Conservation." The Parcel has limited access and is characterized by dense vegetation, forested higher elevation ridges, streams in the valleys and rugged terrain (Figures 1 and 2). Access to the entire Parcel B is restricted with exceptions to public hunting area and trail access, providing little opportunity for fugitive dumping or other sources of environmental concern. Vehicle access is restricted by a cattle gate which requires Army Range Control permission. Recreational use of this parcel is limited to those accessing by foot.

The Army holds a lease on the property until 2029 and has used the property for military training. The entire property is part of the Army's larger Kahuku Training Area (KTA). Range Control personnel reported that, although only blank ammunition is currently used in the KTA, old unexploded ordnance (UXO) has been found (specific locations not identified) during training or surveys.

This assessment has revealed no evidence of recognized environmental conditions associated with the Subject Properties. No additional investigation or sampling of either Parcel is recommended. Use of the Subject Properties for military training represents a notable finding for the possible presence of UXO; however, specific locations of potential UXO were not identified. Herbicide usage to control an invasive weed is also considered a notable finding; however, pesticides appear to be used properly by the O'ahu Invasive Species Control. Additional notable findings related to housekeeping practices at Kahuku Parcel A are discussed further in Section 7.

Section 2: Introduction

A Phase I Environmental Site Assessment (ESA) has been prepared for two parcels of real estate referenced as the “Kahuku Properties,” and also referred to as the “Subject Properties” or individually as “Parcel A” or “Parcel B” throughout this Phase I ESA report (Report). The Army intends to purchase or acquire a new long-term lease on the Subject Properties for the purpose of utilizing the properties for military training.

The Subject Properties have State Land Use District classifications of Agricultural (Parcel A) and Preservation (Parcel B). Parcel A is zoned AG-2, general agricultural district. Parcel B is zoned P-1, restricted preservation. The Subject Properties’ legal description and ownership are described in Section 3.1.

2.1 Purpose

The Phase I ESA was conducted in accordance with the United States Environmental Protection Agency (EPA) All-Appropriate Inquiry (AAI) rule (40 CFR, Part 312) as described in the American Society for Testing and Materials Standard E1527-13 (ASTM E1527-13), and modified as appropriate by ASTM E2247-08, “Phase I Environmental Site Assessment Process for Forestland or Rural Property.” The purpose of the Phase I ESA was to inform the Army of Recognized Environmental Conditions, Controlled Recognized Environmental Conditions, Historical Recognized Environmental Conditions, or Notable Findings pertaining to the Subject Properties.

A recognized environmental condition (REC) refers to the presence or likely presence of any hazardous substance or petroleum product on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term REC includes hazardous substances and petroleum products even under conditions that might be in compliance with laws. The term is not intended to include “de minimis” conditions that do not present a threat to human health and/or the environment and that would not be subject to an enforcement action if brought to the attention of appropriate governmental agencies.

A controlled recognized environmental condition (CREC) refers to a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). *A historical recognized environmental condition (HREC)* refers to an environmental condition that would have been considered a REC in the past, but which is no longer considered a REC based on subsequent assessment or regulatory closure. Conditions considered by the environmental professional to be a CREC or HREC shall be listed in the findings section of the

Phase I Environmental Site Assessment report, and as a recognized environmental condition in the conclusions section of the Phase I ESA report.

A *Notable Finding* refers to environmental concerns that do not qualify as a REC, but have the potential to affect the Subject Properties. Notable Findings are also described in the conclusions section of the Phase I ESA report.

2.2 Scope of Services

The Phase I ESA was conducted in accordance with the United States Environmental Protection Agency (EPA) All-Appropriate Inquiry (AAI) rule (40 CFR, Part 312) as described in the ASTM E1527-13 and ASTM E2247-08. The following activities were performed to accomplish the Phase I ESA objectives:

- **Site Reconnaissance** – Visual observations of readily accessible areas of the Subject Properties were conducted to identify RECs or Notable Findings. Access within the subject property was limited due to dense vegetation and topography. For portions of the Subject Property that could not be visually or physically observed, observations were made to the extent practicable from the nearest vantage points and available aerial imagery, in accordance with ASTM E2247-08. Additionally, visual observations of adjoining properties were made from vantage points within the Subject Properties and public right-of-ways to assess the potential impact of these properties on the Subject Properties.
- **Interviews** – Interviews were conducted with individuals knowledgeable and familiar with the Subject Properties.
- **Regulatory Records Review** – A review of standard and additional regulatory records, using search distances established by ASTM E1527-13, was conducted and compiled by Environmental Data Resources, Inc. (EDR; Appendix A).
- **Historical Research** – Readily available sources of historical information related to the Subject Properties and adjoining properties were researched to identify historical land use practices that have the potential to adversely impact environmental conditions at the Subject Properties. Sources of historical information utilized to help identify RECs, CRECs, HRECs or Notable Findings associated with the Subject Properties included historical aerial photographs and historical topographic maps. Due to the undeveloped and remote nature of the Subject Properties, relevant Sanborn Fire Insurance Maps and City Directories were not available.
- **Report Preparation** – This written summary of the findings and recommendations of the Phase I ESA was prepared.

2.3 Significant Assumptions

The independent conclusions presented in this report represent professional judgment based on review of reasonably ascertainable standard records and other standard sources of information.

Conclusions were made with respect to our observations at readily visible and accessible areas of the Subject Properties, for conditions that existed at the time of the assessment, as limited by site reconnaissance conducted on-foot or from vehicle access viewpoints.

Information regarding operations, conditions, and previous investigations provided by the *User* of this report, by the Subject Properties' owner, or by either party's representatives, has been assumed to be correct and complete, except as noted in other sections of this report.

Historical records at five-year intervals stipulated by ASTM E1527-13 were not readily ascertainable. The EDR inquiry provided USGS Aerial Photography for 1975 and 1992 and Google Earth Aerials 2001, 2004, 2006, 2011 and 2013. The USGS Aerial Photography from 1975 included dense cloud cover and, therefore, the most likely use from 1975 could not be interpreted. United States Department of Agriculture (USDA) Geospatial Data Gateway provided aerial imagery for 2015 (Appendix B). Review of the historical topographic maps provided by EDR Topo Map Report included USGS Hauula, Kahuku, Haleiwa and Waimea 7.5' Quadrangle maps from 1952, 1953, 1954, 1960, 1965, 1983, 1992, 1998, 1999 and 2013. According to ASTM E1527-13, if the specific use of the property appears unchanged over a period longer than five years, then it is not required to research the use during that period. Based on the historical aerial photos and topographic maps, the Subject Property use appears unchanged during any 5-year periods that photos and maps were not available.

2.4 Limitations and Exceptions

ASTM guidance describes several “non-scope” environmental issues or conditions that the *User* may wish to assess in connection with commercial real estate that are outside the scope of this practice. These non-scope items include: asbestos-containing building materials, biological agents, cultural and historical resources, ecological resources, endangered species, health and safety, indoor air quality unrelated to releases of hazardous substances or petroleum products into the environment, industrial hygiene, lead-based paint, lead in drinking water, mold, radon, regulatory compliance, and wetlands (ASTM, 2013).

Some requirements for meeting AAI are strictly the responsibility of the *User* and beyond the scope of the Phase I ESA. These *User* requirements include providing the rationale for conducting the ESA at the Subject Properties; reviewing title and judicial evidence for Activity and Use Limitations (AULs) and environmental liens associated with the Subject Properties; providing any specialized, actual, and local knowledge of or experience with environmental conditions associated with the Subject Properties as would be material to RECs; and providing a written explanation for a significantly lower than fair market purchase price in real estate transactions where no associated RECs are yet identified (ASTM, 2013). Furthermore, parties who wish to qualify for one of the Landowner Liability Protections (LLPs) will need to know whether they are in compliance with AULs, including land use restrictions that were relied upon in connection with a response action. A determination of compliance with AULs is beyond the scope of this assessment (ASTM, 2013).

This ESA is site-specific in that it relates to assessment of environmental conditions on select parcels of commercial real estate (the Subject Properties), and is based on information that was

reasonably ascertainable on dates and for locations indicated in this report. Consequently, it does not address additional issues raised in transactions such as purchases of business entities, or interests therein, or of their assets, that may well involve environmental liabilities pertaining to properties previously owned or operated, or other off-site environmental liabilities.

This assessment is not intended to be a comprehensive inspection or assessment of all conditions that might exist at the Subject Properties. No ESA can absolutely rule out the existence of hazardous materials at a given site or wholly eliminate uncertainty regarding the potential for RECs associated with the Subject Properties. ESA standard practice is intended to reduce, but not eliminate, such uncertainty under conditions of reasonable limits of time and cost. Furthermore, completion of AAI does not imply an exhaustive assessment of clean Subject Properties, since the cost or time required to collect information must be balanced with the usefulness of such information and the orderly completion of a transaction.

This assessment is based upon limited research of “reasonably ascertainable/standard sources” about past and present use of the Subject Properties, and upon our observations of limited accessible areas of the Subject Properties. Existing hazardous materials and contaminants can escape detection using these methods, particularly in this case where dense vegetation and limited access prevent thorough site reconnaissance.

This report’s conclusions were based in part on information supplied by others, the accuracy or sufficiency of which could not be independently verified within the scope and budget of an ESA. No investigation can be thorough enough to exclude the presence of hazardous materials at given Subject Properties; therefore, if no hazardous materials are identified during an assessment, such a finding should not be construed as a guarantee of the absence of such materials on the Subject Properties, but rather the results of services performed within project scope, cost, and other limitations.

Any opinions presented apply to the Subject Properties’ conditions at the time of performance of services and do not address the potential for future releases. Changes in applicable environmental standards, practices, or regulations may occur following performance of services, which could impact the opinions presented.

2.5 User Reliance

This ESA of the Subject Properties was prepared for the sole use and benefit of the Army. ASTM guidance provides that the report may be used for Subject Properties’ transactions for up to one year after our assessment information was collected or updated, if specific ESA components (interviews, environmental lien records searches, regulatory records review, visual inspection of subject and adjoining properties, and declaration by the Environmental Professional responsible for the assessment or update) are updated no more than 180 days prior to such transactions. Any periodic ESA review should include an update of environmental conditions in the Subject Properties area.

Section 3: Subject Properties Description

This section provides information about the Subject Properties, such as ownership, general description, environmental setting, and current property usage, and describes the general uses of the adjoining properties and surrounding area.

3.1 Location and Legal Description

The Subject Properties are located near Pūpūkea on the north shore of O‘ahu (Figure 1).

The Subject Properties consist of two City and County of Honolulu tax parcels, TMK 5-8-02-02 and 5-9-06-26 (Figure 1). The total area of the Subject Properties is 1,150 acres. Legal addresses, ownership, and individual parcel area details are summarized from real property assessment division (City and County of Honolulu Land Information System (HoLIS)) as follows (Table 2):

TABLE 2: PROPERTY LEGAL AND OWNERSHIP INFORMATION

Street Address	Parcel	TMK	Parcel Area (acres)	Current Owner(s)
No address on file	A	5-8-02-02	450	State of Hawai‘i
No address on file	B	5-9-06-26	700	State of Hawai‘i

EDR reported no deeds vesting title in the Subject Properties from the public record search of City and County of Honolulu from January 1, 1970 to February 8, 2016. EDR reported a lease agreement by the State of Hawai‘i as fee simple owner and the United States of America, as tenant, recorded August 20, 1964 at DBV 4821, PG 145 (State General Lease Number S-3850 and U.S. Lease, Contract Number DA-94-626-ENG-77). According to the tax assessor website, the Subject Properties are owned by the State of Hawai‘i and leased by the United States of America. A grant of easement was recorded in June 2005 (Instrument Number 2005-128868) for the Subject Properties (EDR).

The Bureau of Conveyances’ record of the State General Lease No. S-3850 was signed August 1964 by and between the State of Hawai‘i (represented by its Board of Land and Natural Resources) and the Army. State General Lease No. S-3850 outlines the lease agreement of Kahuku Properties to the Army for military purposes for a period of 65 years; the lease is set to expire August 2029. Section 12 of the lease agreement states that “the government (Army) hereby agrees that, commensurate with training activities, it will take reasonable action during its use of the premises herein demised to prevent unnecessary damage to or destruction of vegetation, wild life and forest cover, geological features and related natural resources and improvements constructed by the Lessor, help preserve the natural beauty of the premises, avoid pollution or contamination of all ground and surface waters and remove or bury all trash, garbage and other waste materials resulting from Government use.” Section 15 of the lease agreement limits the Army from using any portion of the Kahuku Properties “as an impact area for explosive or incendiary munitions of any type and shall limit firing on the premises to

weapons not larger than .50 caliber provided, however, the Army may also fire inert 3.5-inch rockets or weapons of similar size or purpose as long as such training will not cause fires.”

3.2 Subject Properties and Vicinity General Characteristics

Both parcels have limited access, controlled by the Army. Both parcels are used for military training (part of the Kahuku Training Area (KTA)), but may also be used for recreational purposes on most weekends. Much of the project vicinity is also within the KTA, and is also part of the Pūpūkea-Paumalu Forest Reserve and Kahuku Forest Reserve (see site reconnaissance photos in Appendix C). Figure 2 indicates the Subject Properties’ natural features, roadways and trails.

3.3 Current use of the Subject Properties

Parcel A is zoned as agricultural land but is not being cultivated, and there is no indication on historical topographic maps or aerial photographs that the parcel was farmed. The State’s Office of Planning Statewide Geographic Information System (GIS) Program “Prior Agricultural Lands” layer for O’ahu does not indicate the land was used for agriculture (including pineapple or sugarcane cultivation).

Parcel A is the site an authorized off-highway vehicle riding area in the State of Hawai’i, with recreational use permitted on weekends and holidays. The Waiale’e Motorcycle Riding Area is operated by Hawai’i Motorsports Association (HMA) and is available for HMA members under a revocable permit with DLNR. Parcel A is part of the KTA and used for military training when not being used for recreation purposes. According to State lease documents, on-the-ground training has restrictions and is not conducted without public notice, prior authorization, and documentation of the nature of training. A helicopter landing zone is located on Parcel A (Army 2016).

Parcel B is also used for military training purposes, and a helicopter landing zone is located near its eastern tip (Figure 3a). A paved road is present within the Parcel but a cattle gate restricts access to only those with Army Range Control Authorization. Access is additionally limited by the requirement of having authorized Army personnel open the gate, as the gate key is not loaned. Parcel B’s non-military land use is for recreation, specifically hiking, biking and hunting. The State of Hawai’i, Department of Land and Natural Resources, Division of Forestry and Wildlife manages Kaunala Trail which is used for hiking and traverses a public hunting area.

3.4 Descriptions of Structures, Roads and Other Improvements

Parcel A contains the following structures that are used by HMA:

- a registration building located within the maintenance area, constructed of wood;
- a check-in station, located at the entrance road, consisting of a roofed platform and used for checking in HMA entrants;
- roofed picnic areas for HMA members for use during weekend events; and

- a pump house, located at the entrance road, constructed of concrete block. The pump house was constructed by the Motorsports Association to pump water from the stream for dust control at the motocross facility. However, the stream is often dry.

The roadways within Parcel A consist of dirt roads; roads off the main access route are in varying conditions of maintenance. Parcel A also contains a cleared area utilized by the Army as a helicopter landing area, as part of the KTA (Figure 3a).

No buildings were observed from the accessible areas or aerial photographs on Parcel B. One picnic pavilion was constructed by Boy Scouts of America in partnership with DLNR's Division of Forestry and Wildlife (DOFAW). A paved road provides access to the southeast portion of Parcel B. Another smaller cleared area at the edge of Parcel B is utilized by the Army as a helicopter landing area (Figure 3a).

3.5 Current Uses of the Adjoining Properties

Immediately adjoining properties are all forest land, and are also part of the KTA.

Section 4: User Provided Information

The Army is responsible for communicating commonly known or reasonably ascertainable information that is material to RECs associated with the Subject Properties. A “User Questionnaire” was completed by the Army (Appendix D).

4.1 Title Records

A title search per se is not required to achieve AAI; however, ASTM specifies that the standard practice calls for the User to either conduct or contract title research to assess AULs and thus meet requirements for LLP (ASTM, 2013). The Army reported that they will conduct the title search closer to the potential real estate transaction.

4.2 Environmental Liens or Activity and Use Limitations

The Army reported that they know of no environmental liens associated with the Subject Properties, and that the only AULs of which they are aware are associated with the land's conservation zoning. EDR's search of public records also did not indicate environmental liens or AULs associated with the Subject Properties.

4.3 Specialized Knowledge

The Army has no specialized knowledge or experience regarding environmental concerns associated with the Subject Properties.

4.4 Commonly Known or Reasonably Ascertainable Information

The Army is not aware of commonly known or reasonably ascertainable information regarding environmental concerns associated with the Subject Properties.

4.5 Valuation Reduction for Environmental Issues

ASTM E1527-13 and 40 CFR 312.29 indicate that the User must identify and make a written record of an explanation for a significantly lower than fair market purchase price in transactions involving commercial real estate purchase or lease where no associated RECs are yet identified. The User shall consider the relationship of the purchase price of the property to the fair market value of the property if the property was not affected by hazardous substances or petroleum products. The Army has stated that the purchase price reasonably reflects the fair market value of the property.

4.6 Owner, Property Manager, and Occupant Information

The owner of the Subject Properties is the State of Hawaii. There are not permanent occupants on the Subject Properties and the lessee of the Kahuku properties is the United States Army. HMA utilizes Kahuku Parcel A on weekends as part of their motocross activities.

4.7 Reason for Performing Phase I

This Phase I ESA was requested by the Army, a potential purchaser or continued Lessee of the Subject Properties.

4.8 Other Information

No other information was provided by the *User*.

Section 5: Records Review

5.1 Standard Environmental Record Sources

A review of federal, state, and tribal environmental databases related to the Subject Properties and surrounding area in accordance with the ASTM E1527-13 search radius was conducted to identify potential RECs. Properties that have or may have the potential for existing or future site contamination, environmental liabilities, or the potential for contamination migration were identified in this database search. Information from these various databases was compiled in the EDR Radius Map Report (EDR Report, Appendix A).

EDR's list of fifteen "Orphan" sites, i.e., sites for which EDR could not find addresses or mapping information, was reviewed. The listed "orphan" facilities were of such a distance and nature that they would not have affected either Subject Property (Appendix A). Three orphan reports were located and found to be within the one-mile radius of the nearest Subject Property boundary; these three listings are for past National Pollutant Discharge Elimination System (NPDES) permits (likely related to construction work along Drum Road) and are not considered to be of environmental concern.

Standard environmental records and respective search distances are listed in Table 3.

TABLE 3: STANDARD REGULATORY SOURCES AND SEARCH DISTANCES

Standard Environmental Record Sources		Minimum Search Distance	Found
Federal NPL Site List		1.0 mile	0
Federal Delisted NPL Site List		0.5 mile	0
Federal CERCLIS List		0.5 mile	0
Federal CERCLIS NFRAP List		0.5 mile	0
Federal RCRA CORRACTS Facilities List		1.0 mile	0
Federal RCRA Non-CORRACTS TSD Facilities List		0.5 mile	0
Federal RCRA Generators List		Subject & Adjoining Properties	0
Federal Institutional Control/Engineering Control Registries		Subject Properties	0
Federal ERNS List		Subject Properties	0
State and Tribal Hazardous Waste Sites for Investigation/Remediation	NPL-Equivalent	1.0 mile	0
	CERCLIS-Equivalent	0.5 mile	0
State/Tribal Landfill and/or Solid Waste Disposal Site Lists		0.5 mile	0
State/Tribal Leaking Storage Tanks Lists		0.5 mile	0
State/Tribal Registered Storage Tanks Lists		Subject & Adjoining Properties	0
State/Tribal Institutional Controls/Engineering Controls Registries		Subject Properties	0
State/Tribal Voluntary Cleanup Sites		0.5 mile	0
State/Tribal Brownfield Sites		0.5 mile	0

5.2 Environmental Records Review Findings

Federal National Priorities List (NPL) and Delisted NPL Site Lists

The NPL, also known as the Superfund list, is a subset of the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) that lists properties with the highest priority for cleanup under the EPA Hazard Ranking System (40 CFR Part 300). The list is compiled by the EPA pursuant to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 42 United States Code §9605 (a)(8)(B). No NPL sites were reported within one mile of the Subject Properties.

Federal CERCLIS and CERCLIS NFRAP Site List

The CERCLIS list is compiled by the EPA. It contains sites that the EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the NPL (ASTM, 2013). The CERCLIS No Further Remedial Action Planned (NFRAP) database is for sites removed from CERCLIS. These include sites for which, after initial investigation, no contamination was found, or where contamination was removed quickly enough or was not serious enough to warrant Federal Superfund action or NPL consideration (EDR, 2016). No CERCLIS and CERCLIS NFRAP listed facilities were reported on or within one-half mile of the Subject Properties.

Federal RCRA Corrective Action Report (CORRACTS) Facilities List

The RCRA database, compiled by the EPA, lists those regulated facilities that have notified EPA as hazardous waste generators, transporters, or treatment, storage, or disposal facilities under RCRA, as summarized on the Resource Conservation and Recovery Information System (RCRIS). CORRACTS identifies hazardous waste handlers for which RCRA corrective action is documented. No listed CORRACTS facilities were reported on or within one mile of the Subject Properties.

Federal RCRA Non-CORRACTS TSD Facilities List

RCRIS non-CORRACTS Treatment, Storage, and Disposal (TSD) facilities are those facilities without documented corrective actions where treatment, storage, and/or disposal of hazardous wastes takes place, as defined and regulated by RCRA. No listed RCRA Non-CORRACTS TSD facilities were reported on or within one-half mile of the Subject Properties.

Federal RCRA Generators List

Hazardous waste “generators” are those facilities that produce hazardous waste as defined by RCRA. EDR reported no large or small-quantity on adjoining properties.

Federal Institutional and Engineering Controls Registries

The Federal Institutional Controls (ICs) Registry lists sites that have administrative measures (e.g., ground water use, construction, and property use restrictions) and post-remediation care requirements imposed to prevent exposure to residual contaminants on site. ICs typically require deed restrictions for listed sites. The Engineering Controls (ECs) Registry lists facilities that have engineering controls in place, including various forms of caps, building foundations,

liners, and other treatment methods to eliminate pathways of migration for regulated substances to enter environmental media or to prevent affecting human health. EDR reported no IC facilities on the Subject Properties.

Federal ERNS List

The Emergency Response Notification System (ERNS) list is compiled by the EPA. The ERNS list compiles information on reported releases of oil and hazardous substances. EDR listed no such facilities located on the Subject Properties.

NPL-Equivalent and CERCLIS-Equivalent State Hazardous Waste Sites

The Hawaii equivalent to NPL consists of those sites on the planned cleanup priority list for which the State will provide funds. Other facility cleanups may be funded by potentially responsible parties. EDR looks for both types of facilities in Hawai'i Department of Health (HDOH) records searches (EDR, 2013e). The HDOH office of Hazard Evaluation and Emergency Response (HEER) compiles the State Hazardous Waste Sites (SHWS) database, which includes facilities, sites, or areas in which the HDOH has an interest, has investigated, or may investigate under Hawaii Revised Statute (HRS) 128D, and includes CERCLIS sites. EDR listed no such facilities within the recommended search distances.

State Landfill and/or Solid Waste Disposal Site Lists

The Hawaii Solid Waste Facilities List contains information pertaining to all permitted landfills located within the State of Hawaii. No permitted landfills were reported on or within one-half mile of the Subject Properties.

State Leaking Storage Tanks Lists

The State Department of Health Solid and Hazardous Waste Branch (SHWB) compiles a record of Leaking Underground Storage Tank inventoried incidents. No leaking tank sites were reported by EDR or SHWB on or within one-half mile of the Subject Properties.

State Registered Storage Tank Lists

The Underground Storage Tank (UST) database, compiled by SHWB, contains a list of registered UST owners and some details about facility UST contents, install dates, and current or past use information. No UST facilities were reported on the Subject Properties or adjoining properties.

State ICs and ECs Registries

State ICs and ECs are essentially the same as Federal controls as described in the Federal ICs and ECs section. HDOH maintains a list of facilities with ECs in place. HDOH also lists Voluntary Cleanup Sites and Brownfields Sites with ICs in place. No listed facilities were reported on either of the Subject Properties.

State Voluntary Cleanup Sites

HDOH's Voluntary Response Program (VRP) was established by statute in 1997 (Chapter 128D, Part II, HRS). The VRP encourages voluntary cleanup of contaminated properties by "streamlining" the cleanup process (EDR, 2016). No listed facilities were reported on or within one-half mile of the Subject Properties.

State Brownfield Sites

A Brownfield is real property for which future development or reuse may be hindered by existing or potential environmental contamination or hazardous substance issues. The EPA's Brownfields Program was developed so states, local communities, and other parties interested in economic viability can assess, safely clean up, and sustainably reuse brownfields. HDOH maintains a list of Brownfields Sites. No listed sites were reported on or within one-half mile of the Subject Properties.

5.3 Additional Environmental Record Sources

EDR also reviewed the following additional reasonably ascertainable additional sources of environmental records that fall outside the requirements of the ASTM guidance (and, therefore, do not have recommended search distances). Records reviewed by EDR include:

State Records of Emergency Releases

HDOH HEER maintains a spreadsheet of spill incidents at various facilities. EDR's search of this database indicated no reported releases for the Subject Properties. The HEER "Releases" and "Sites of Interest" databases were also searched for key phrases "Kahuku" and "Motocross." No releases were reported that were likely to affect the Subject Properties.

FINDS

The Facility Index System (FINDS) contains both facility information and "pointers" to other sources of information that contain more detail. FINDS were not reported on or within one mile of the Subject Properties.

Drinking Water Quality Records

No water wells are located within the Subject Properties. EDR's search of wells within a one-mile buffer of the Subject Properties boundary indicates public water supply (PWS) wells at two locations within one-mile of the Subject Properties. EDR reports that the Honolulu Board of Water Supply (BWS) has a group of wells situated about one-quarter mile north of Parcel A (Board of Water Supply Waiale'e PWS ID HI0000366). BWS reportedly has another PWS well about three-quarters of a mile southwest of Parcel B (Waipahu-Ewa-Wai'anae PWS ID HI0000335). A PWS is any water system which provides water to at least 25 people for at least 60 days annually.

Other EDR Record Sources

EDR searched several other additional sources of regulatory information. The EDR for Subject Properties report indicated no reports related to Local Brownfield Lists, Local Lists of

Landfill/Solid Waste Disposal Sites, and Local Lists of Hazardous Waste/Contaminated Sites. No listed facilities are located on or within one half mile of the Subject Properties.

5.4 Physical Setting Record Sources

The objective of reviewing physical setting records is to assess the potential for contaminant migration that may affect the Subject Properties. Review of a current U.S. Geological Survey (USGS) 7.5-minute topographic map (or equivalent) is the only required standard source for evaluating the physical setting of the Subject Properties; however, additional sources may be used to provide additional information on physical setting per the environmental professional's discretion (ASTM, 2013). Discretionary physical setting sources shall be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to the property, or from or within the property into the groundwater or soil and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial and customary practice in initial environmental site assessments in the type of commercial real estate transaction involved, in order to assess the impact of such migration on recognized environmental conditions in connection with the property.

5.4.1 Current USGS 7.5-Minute Topographic Map

Topographic map coverage of the Subject Property vicinity is provided by the USGS Hauula, Kahuku, Haleiwa and Waimea Quadrangles, at a scale of 1:24,000 (Figure 1). The approximate center of Parcel A is at 21° 40' 52" North latitude, 158° 00' 59" West longitude, at an average elevation of about 450 feet above mean sea level (MSL). The approximate center of Parcel B is at 21° 38' 37" North latitude, 158° 01' 07" West longitude, at an average elevation of about 570 feet MSL.

Parcel A is situated on a plateau above the north coast of O'ahu, and ranges in elevation from about 400 feet MSL at its north end to about 550 feet MSL at its south end. Parcel B has very rugged topography, with intermittent streams in steep-sided gulches.

5.4.2 Geology/Soils

O'ahu is a volcanic doublet with the Wai'anae range on the west and the younger Ko'olau range on the east. The Ko'olau range is a narrow long ridge about 37 miles long and deeply eroded by streams. It consists of thin, narrow, basaltic lava flows piled one upon another like shingles, with minor amounts of volcanic ash and numerous dikes (Stearns, 1985). Lava flows from the Ko'olau volcano banked against the already eroded slope of Wai'anae volcano to form the gently sloping surface of the Schofield Plateau (MacDonald, 1983). The Kahuku study area comprises of agricultural fields close to the shore and preservation areas on the summit of Ko'olau mountains.

Subject Parcel A soils are primarily Kemoo silty clay (48 percent), Kemoo-badland complex (40 percent) and rocky land (6 percent) (Foote et al 1972). The parent material for the Kemoo series (both Kemoo-Badland complex and Kemoo silty clays) is basalt with a depth of more than 80 inches to restrictive features. The Kemoo series consist of deep, well drained soils that have

formed in material weathered from basalt. The Kemoo-Badland complex is 60 percent Kemoo or similar soils and 40 percent Badland. Kemoo-Badland soils are on uplands and have slopes of 10 to 70 percent. Kemoo silty clays are on uplands and have slopes of 2 to 12 percent (KpB occurs at 2 to 6 percent slopes and KpC occurs at 6 to 12 percent slopes). The soils are highly erodible and well drained.

Subject Parcel B soils are primarily comprised of Kapa'a silty clay (99.5 percent) (Foote et al, 1972). The parent material for the Kapa'a silty clay is residuum from basalt with more than 80 inches depth to restrictive features. The Kapa'a series consists of deep, well drained soils that formed in material weathered from basalt. The Kapa'a silty clay soils are on uplands and have slopes of 40 to 100 percent. The soils are highly erodible and well drained.

5.4.3 Hydrology and Hydrogeology

According to "Aquifer Identification and Classification for the Island of O'ahu" (Mink and Lau 1990), the Subject Properties are located over the Kawaihoa aquifer system in the North O'ahu aquifer sector. There are two unique underlying aquifers: 30403212 and 30403111.

Subject Parcel A's underlying aquifer, 30403212, is an unconfined high level aquifer segmented into compartments by dikes. Subject Parcel B's underlying aquifer, 30403111, is in unconfined basal flank lavas. Flank aquifers normally are horizontally extensive and display the lowest heads.

Aquifer 30403212 (Parcel A) has potential to supply drinking fresh water having less than 250mg/l chloride content and is regarded as irreplaceable source with high vulnerability to contamination. Aquifer 30403111 (Parcel B) is currently used to supply drinking water having less than 250mg/l chloride content, and is regarded as irreplaceable source with high vulnerability to contamination.

5.5 Historical Record Sources

The objective of historical research is to determine previous uses of the Subject Properties and surrounding area to identify historical RECs associated with the Subject Properties. To achieve this objective, ASTM E1527-13 dictates documentation of obvious uses of the Subject Properties' first developed use (including agricultural activity or placement of fill), or back to 1940 (whichever is earlier), to the present, under condition that the records are reasonably ascertainable and likely to be useful for AAI (ASTM, 2013). Review of standard historical sources at less than approximately five year intervals is not required by this practice. If the specific use of the property appears unchanged over a period longer than five years, then it is not required by this practice to research the use during that period.

5.5.1 Sources of Historical Information

Table 4 lists the types of historical records that are considered standard or additional sources, and indicates which records were used for the research in this report. Readily available historical topographic maps and aerial photographs were obtained from EDR. Copies of these documents are included in Appendix B; Table 4 below summarizes information from each

source pertinent to the Subject Properties. Due to the undeveloped nature of the Subject Properties, Sanborn Fire Insurance maps were not included in the EDR database request.

TABLE 4: HISTORICAL SOURCES

Historical Record Sources	Date(s)	Use and Comments
Standard Sources		
Aerial Photographs	EDR 1975, 1992, 1985, and 1992; Google Earth 2001, 2004, 2006, 2011, 2013, and USDA 2015	Yes; EDR aerials were limited and from a wide view; significant land use changes not indicated on either property.
Property Tax Files	--	No: City's HoLIS system did not contain any documents for either parcel.
Recorded Land Title Records	--	No: Not provided by User.
USGS Topographic Maps	1952, 1953, 1954, 1960, 1965, 1966, 1983, 1992, 1998, 1999, and 2013	Yes; however, maps indicate no changes in Subject Property use
Local Street Directories	--	No: No City Streets on the parcels (dirt roads on Parcel A; Parcel B is forested).
Zoning/Land Use Records	Various Dates Online CCH Records	Yes
Additional Historic Sources		
Other Maps (Street, Tax Map, etc.)	--	No: No relevant reports documented
Internet Reports, News Items, and other Documents	Various Dates	Yes; internet searches yielded information on military land use, the use of Parcel A for motocross recreation, and the use of herbicides to control invasive species on Parcel A
Previous Environmental Report(s)	--	No: No reports provided by User

5.5.2 Site and Vicinity History

Parcel A is occupied by the Kahuku Motocross Park, which, according to the HMA website, holds several tracks and trails for off-road riding (HMA, 2016). The website describes 4 tracks and numerous trails at the facility. The Main Track is the largest track at Kahuku Motocross Park and includes approximately 25 acres of land. The Main Track has natural elevation changes as well as man-made obstacles. The Practice Track sits on 2.5 acres and is shorter than the main track with assorted small climbs and elevation changes. The PeeWee Track is only for beginner riders and has a motor limit for motocross vehicles for children's safety. The Circle Track is an all-use track that riders utilize for training and handling of the motocross vehicles. The trails consist of dirt trails through patches of ironwood trees.

The HMA uses Parcel A on weekends and holidays, while the Parcel is reserved for military training during the weeks. Occasionally, the Army restricts use for longer periods of time; a 2013 news article (Hawai'i News Now, 2013) discusses a nearly two-month closure of the Kahuku Motocross Park to allow for extended Army training.

Both parcels have been used for military training purposes since 1964. The Properties are currently owned by the State of Hawaii, but the US Army has a lease on the Properties until 2029. Internet searches for information regarding the military use of the Subject Properties led to several documents regarding the currently active Kahuku Training Area (KTA). Both Parcels lie within the KTA, and Parcel B's south border abuts the Kawaihoa Training Area (Figure 3b).

A Wildfire Standard Operating Procedure (SOP) for KTA (Army undated) describes the Army's efforts to control wildfires that may result from the use of the KTA (includes both Parcels A and B) for live fire training exercises. The document notes that live-fire and tracer ammunition are prohibited at the KTA, while blank ammunition and limit pyrotechnics are permitted. Range control approval and guidance must be obtained prior to firing all pyrotechnics. The KTA SOP document includes a document showing biological and archaeological sensitive areas (Appendix B).

Information on invasive weed control using herbicides on Parcel A was found on the O'ahu Invasive Species Committee (OISC). *Chromolaena odorata*, "devil weed," was first reported from an annual road survey in Kahuku in January 2011 by the O'ahu Invasive Species Committee (OISC). Devil weed is a state-listed noxious weed, toxic to other plants, livestock and humans, produces up to 800,000 wind-dispersed seeds a year, and is a fire-promoting species that forms dense, monotypic stands of vegetation. *C. odorata* is a major pest on the island of Guam, and the OISC believes the likely pathway of introduction was military activities. OISC conducts survey and treatment for devil weed in the Kahuku Training Area in partnership with the Hawai'i Department of Agriculture and the O'ahu Army Natural Resources Program (OANRP). OISC has performed management activities and studied *Chromolaena odorata* at KTA (Appendix B).

OANRP continues to contract OISC to conduct control across almost half of the primary infestation. Each control area has been documented as an Incipient Control Area (ICA) with a goal of eradication of devil weed from the ICA. The three ICAs within Kahuku Parcel A include areas 03 (118 hectares), 04 (111 hectares), and 07 (40.69 hectares). ICA area 03 had 2.23 hectares weeded, ICA area 04 had 4.56 hectares weeded, and ICA area 07 had 0.73 hectares weeded. Figure 4 demonstrates ICA boundaries near Kahuku Parcel A and 2015 herbicide treatments targeting regrowth of devil weed from past herbicide applications (OANRP, 2015). Areas classified as inactive have few to no plants remaining and will be surveyed as part of regular OISC monitoring.

Past treatments include an aerial spraying in 2011 upon discovery. A cocktail of herbicides was used: 1.5 quarts Garlon 4 Ultra, 44.5oz Roundup ProMax, 16 oz. Polaris, 4oz. Oust XP, and 20 oz. MSO at a rate of 10 gallons' spray per acre. About 50 gallons of solution was sprayed across 4.7 acres following approval from the Hawai'i Department of Agriculture (OISC, 2015).

Appendix 1-2). Aerial treatments were not conducted within Kahuku Parcel A in 2015 as much of the area is being managed through ground control herbicide efforts.

5.5.3 Site Historical Concerns

While several small structures were observed on both Parcels during field reconnaissance (as described in Section 3.4), no structures are indicated in historical records. The only identified historical land use on the Subject Properties is motocross riding on Parcel A, recreational hiking on Parcel B, and military training on both parcels. There is no indication from searching additional historical sources that unexploded ordnance is likely to be found at the Subject Property, although the Army has reportedly found old unexploded ordinance during training or surveys in the KTA. The historical record sources do not indicate potential offsite contamination sources that would likely impact the Subject Properties.

Section 6: Subject Properties Reconnaissance

6.1 Methodology and Limiting Conditions

Reconnaissance of the Subject Properties was conducted on April 6th, 2016 by [REDACTED] (Hart Crowser), and [REDACTED] (Masa Fujioka & Associates). The weather was an average of 75 degrees, partly sunny, with no precipitation during the site reconnaissance. Wind speed was averaging 13 miles per hour during the survey effort of Kahuku Parcel B and 18 miles per hour at Kahuku Parcel A. Site reconnaissance photographs are included in Appendix C, which includes a photo map directory to identify the location the photograph was taken within the parcel.

Parcel A contains an off-highway vehicle motocross park and includes numerous tracks and dirt roads. The dirt road used for site reconnaissance begins at the northwestern corner and moves southeast to south until it narrows to a trail approaching the Parcel's south boundary. The road and reasonably accessible side roads and trails were driven, and additional trails were walked to view the parcel to the extent practicable.

Most Parcel B was inaccessible due to topography and dense vegetation. Access was limited to a paved road along the southern boundary and a foot trail on the east boundary (Figure 2). Trails were accessed by foot and overlook areas were utilized to view interior areas of the parcel to the extent practicable.

6.2 General Site Setting

6.2.1 Current Use(s) of the Subject Properties

Observations noted during the reconnaissance are summarized in Table 5. The Subject Properties were viewed, to the extent practical (ASTM E2247-08), to identify current uses likely to involve the use, treatment, storage, disposal, or generation of hazardous substances or petroleum products. Parcel A has a property tax classification of agricultural; however, no agriculture use was observed. The Parcel is predominantly occupied by the Kahuku Motocross Park, which operates on most weekends and holidays. In addition to the motocross tracks, which consist of a variety of dirt trails, tracks, and obstacle courses, the HMA has several small structures used for event registration, equipment storage and maintenance, and HMA member social gatherings.

Parcel B is largely comprised of forested preservation areas located in the Pūpūkea Paumalū Forest Reserve and has a State Land Use District classification of "Preservation." Recreational use of the Reserve is permitted on weekends via a DLNR hiking trail.

No physical indication of military training at the two Parcels was observed during the site reconnaissance, although a group of soldiers was observed near the south end of Parcel A during the site visit.

6.2.2 Indications of Past Use(s) of the Subject Properties

The reconnaissance did not provide indications of past uses that were likely to have involved the use, treatment, storage, disposal, or generation of hazardous substances or petroleum products.

6.2.3 Current Use(s) and Indications of Past Use(s) of Adjoining Properties

Adjoining properties were observed to be heavily vegetated and unused, with no indications of past use(s) observed.

6.3 Exterior and Interior Observations

Exterior and interior observations, as applicable, are summarized in Table 5. Significant observations are described below:

Parcel A holds HMA's Kahuku Motocross Park. The site contains several empty containers, including a pesticide container (Figure 5) and a hazardous waste container used for general trash. What appeared to be an abandoned vehicle had mostly disintegrated and was covered with brush (Figure 5). Poor housekeeping practices at the Park were indicated by scattered litter throughout the site; discarded batteries and empty containers (with former contents not indicated) on the ground; and fuel containers without proper caps (Figure 6).

The Park Maintenance Area contains several water tanks (some with fuel pumps) and storage containers. The water is used for dust control. A roofed structure in the Maintenance Area is used to hold equipment, such as small bulldozers, that are used to re-grade the motocross tracks at the site.

No evidence (such as staining, odors, or stressed vegetation) of chemical or petroleum releases was observed. The site reconnaissance revealed poor housekeeping practices that included the presence of unsecured empty containers. However, no releases were indicated. Based on the small size of the containers, incidental spills are unlikely to have provided a significant environmental impact.

TABLE 5: SUMMARY OF RECONNAISSANCE OBSERVATIONS

Reconnaissance Subject	Comments	REC? (Y/N)
Current Use(s) of the Subject Property		
Current use	Parcel A: Military training, OHV motocross park. Parcel B: Military training, DLNR hiking trail.	N
Vacant spaces / undeveloped areas	Parcel A: Approximately two-thirds of the property undeveloped. Parcel B: Entire parcel undeveloped except for the paved road on the south parcel boundary.	N
Property improvements	Parcel A: Dirt roads, tracks and trails for motocross racing/driving; several small shelters and buildings used by the HMA. Parcel B: Paved road on the south parcel boundary.	N
Structures (<i>incl. potential for vapor intrusion</i>)	Parcel A: Various small structures used by HMA (Figure 6) Parcel B: Small concrete block structure for a Boy Scout picnic area pavilion (Photo 10, Appendix C).	N
Roads and parking areas	Parcel A: Dirt roads, motocross trails, and parking clearings for association members Parcel B: Gated, road for military use has limited access. See Section 3.3. DLNR hiking trail access. No parking areas.	N
Potable water supply	None within the Properties	N
Wells (<i>dry, irrigation, injection, abandoned, water, industrial</i>)	No evidence of wells was observed.	N
Sewage disposal system	Subject Properties: No evidence of cesspools or on-site wastewater systems was observed. Parcel A: Portable toilets were noted and reported as serviced regularly.	N
Surface water drainage	Subject Properties: Natural drainageways are present. No drainage structures or drainage issues were observed.	N
Heating/cooling systems	Subject Properties: N/A.	N
Landscaping (<i>potential pesticide use</i>)	Subject Properties: none observed during site reconnaissance.	N
Electrical transformers (PCBs)	Subject Properties: No transformers or other potential sources of PCBs were observed.	N

Reconnaissance Subject	Comments	REC? (Y/N)
Containers / Containment		
Aboveground storage tanks	Parcel A: Water tank trucks have small fuel engines for the pump (Figure 5) Parcel B: None observed; no indications of past presence.	N
Underground storage tanks	Subject Properties: No indications of USTs observed.	N
Hazardous chemicals (Storage, Use, Disposal)	Parcel A: Observed uncapped and unlabeled empty small containers. Parcel B: No evidence of a hazardous substance release.	N
Petroleum hydrocarbons	Parcel A: Abandoned vehicle (Figure 5) and uncapped empty containers (Figure 6) observed in maintenance area had no indication of fuel release. Parcel B: No evidence of petroleum hydrocarbons.	N
Pesticide usage or storage	None observed during site reconnaissance.	N
Solid or hazardous waste storage	Parcel A: Minor debris/litter observed. No evidence (such as stressed vegetation or staining) of hazardous substance releases. Parcel B: None observed.	N
Unidentified substances	Parcel A: Containers of unidentified substances were observed (Figure 6), but no release was indicated. Parcel B: None observed.	N
Septic tanks	Subject Properties: No evidence of septic or cesspool systems was observed.	N
Berms (potential secondary containment)	Subject Properties: None observed.	N
Potential Waste Disposal		
Industrial wastewater	Subject Properties: None observed.	N
Pits, ponds, lagoons	Subject Properties: None observed.	N
Pools of liquid	Subject Properties: None observed.	N
Floor drains	Subject Properties: None observed.	N
Storm drainage system	Subject Properties: None observed.	N
Dumping or filling (soil or debris piles)	Subject Properties: None observed, except for grading conducted to create the motocross tracks.	N
Roads and Trails With No Apparent Purpose (potential for illicit dumping)	Parcel A: Numerous OHV trails observed throughout the Parcel. Parcel B: None observed. Hunting trails and/or game (pig) trails were observed.	N

Reconnaissance Subject	Comments	REC? (Y/N)
Potential Evidence for Chemical Impacts		
Materials Spills	Parcel A: Poor housekeeping in maintenance area may have resulted in historical releases, but no staining or other indication of releases noted. Parcel B: None observed.	N
Stained or corroded pavement, flooring, or walls	Subject Properties: N/A	N
Odors	Subject Properties: None detected	N
Air emissions	Subject Properties: None observed	N
Stained or disturbed soil	Subject Properties: None observed	N
Stressed vegetation	Subject Properties: None observed.	N
Non ASTM items & Miscellaneous		
Asbestos-containing building materials	Subject Properties: No suspect asbestos-containing materials were observed.	N
Lead-based paint	Subject Properties: None observed.	N
Interior water damage / mold	Kahuku Parcel A: None observed. Kahuku Parcel B: N/A	N
Florescent lighting	Subject Properties: None observed	N
High voltage power lines/cellular phone towers	Subject Properties: None observed.	N
Other	Subject Properties: None.	N
Site recon indications of previous use that may have had an environmental impact		
Concrete pads	Parcel A: Concrete pads observed at two concrete masonry unit buildings. Parcel B: None observed.	N
Pump islands	Parcel A: Two non-functioning pumps observed near entrance. Parcel B: None observed.	N
Fill ports or vent pipes	Subject Properties: None observed.	N
Former building foundations	Subject Properties: None observed.	N
Abandoned drums/containers	Parcel A: Empty unlabeled containers observed near the maintenance area (Figure 5 & 6). One container was labeled "Chem-Tainer of Hawai'i" (Figure 5), however, communications with HMA indicated that the container was used for general trash and not for chemical storage. Parcel B: None observed.	N

Reconnaissance Subject	Comments	REC? (Y/N)
Sumps and clarifiers	Subject Properties: None observed.	N
Hoists or lifts	Subject Properties: None observed.	N
Concrete / asphalt patches	Subject Properties: None observed.	N
Monitoring Wells	Subject Properties: None observed.	N
Other	Subject Properties: None.	N
Indication of Adjoining Property Concerns		
Adjoining property use that may provide environmental concern	Subject Properties: None observed.	N
Monitoring wells on adjoining property	Subject Properties: None observed.	N
Odors emanating from adjoining property	Subject Properties: None noted.	N
Contaminated runoff from adjoining property	Subject Properties: None observed.	N
Other	Subject Properties: None.	N

Section 7: Interviews

7.1 Interviews with Owners

The properties are owned by the State. Access to Kahuku Parcel A is managed by DLNR and Kahuku Parcel B is accessed through coordination with Schofield Range Control. Interviews with these two entities are described below.

7.2 Interviews with Site Managers

DLNR serves as the manager of the property, and was interviewed; a record of the correspondence is included in Appendix D. [REDACTED] of the Nā Ala Hele Trail Access program reported that the Kahuku Motocross Park is currently the only authorized motocross park in the State of Hawai'i. [REDACTED] knew of no environmental issues associated with Kahuku Parcel A but there have been conflicts related to the use of military helicopter landing area by KMA members. [REDACTED] reported that DLNR has approved improvement funds for the site to include fixing heavy equipment for park improvement purposes and upgrading sanitation and waste removal. Kahuku Motorsports Association is currently using portable toilets and relying on members to utilize a dumpster at the entrance or haul their refuse out of the park. [REDACTED] mentioned that DLNR, Army Environmental, and Kahuku Motocross Management need to work collaboratively to address the prevention of weed seed dispersal – primarily devil weed.

7.3 Interviews with Occupants

[REDACTED] Yasuda has been the Treasurer and Secretary of Hawai'i Motorsports Association for the past three years; a record of the interview is included in Appendix D. [REDACTED] stated that the parcel has been used for motor sports since the late 1960s and early 1970s and they currently have a revocable permit for off-roading use on weekends and holidays. On two weekends in June, Parcel A is unavailable for use by the Motorsports Association so it can be used for military training. [REDACTED] stated that plant specialists visit the property and provide outreach materials related to invasive species. The invasive species primarily managed within the Motocross Park is devil weed *Chromolaena odorata*. Devil weed was discovered in 2011 and has served as a catalyst for discussion among land managers for the creation of a decontamination area for off-road vehicles to reduce seed dispersal across O'ahu.

The Army currently leases the Property for training. [REDACTED], Range Training Manager, provided information about the Army's training activities in the KTA. He has been working at Range Control since 2007, and reported that he knows of no fuel spills associated with helicopter use in the area. [REDACTED] also reported that, although only blank ammunition is currently used in the KTA, old UXO have been found (specific locations not identified) during training and surveys. [REDACTED] indicated that 5.56-mm short range training ammunition is used around the Kahuku Combined Arms Collective Training Facility (CACTF) and that all other areas use ground pyrotechnics and blank ammunition (Appendix D). The CACTF location was confirmed to be outside of the Kahuku Properties (Appendix B).

7.4 Interviews with Local Government Officials

Local government official interviews were not conducted through the interview with the DLNR site manager.

7.5 Interviews with Others

No additional interviews were conducted.

Section 8: Findings and Opinion

A Phase I ESA has been conducted in conformance with the scope and limitations of ASTM E2247-08 and E1527-13 of the Kahuku Properties (TMKs 5-8-02-02 and 5-9-06-26). This assessment has revealed no evidence of RECs, CRECs or HRECs associated with the Subject Properties.

The assessment revealed the following notable findings with respect to Parcel A:

- Historical use of the property for military training represents a notable finding for the possible presence of unexploded ordnance; however, specific locations of potential UXO were not identified.
- Herbicide usage to control an invasive weed is also considered a notable finding; however, pesticides appear to be used properly by the OISC.
- Poor housekeeping practices noted during the site reconnaissance included the presence of unsecured containers of fuel; however, no releases were indicated. Based on the small size of the containers, incidental spills are unlikely to have provided a significant environmental impact.

The assessment revealed the following notable finding with respect to Parcel B:

- Historical use of the property for military training represents a notable finding for the possible presence of unexploded ordnance; however, specific locations of potential UXO were not identified.

Section 9: Conclusions

We have performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E2247-08 and E1527-13 standards of the Subject Properties. Any exceptions to, or deletions from, this practice are described in this report. This assessment has revealed no evidence of recognized environmental conditions associated with the Subject Properties. No additional investigation or sampling of the Subject Properties is recommended.

Section 10: Deviations & Data Gaps

No deviations from the ASTM E2247-08 and E1527-13 standards were made during the preparation of the Phase I ESA portion of this report, except as described in Section 2.4. Significant data gaps were not identified during this assessment.

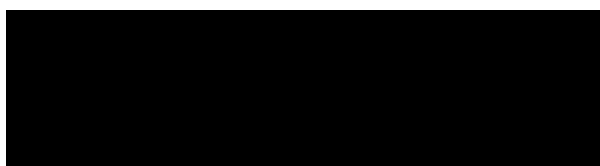
Section 11: References

- Army, 2016. GIS Data Layer showing Army Landing Zones, Army Corps of Engineers, Honolulu District, provided March 2016.
- Army, undated. Kahuku Training Area Standard Operating Procedures (Wildfire SOP), 26 p.
- ASTM, 2008. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property (ASTM Designation E2247-08). American Society for Testing and Materials International, Pennsylvania, June 2008.
- ASTM, 2013. Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Designation E 1527-13). American Society for Testing and Materials International, Pennsylvania, November 6, 2013.
- EDR, 2016. EDR Package (liens, aerials, topographic maps, wells): Kahuku, Inquiry Number 4542430.5s. Environmental Data Resources, Inc., February 23, 2016 (Appendix A).
- Foote, DE, and EL Hill, S Nakamura, and F Stephens, 1972. Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii. United States Department of Agriculture Soil Conservation Service, August 1972.
- Hawai'i News Now, 2013. [REDACTED] published January 2016.
- HDOH HEER, 2016. Public Records, State of Hawaii Hazard Evaluation and Emergency Response Office, accessed May 2016
- HMA, 2016. Website describing HMA's Kahuku Motocross Park, [REDACTED] accessed May 2016.
- Macdonald, GA, and AT Abbott, and FL Peterson, 1983. Volcanoes in the Sea: The Geology of Hawaii. Honolulu (University of Hawaii Press), 1983.
- Mink, JF, and S. Lau, 1990. Aquifer Identification and Classification for Oahu: Groundwater Protection Strategy for Hawaii. Water Resources Research Center, University of Hawaii, Technical Report 179, February 1990.
- O'ahu Army Natural Resource Program, 2015. 2015 Status Report for the Makua and Oahu Implementation Plans, 176 pp.
- O'ahu Invasive Species Committee Survey and Control of Devil Weed (*Chromolaena odorata*) in the Kahuku Training Area, O'ahu, Hawai'i Progress Report October 1, 2014 to March 31, 2015, 6 pp.
- O'ahu Invasive Species Committee Survey and Control of Devil Weed (*Chromolaena odorata*) in the Kahuku Training Area, O'ahu, Hawai'i Progress Report October 1, 2014 to March 31, 2015, Appendix 1-2, 33 pp.
- Stearns, Harold T., 1985. Geology of the State of Hawai'i Second Edition (Pacific Books), 1985.
- Tetra Tech, 2004. Stryker Bridge Combat Team Final EIS, Hawai'i (Appendix B)

USDA: NRCS: Geospatial Data Gateway: Order Data 2015 Digital Ortho MrSID Island Imagery,
[REDACTED] Date Accessed: March 1, 2017

Section 12: Signatures of Environmental Professionals

The undersigned environmental professionals have performed a Phase I Environmental Site Assessment of the properties designated as TMKs 5-8-02-02 and 5-9-06-26 (Subject Properties), in general conformance with the scope and limitations stated earlier in this report. By signing below, the environmental professionals declare that, to the best of their professional knowledge and belief, the undersigned meet the definition of an *Environmental Professional* as defined in §312.10 of 40 CFR 312 and have the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the Subject Properties. The undersigned have performed this investigation in conformance with the “all appropriate inquiry” standards and practices set forth in 40 CFR Part 312.



Date: 3/30/2017

Senior Geologist, Masa Fujioka & Associates



Date: 3/30/2017

  Ph.D.
Principal, Hart Crowser, Inc.

Section 13: Qualifications of Environmental Professionals

Qualifications required of an Environmental Professional to assess a property are defined in the EPA's AAI Rule (40 CFR 312.10, 2005). An Environmental Professional is defined as:

A person who possesses sufficient specific education, training, and experience necessary to exercise professional judgment to develop opinions and conclusions regarding conditions indicative of releases or threatened releases (see 40 CFR Part 312.1(c)) on, at, in, or to a property, sufficient to meet the objectives and performance factors in 40 CFR Parts 312.20(e) and (f).

Such a person must:

- *Hold a current Professional Engineer's or Professional Geologist's license or registration from a State, Tribe, or US territory (or the Commonwealth of Puerto Rico) and have the equivalent of three (3) years of full-time relevant experience; or*
- *Be licensed or certified by the Federal Government, a State, Tribe, or US territory (or the Commonwealth of Puerto Rico) to perform environmental inquiries as defined in 40 CFR Part 312.21 and have the equivalent of three (3) years of full-time relevant experience; or*
- *Have a Baccalaureate or higher degree from an accredited institution of higher education in a discipline of engineering or science and the equivalent of five (5) years of full-time relevant experience; or*
- *Have the equivalent of ten (10) years of full-time relevant experience.*

The qualifications of the Environmental Professionals who meet these requirements and who prepared this report are contained on the following pages.

Statement of Qualifications

TITLE

Senior Geologist

EXPERTISE

is a Senior Geologist with Masa Fujioka & Associates (MFA). She has 25 years of experience as a Geologist in Hawai'i. Her expertise includes Phase I and Phase II Environmental Site Assessments, Geologic Investigations, Hydrogeologic Investigations, Soil and Groundwater Remediation, Geotechnical Inspections and Field Mapping.

**ACADEMIC
BACKGROUND**

B. S., Geology and Geophysics, 1990
University of Hawaii, Manoa

EXPERIENCE

Ms. Romano has performed numerous Phase I Environmental Site Assessments, including historical record searches, site reconnaissance, interviews and report preparation. Performed Phase II Environmental Site Assessments including report preparation, multi-incremental soil sampling, supervision of drilling and installation of groundwater monitoring, air monitoring and injection wells; well logging and soil classification.

Project Manager on multiple environmental consultation projects including subsurface investigations, remedial investigations, and feasibility/ treatability studies for petroleum releases from leaking USTs and other releases. Prepared regulatory reports including data analyses and recommendations.

Project Manager for multiple hydrogeologic investigations involving groundwater supply and transport problems. Performed well design, permitting and supervision for installation of drinking water, salt water, monitoring and injection wells. Performed and documented well development, pump tests, injection tests, and slug tests for determination of hydraulic conditions and aquifer characteristics including compliance with Regulatory permitting and reporting.

Extensive experience in conducting and supervising field mapping and environmental sampling (soil, groundwater, surface water, deep well tunnels, soil vapor, air, and waste) for laboratory analyses and for environmental assessment and delineation of subsurface conditions. Field and technical experience includes landfill gases and landfill gas extraction systems.

PAST EXPERIENCE

*Masa Fujioka & Associates, August 1991 with continued consulting projects to present.
C&R Groundwater Services, August 2000 to September 2009, Principal
J. Romano Consulting, September 2009 to October 2016*

OTHER TRAINING

40-hour Hazardous Materials/Waste Health and Safety Training since 1991 and Supervisor 8-hour Hazardous Materials/Waste Health and Safety Training since 2003.

AFFILIATIONS:

American Institute of Professional Geologists (AIPG)

HISTORY OF PROJECTS ON-GOING AND COMPLETED

Partial List

Hawai'i County Dept. of Environmental Management, Hilo Hawaii

Project Manager for groundwater monitoring and aquifer transport at Hilo Landfill. Supervision of drilling and installation of monitoring wells and pump testing. Conducted quarterly groundwater and soil gas monitoring at West Hawaii and Hilo Solid Waste Landfills. Ongoing

Hawai'i County Dept. of Environmental Management, Hilo Hawaii

Supervised and conducted subsurface air monitoring, field inspections, fire remediation, including installation, design and monitoring requirements for remediation CO₂/water injection system. Geologic, environmental mapping and reporting, Kailua-Kona Closed Landfill, Hawaii. Ongoing

Damien Estates Kahuku Ranch, Ocean View, Hawaii

Phase II Environmental Site Assessment and Remediation, Kahuku Ranch 114,000-acre site real estate transfer to Volcanos National Park. Completed.

McCoy Plantation, Honaunau, Hawaii

Phase I Environmental Site Assessment for real estate transfer of multiple parcels 500 acre agricultural/ranch lands to Puuhonua National Historical Park, Hawaii. Completed.

Hawaii MacFarms, Captain Cook, Hawaii

Phase I Environmental Site Assessment on separate locations for real estate transfer of large parcels of agricultural lands. Kona and Ka'u District, Hawaii. Completed.

University of Hawaii, Hilo, State of Hawaii

Prepared hydrogeologic reports for Aquaculture Farm, including well permitting, groundwater data collection and analysis, saltwater and freshwater well design, installation, pump testing, salinity analysis and reporting. Hilo, Hawaii. Completed.

██████████ **PhD, FACEC**
Principal/Hawaii Operations Manager

EDUCATION

PhD, Geology & Geophysics,
University of Hawaii, 2005

M Eng, Civil (Geotechnical)
Technical University of Nova
Scotia, 1986

B Eng, Civil Engineering,
Technical University of Nova
Scotia, 1986

REGISTRATIONS

Professional Engineer,
WA (Environmental
Engineering)

LEED® Accredited
Professional

AFFILIATIONS

American Council of
Engineering Companies

- Risk Management Comm
Chair, 2012-2015
- National Director, 2005-
2007, 2016-2018

ACEC Hawaii

- President, 2004-2005
- Board Member 2002-
2007

Society of American Military
Engineers

National Association of
Environmental Professionals

██████████ has more than 20 years of experience providing environmental engineering consulting services for a wide variety of projects in Hawai'i and the Pacific, and on the US west coast. She has managed hundreds of environmental engineering projects in Hawaii and the Pacific. Projects encompass a variety of facility types and settings, and include assessment of soil, groundwater, surface water, and building materials for contaminants such as petroleum compounds, pesticides, PCBs, furans and dioxins, heavy metals, and asbestos.

Dr. ██████████ has extensive experience in environmental permitting and compliance. She has facilitated a full range of Federal, State and local permits for many project types. She has procured CWA Section 401/404 permits for several projects. Dr. ██████████ has managed the preparation of EAs/EISs for public works projects and Phase I Environmental Site Assessments and Environmental Baseline Surveys for property transactions. She has provided environmental services for many design-build projects, at both design and construction phases. She has performed human-health and ecological risk assessments for contaminated properties, and has published on the risk assessment process.

REPRESENTATIVE PROJECT EXPERIENCE

Environmental Baseline Survey/Environmental Condition of Property Analysis, Moanalua Shopping Center, O'ahu, HI

Project Manager for an Environmental Baseline Survey for the transfer by lease of a Navy property to a private developer for redevelopment of a large shopping center and military services. Project included review of site history, regulatory records and geologic setting; conducting a site reconnaissance and interviews; conducting sampling; and providing a report. Environmental concerns addressed that the property included hazardous building materials and PCBs at transformer sites.

Environmental Baseline Survey/Environmental Condition of Property Analysis, Waikale Gulch (NAVMAG), O'ahu, HI

Project Manager for an Environmental Baseline Survey for the sale of a former Naval Magazine facility to a private interest. Project included review of site history, regulatory records and geologic setting; conducting a site reconnaissance and interviews; conducting sampling; and providing a report. Environmental concerns addressed that the property included hazardous building materials, PCBs at transformer sites, and metals, PCBs, dioxins, and unexploded ordinance at a former landfill site.



Site Characterization, NCTS, Finegayan, Guam

Project Manager for preliminary environmental investigations for NCTS Finegayan, Guam. Environmental scope of work consisted of an Environmental Baseline Survey effort, including historical plan review to assess potential environmental issues, site reconnaissance, interviews with personnel having historical knowledge of the environmental history of the facility, and preparation of a report. Plan review showed numerous environmental issues (e.g., historical buried tanks) unknown to current facility personnel.

Phase I Environmental Site Assessment, Kapolei Senior Housing Development, O'ahu, HI

Project Manager for a Phase I Environmental Site Assessment for a large property in Kapolei proposed for a Senior Housing Development. Project included review of site history, regulatory records and geologic setting, as well as conducting a site reconnaissance and interviews, and providing a report.

Environmental Investigation, Army Child Welfare Center, Fort Shafter, O'ahu, HI

Project Manager for an environmental investigation during design of a facility at Fort Shafter. Project included review of site history and regulatory records; developing a sampling plan and conducting surface soil sampling for pesticides and heavy metals; providing a report summarizing the investigation results; and providing input to specifications and design drawings to inform the construction contractor of required actions to address contaminated soil.

Global Hawk Aircraft Maintenance and Operations Center, Anderson Air Force Base, Guam

Project Manager for the design consultation and preparing design documents for the Global Hawk Aircraft Maintenance and Operations Center. Environmental concerns at the project site included extensive PCB contamination of soils, potential contamination from an oil-water separator, and hazardous building materials. Work included design consultation and design documents (plans, specifications and cost estimates) for handling and removal of hazardous materials and contaminated soil.

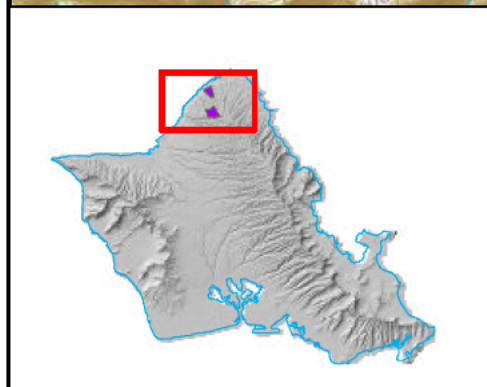
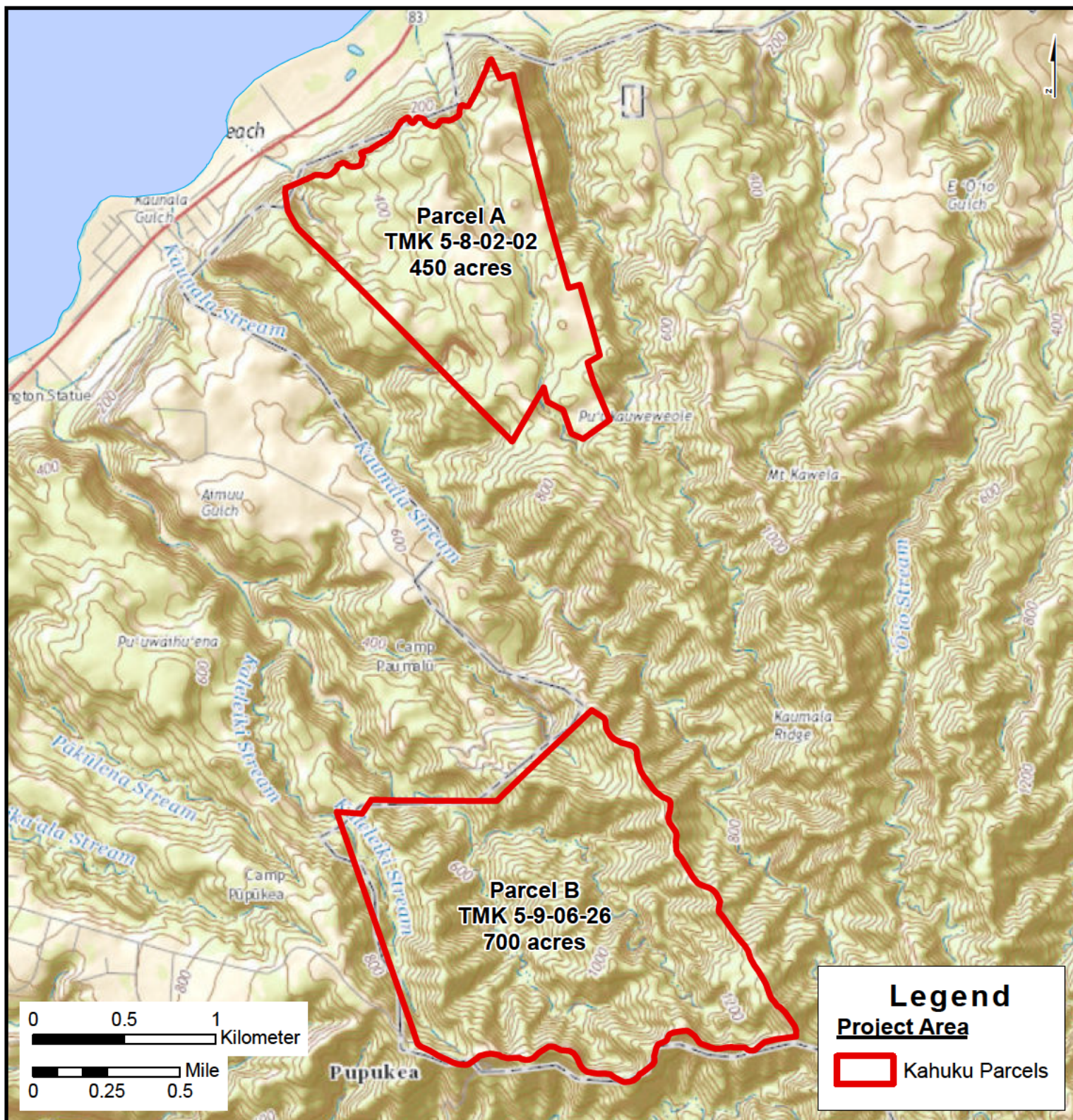
Keaau Middle School Environmental Investigation and Design, Kea'au, Island of Hawai'i, HI

Project Manager for environmental consultation associated with the design for demolition of several structures at the School. Environmental scope of work included investigation of soil contamination by organochloride pesticides, lead, and arsenic; investigation of building materials for arsenic, asbestos, and lead; developing specifications for handling and removal of hazardous materials or contaminated soil during demolition activities; environmental permitting, and consultation during demolition.

NOAA Pacific Region Center, Ford Island, O'ahu, HI

Project Manager for environmental and civil sustainability consultation for the NOAA Pacific Region Center on Ford Island. The environmental scope of work consisted of extensive hazardous materials surveys that identified high lead concentrations on building structural components, evaluation of encapsulation/remediation alternatives, and preparation of design documents for management of lead-based paint. The sustainability scope of work consisted of assisting the project civil engineer with assessing possible LEED points from storm water management and wastewater re-use.

FIGURES



Contract No. W9128A-12-D-0005
Date: March 2017

Figure 1
Property Location Map
Kahuku Parcels
Environmental Condition of Property (ECoP)
Report for U.S. Army Land Acquisition, Oahu

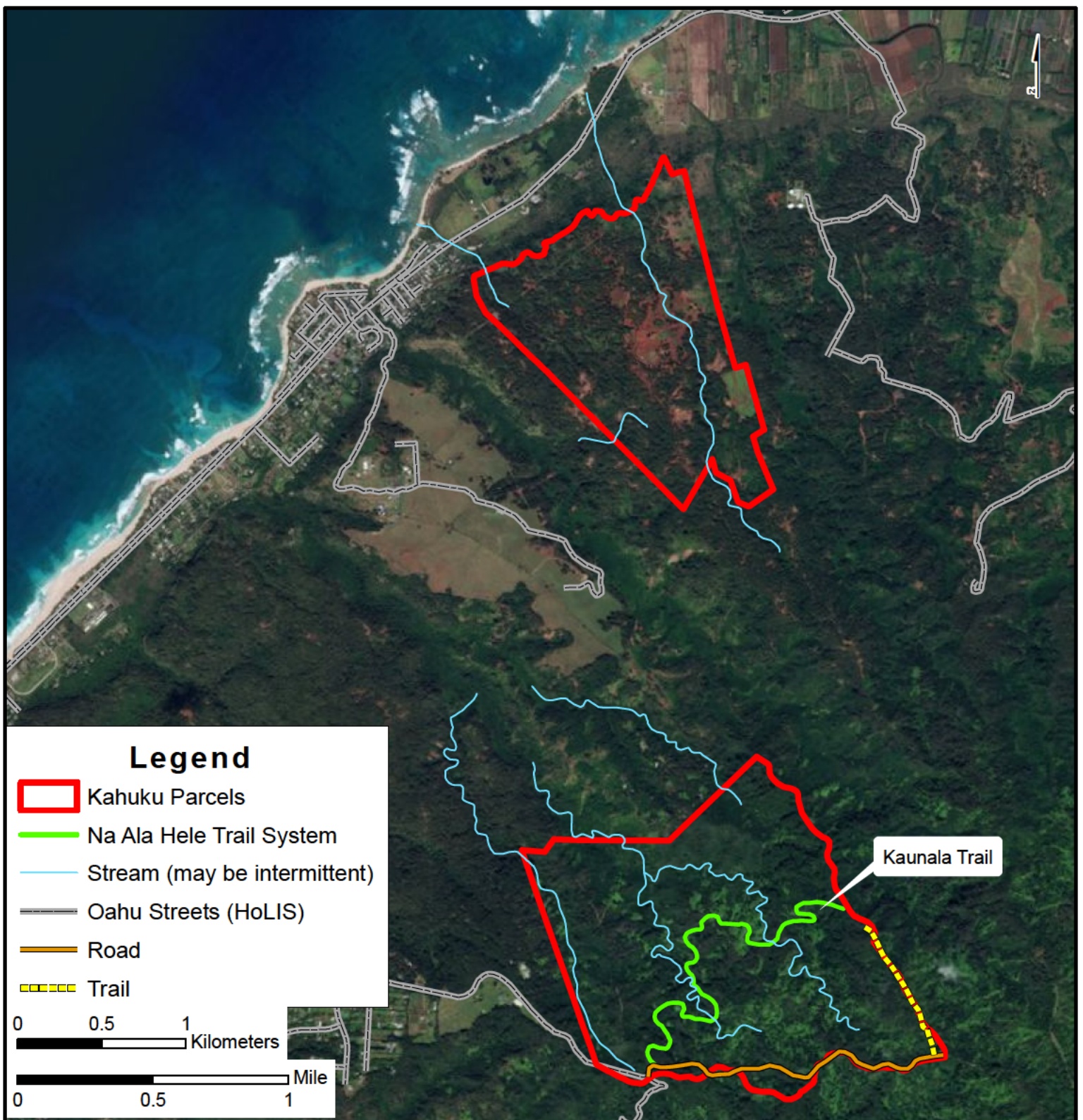


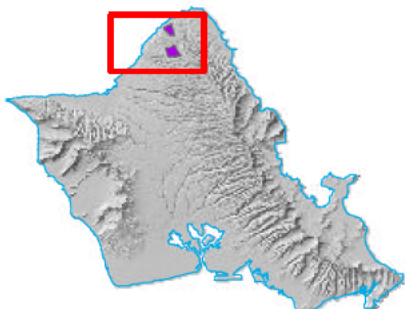
Figure 2

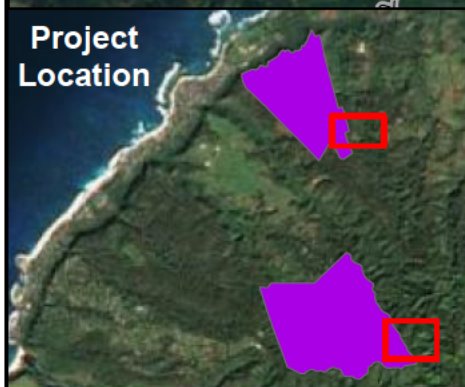
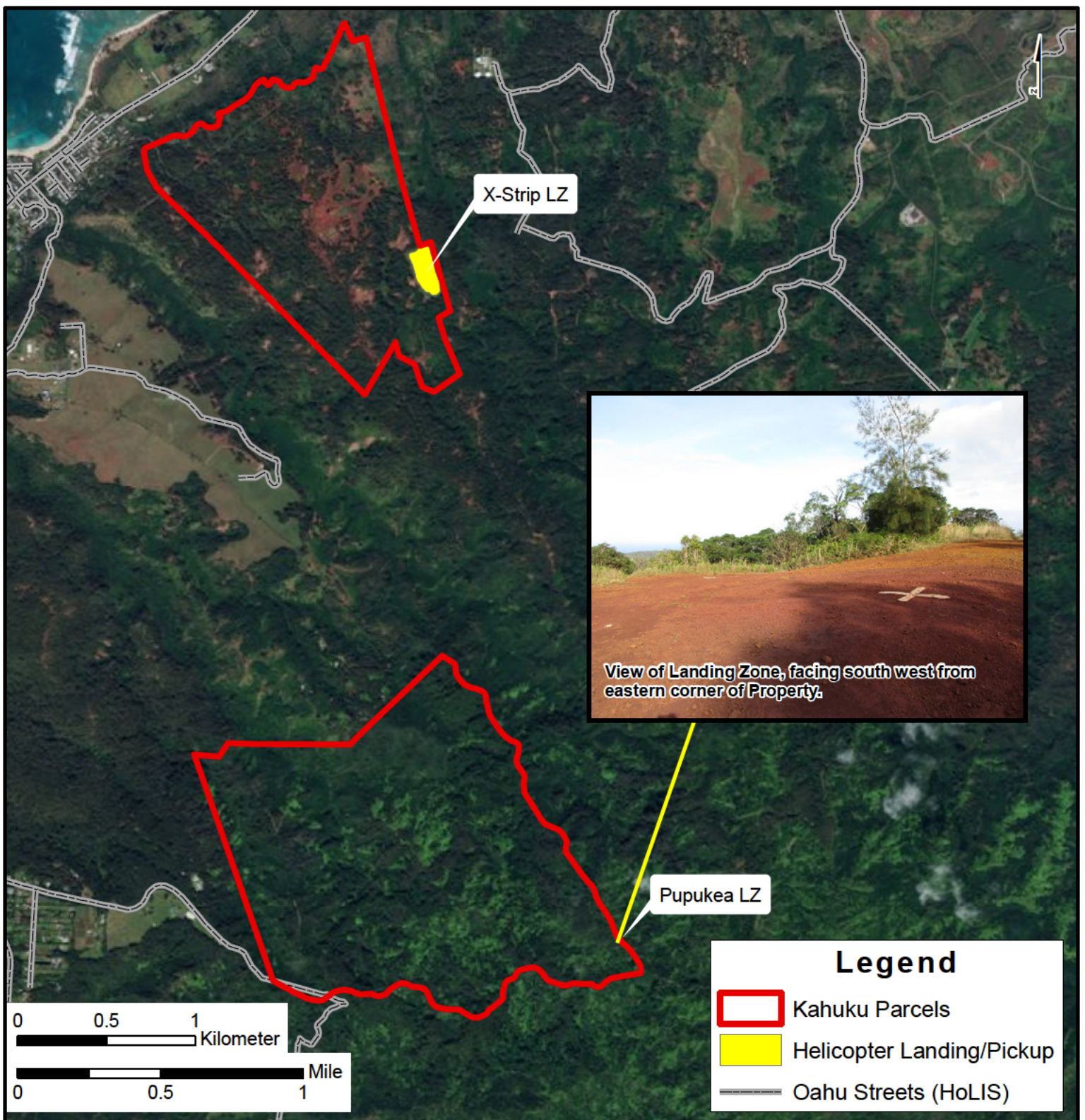
**Subject Property
Natural Features**

Kahuku Parcels

**Environmental Condition
of Property (ECoP)
Report for U.S. Army
Land Acquisition, Oahu**

Contract No. W9128A-12-D-0005
Date: March 2017





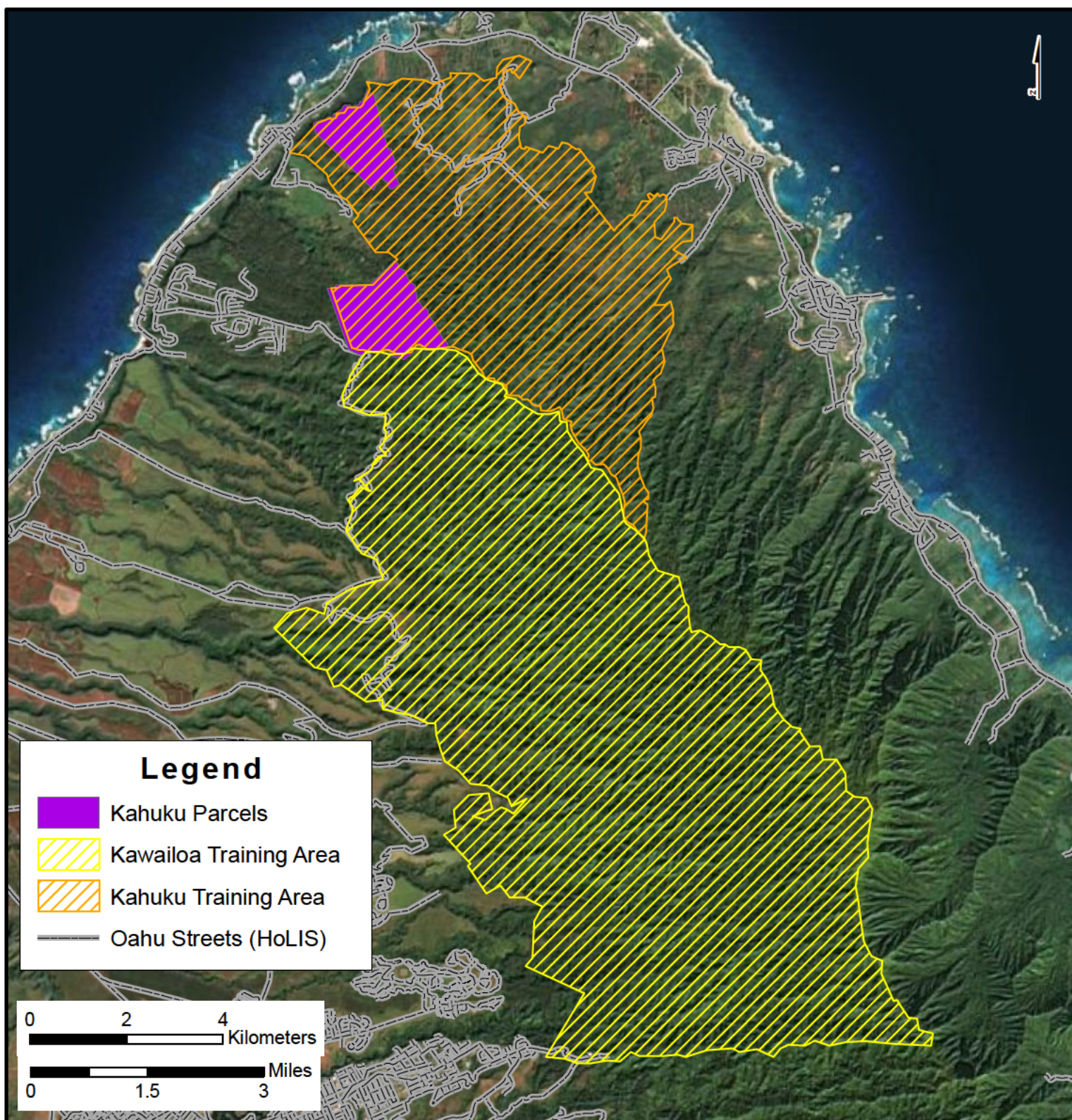
Contract No. W9128A-12-D-0005
Date: March 2017

Figure 3a

Army Operational Areas

Kahuku Parcels

Environmental Condition
of Property (ECoP)
Report for U.S. Army
Land Acquisition, Oahu



Contract No. W9128A-12-D-0005
Date: March 2017

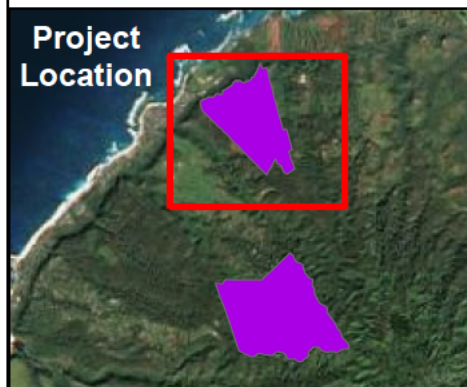
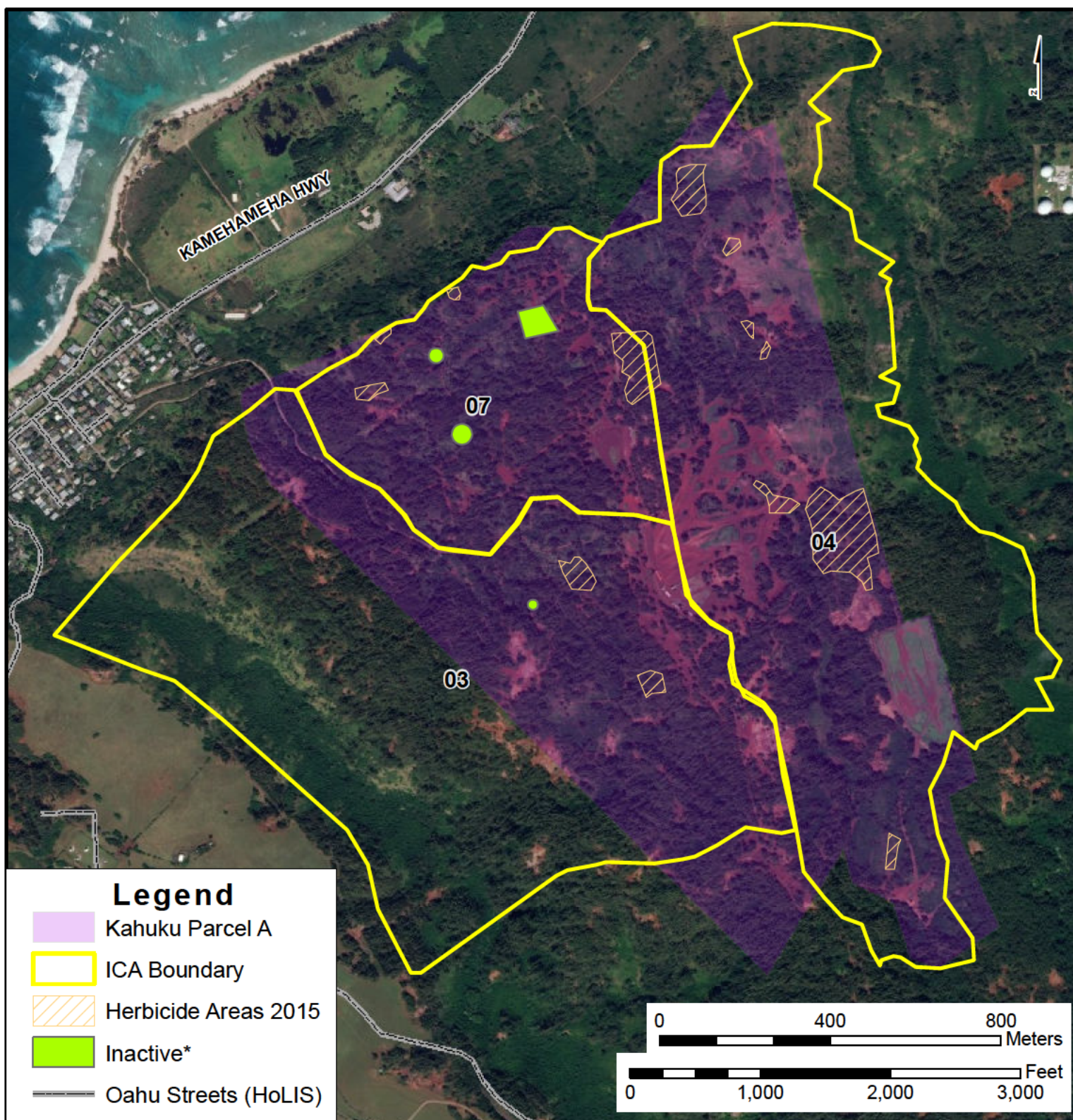
Kahuku and Kawaihoa Training Area boundaries
digitized from the 25th ID(L) & USARHAW Integrated
Wildlife Fire Management Plan SOPs

Figure 3b

Army Training Areas

Kahuku Parcels

**Environmental Condition
of Property (ECoP)
Report for U.S. Army
Land Acquisition, Oahu**



Contract No. W9128A-12-D-0005
Date: March 2017

*indicates area of past herbicide treatment, closely monitored but not treated until devil weed is observed within the area.

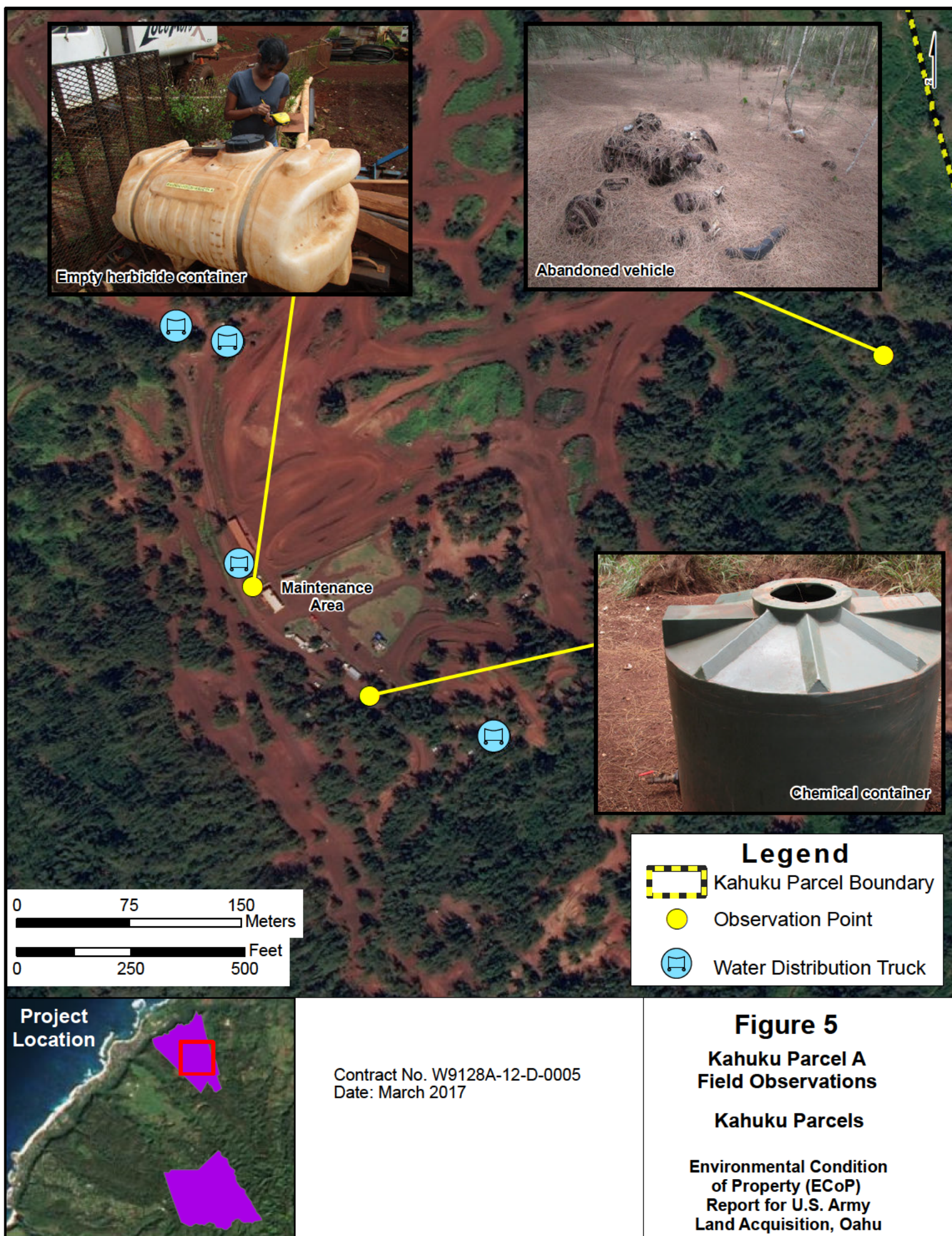
ICA boundaries digitized from the 2015 Makua and Oahu Implementation Plan Status Report produced by OANRP.

Figure 4

C. odorata Incipient Control Areas (ICAs)

Kahuku Parcels

Environmental Condition of Property (ECOP)
Report for U.S. Army
Land Acquisition, Oahu





Contract No. W9128A-12-D-0005
Date: March 2017

Figure 6

Kahuku Parcel A Maintenance Area Housekeeping Observations

Environmental Condition
of Property (ECoP)
Report for U.S. Army
Land Acquisition, Oahu

APPENDICES

APPENDIX A – ENVIRONMENTAL DATABASE REVIEW

EDR DATA MAP™ AREA STUDY REPORT

TABLE OF EDR “ORPHAN” SITES

EDR ENVIRONMENTAL LIENSEARCH™

EDR DATAMAP™ WELL SEARCH REPORT

Kahuku

Haleiwa, HI 96712

Inquiry Number: [REDACTED]

February 23, 2016

EDR DataMap™ Area Study

Thank you for your business.
Please contact EDR at [REDACTED]
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2016 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

HALEIWA, HI 96712
HALEIWA, HI 96712

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records within the requested search area for the following databases:

FEDERAL RECORDS

NPL	National Priority List
Proposed NPL	Proposed National Priority List Sites
Delisted NPL	National Priority List Deletions
NPL LIENS	Federal Superfund Liens
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERCLIS-NFRAP	CERCLIS No Further Remedial Action Planned
LIENS 2	CERCLA Lien Information
CORRACTS	Corrective Action Report
RCRA-TSDF	RCRA - Treatment, Storage and Disposal
RCRA-LQG	RCRA - Large Quantity Generators
RCRA-SQG	RCRA - Small Quantity Generators
RCRA-CESQG	RCRA - Conditionally Exempt Small Quantity Generator
RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
DOT OPS	Incident and Accident Data
US CDL	Clandestine Drug Labs
US BROWNFIELDS	A Listing of Brownfields Sites
DOD	Department of Defense Sites
LUCIS	Land Use Control Information System
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
DEBRIS REGION 9	Torres Martinez Reservation Illegal Dump Site Locations
US MINES	Mines Master Index File
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
SSTS	Section 7 Tracking Systems
ICIS	Integrated Compliance Information System

EXECUTIVE SUMMARY

PADS.....	PCB Activity Database System
MLTS.....	Material Licensing Tracking System
RADINFO.....	Radiation Information Database
FINDS.....	Facility Index System/Facility Registry System
RAATS.....	RCRA Administrative Action Tracking System
RMP.....	Risk Management Plans
COAL ASH DOE.....	Steam-Electric Plant Operation Data
COAL ASH EPA.....	Coal Combustion Residues Surface Impoundments List
PRP.....	Potentially Responsible Parties
EPA WATCH LIST.....	EPA WATCH LIST
US FIN ASSUR.....	Financial Assurance Information
PCB TRANSFORMER.....	PCB Transformer Registration Database
US HIST CDL.....	National Clandestine Laboratory Register
SCRD DRYCLEANERS.....	State Coalition for Remediation of Drycleaners Listing
2020 COR ACTION.....	2020 Corrective Action Program List
FEMA UST.....	Underground Storage Tank Listing
FEDERAL FACILITY.....	Federal Facility Site Information listing
US AIRS.....	Aerometric Information Retrieval System Facility Subsystem
LEAD SMELTERS.....	Lead Smelter Sites

STATE AND LOCAL RECORDS

SHWS.....	Sites List
SWF/LF.....	Permitted Landfills in the State of Hawaii
UIC.....	Underground Injection Wells Listing
SPILLS.....	Release Notifications
ENG CONTROLS.....	Engineering Control Sites
INST CONTROL.....	Sites with Institutional Controls
VCP.....	Voluntary Response Program Sites
DRYCLEANERS.....	Permitted Drycleaner Facility Listing
BROWNFIELDS.....	Brownfields Sites
CDL.....	Clandestine Drug Lab Listing
AIRS.....	List of Permitted Facilities

TRIBAL RECORDS

INDIAN RESERV.....	Indian Reservations
INDIAN ODI.....	Report on the Status of Open Dumps on Indian Lands
INDIAN LUST.....	Leaking Underground Storage Tanks on Indian Land
INDIAN UST.....	Underground Storage Tanks on Indian Land
INDIAN VCP.....	Voluntary Cleanup Priority Listing

EDR PROPRIETARY RECORDS

EDR MGP.....	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto.....	EDR Exclusive Historic Gas Stations
EDR Hist Cleaner.....	EDR Exclusive Historic Dry Cleaners
RGA HWS.....	Recovered Government Archive State Hazardous Waste Facilities List
RGA LUST.....	Recovered Government Archive Leaking Underground Storage Tank
RGA LF.....	Recovered Government Archive Solid Waste Facilities List

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

EXECUTIVE SUMMARY

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

FUDS: The Listing includes locations of Formerly Used Defense Sites Properties where the US Army Corps Of Engineers is actively working or will take necessary cleanup actions.

A review of the FUDS list, as provided by EDR, and dated 01/31/2015 has revealed that there is 1 FUDS site within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
WAIMEA FALLS PARK		2	3

STATE AND LOCAL RECORDS

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Health's Active Leaking Underground Storage Tank Log Listing.

A review of the LUST list, as provided by EDR, and dated 09/04/2015 has revealed that there is 1 LUST site within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
<i>NAVCAMS EASTPAC - OP</i> Release ID: [REDACTED] Facility Id: [REDACTED] Facility Status: Site Cleanup Completed (NFA)	<i>BLDG 1 TANK 1</i>	<i>1</i>	<i>3</i>

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Health's Listing of Underground Storage Tanks.

A review of the UST list, as provided by EDR, and dated 09/04/2015 has revealed that there is 1 UST site within the searched area.

<u>Site</u>	<u>Address</u>	<u>Map ID</u>	<u>Page</u>
<i>NAVCAMS EASTPAC - OP</i> Tank Status: Permanently Out of Use Facility Id: 9-201009 Date Closed: 04/01/1996	<i>BLDG 1 TANK 1</i>	<i>1</i>	<i>3</i>

EXECUTIVE SUMMARY

Please refer to the end of the findings report for unmapped orphan sites due to poor or inadequate address information.

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Total Plotted</u>
<u>FEDERAL RECORDS</u>	
NPL	0
Proposed NPL	0
Delisted NPL	0
NPL LIENS	0
CERCLIS	0
CERCLIS-NFRAP	0
LIENS 2	0
CORRACTS	0
RCRA-TSDF	0
RCRA-LQG	0
RCRA-SQG	0
RCRA-CESQG	0
RCRA NonGen / NLR	0
US ENG CONTROLS	0
US INST CONTROL	0
ERNS	0
HMIRS	0
DOT OPS	0
US CDL	0
US BROWNFIELDS	0
DOD	0
FUDS	1
LUCIS	0
CONSENT	0
ROD	0
UMTRA	0
ODI	0
DEBRIS REGION 9	0
US MINES	0
TRIS	0
TSCA	0
FTTS	0
HIST FTTS	0
SSTS	0
ICIS	0
PADS	0
MLTS	0
RADINFO	0
FINDS	0
RAATS	0
RMP	0
COAL ASH DOE	0
COAL ASH EPA	0
PRP	0
EPA WATCH LIST	0
US FIN ASSUR	0
PCB TRANSFORMER	0
US HIST CDL	0

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Total Plotted</u>
SCRD DRYCLEANERS	0
2020 COR ACTION	0
FEMA UST	0
FEDERAL FACILITY	0
US AIRS	0
LEAD SMELTERS	0
<u>STATE AND LOCAL RECORDS</u>	
SHWS	0
SWF/LF	0
UIC	0
LUST	1
UST	1
SPILLS	0
ENG CONTROLS	0
INST CONTROL	0
VCP	0
DRYCLEANERS	0
BROWNFIELDS	0
CDL	0
AIRS	0
<u>TRIBAL RECORDS</u>	
INDIAN RESERV	0
INDIAN ODI	0
INDIAN LUST	0
INDIAN UST	0
INDIAN VCP	0
<u>EDR PROPRIETARY RECORDS</u>	
EDR MGP	0
EDR Hist Auto	0
EDR Hist Cleaner	0
RGA HWS	0
RGA LUST	0
RGA LF	0

NOTES:

Sites may be listed in more than one database

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)Site
EDR ID Number
Database(s)
EPA ID Number

1 NAVCAMS EASTPAC - OPANA
BLDG 1 TANK 1
KAHUKU, HI 96731
LUST
UST
U003154912
N/A

LUST:

Facility ID: 9-201009
Facility Status: Site Cleanup Completed (NFA)
Facility Status Date: 01/30/2001
Release ID: 000078
Project Officer: Jose Ruiz

UST:

Facility ID: 9-201009
Owner: U.S. DEPT OF THE NAVY
Owner Address: Not reported
Owner City,St,Zip: Kahuku, 96731 96731
Latitude: 21.685645
Longitude: -158.009541
Horizontal Reference Datum Name: NAD83
Horizontal Collection Method Name: On Base

Tank ID: R-M-1
Date Installed: 01/01/1975
Tank Status: Permanently Out of Use
Date Closed: 04/01/1996
Tank Capacity: 4000
Substance: Diesel

2 WAIMEA FALLS PARK
FUDS
1007212702
N/A
, HI

FUDS:

Federal Facility ID: HI9799F9894
FUDS #: H09HI0469
INST ID: 54132
Facility Name: WAIMEA FALLS PARK
City: Not reported
State: HI
EPA Region: 09
County: Not reported
Congressional District: 02
US Army District: Honolulu District (POH)
Fiscal Year: 2013
Telephone: XXXXXXXXXX
NPL Status: Not Listed
RAB: Not reported
CTC: 5624.699
Current Owner: Private Sector
Current Prog: Not reported
Future Prog: Not reported
Acreage: Not reported
Description: The property is located at 59-864 Kamehameha Highway in Waimea, Oahu, is identified by TMK:6-1-02:00, and was a battery position. The 345-acre property consisted of a motor pool, ammunition bunkers, concrete foundations, and former gun emplacements. Since the military left the property, the site has been a park and tourism center. The land is under private ownership.
History: The Waimea Battery Battle Position was established in 1943 to support

MAP FINDINGS

Map ID
Direction
Distance
Distance (ft.)Site

EDR ID Number
EPA ID Number

WAIMEA FALLS PARK (Continued)

1007212702

Latitude:
Longitude:

field forces in the event of an enemy landing on the north shore. The lease was terminated in 1982. Subsequently, the property was developed as a park. The property is known or suspected to contain military munitions or unexploded ordnance and therefore may present an explosive hazard.
-158.035995482
21.6317996979

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/30/2015	Source: EPA
Date Data Arrived at EDR: 11/07/2015	Telephone: N/A
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 01/26/2016
Number of Days to Update: 58	Next Scheduled EDR Contact: 04/18/2016
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)

Telephone: [REDACTED]

EPA Region 1

Telephone: [REDACTED]

EPA Region 3

Telephone: [REDACTED]

EPA Region 4

Telephone: [REDACTED]

EPA Region 5

Telephone: [REDACTED]

EPA Region 10

Telephone: [REDACTED]

EPA Region 6

Telephone: [REDACTED]

EPA Region 7

Telephone: [REDACTED]

EPA Region 8

Telephone: [REDACTED]

EPA Region 9

Telephone: [REDACTED]

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/30/2015	Source: EPA
Date Data Arrived at EDR: 11/07/2015	Telephone: N/A
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 01/26/2016
Number of Days to Update: 58	Next Scheduled EDR Contact: 04/18/2016
	Data Release Frequency: Quarterly

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/30/2015	Source: EPA
Date Data Arrived at EDR: 11/07/2015	Telephone: N/A
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 01/26/2016
Number of Days to Update: 58	Next Scheduled EDR Contact: 04/18/2016
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: [REDACTED]
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: [REDACTED]
Last EDR Contact: 02/19/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 11/11/2013
Date Made Active in Reports: 02/13/2014
Number of Days to Update: 94

Source: EPA
Telephone: [REDACTED]
Last EDR Contact: 02/19/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Quarterly

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/09/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 82

Source: EPA
Telephone: [REDACTED]
Last EDR Contact: 12/18/2015
Next Scheduled EDR Contact: 04/11/2016
Data Release Frequency: Quarterly

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 06/09/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: (415) [REDACTED]
Last EDR Contact: 12/18/2015
Next Scheduled EDR Contact: 04/11/2016
Data Release Frequency: Quarterly

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/09/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: (415) [REDACTED]
Last EDR Contact: 12/18/2015
Next Scheduled EDR Contact: 04/11/2016
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 06/09/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: (415) [REDACTED]
Last EDR Contact: 12/18/2015
Next Scheduled EDR Contact: 04/11/2016
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 06/09/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: (415) [REDACTED]
Last EDR Contact: 12/18/2015
Next Scheduled EDR Contact: 04/11/2016
Data Release Frequency: Varies

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 06/09/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: (415) [REDACTED]
Last EDR Contact: 12/18/2015
Next Scheduled EDR Contact: 04/11/2016
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 09/10/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/11/2015	Telephone: [REDACTED]
Date Made Active in Reports: 11/03/2015	Last EDR Contact: 11/24/2015
Number of Days to Update: 53	Next Scheduled EDR Contact: 03/14/2016
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 09/10/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 09/11/2015	Telephone: [REDACTED]
Date Made Active in Reports: 11/03/2015	Last EDR Contact: 11/24/2015
Number of Days to Update: 53	Next Scheduled EDR Contact: 03/14/2016
	Data Release Frequency: Varies

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/22/2015	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 06/26/2015	Telephone: [REDACTED]
Date Made Active in Reports: 09/16/2015	Last EDR Contact: 12/29/2015
Number of Days to Update: 82	Next Scheduled EDR Contact: 04/11/2016
	Data Release Frequency: Annually

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 06/24/2015	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 06/26/2015	Telephone: [REDACTED]
Date Made Active in Reports: 09/02/2015	Last EDR Contact: 12/30/2015
Number of Days to Update: 68	Next Scheduled EDR Contact: 04/11/2016
	Data Release Frequency: Annually

DOT OPS: Incident and Accident Data

Department of Transportation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012	Source: Department of Transportation, Office of Pipeline Safety
Date Data Arrived at EDR: 08/07/2012	Telephone: [REDACTED]
Date Made Active in Reports: 09/18/2012	Last EDR Contact: 02/03/2016
Number of Days to Update: 42	Next Scheduled EDR Contact: 05/16/2016
	Data Release Frequency: Varies

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/17/2015
Date Data Arrived at EDR: 12/04/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 76

Source: Drug Enforcement Administration
Telephone: [REDACTED]
Last EDR Contact: 11/25/2015
Next Scheduled EDR Contact: 03/14/2016
Data Release Frequency: Quarterly

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/22/2015
Date Data Arrived at EDR: 12/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 12/21/2015
Next Scheduled EDR Contact: 04/04/2016
Data Release Frequency: Semi-Annually

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: [REDACTED]
Last EDR Contact: 01/15/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: [REDACTED]
Last EDR Contact: 12/11/2015
Next Scheduled EDR Contact: 03/21/2016
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015
Date Data Arrived at EDR: 05/29/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 13

Source: Department of the Navy
Telephone: [REDACTED]
Last EDR Contact: 02/16/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/02/2015
Number of Days to Update: 46

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 12/23/2015
Next Scheduled EDR Contact: 04/11/2016
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: [REDACTED]
Last EDR Contact: 12/11/2015
Next Scheduled EDR Contact: 03/21/2016
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: [REDACTED]
Last EDR Contact: 02/22/2016
Next Scheduled EDR Contact: 06/06/2016
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: [REDACTED]
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: No Update Planned

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: [REDACTED]
Last EDR Contact: 12/04/2015
Next Scheduled EDR Contact: 03/14/2016
Data Release Frequency: Varies

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/18/2015
Date Data Arrived at EDR: 09/01/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 125

Source: Department of Labor, Mine Safety and Health Administration
Telephone: [REDACTED]
Last EDR Contact: 12/03/2015
Next Scheduled EDR Contact: 03/14/2016
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005	Source: USGS
Date Data Arrived at EDR: 02/29/2008	Telephone: [REDACTED]
Date Made Active in Reports: 04/18/2008	Last EDR Contact: 12/04/2015
Number of Days to Update: 49	Next Scheduled EDR Contact: 03/14/2016
	Data Release Frequency: Varies

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2013	Source: EPA
Date Data Arrived at EDR: 02/12/2015	Telephone: [REDACTED]
Date Made Active in Reports: 06/02/2015	Last EDR Contact: 11/24/2015
Number of Days to Update: 110	Next Scheduled EDR Contact: 03/07/2016
	Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012	Source: EPA
Date Data Arrived at EDR: 01/15/2015	Telephone: [REDACTED]
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 12/23/2015
Number of Days to Update: 14	Next Scheduled EDR Contact: 04/04/2016
	Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 04/16/2009	Telephone: [REDACTED]
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 02/22/2016
Number of Days to Update: 25	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009	Source: EPA
Date Data Arrived at EDR: 04/16/2009	Telephone: [REDACTED]
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 02/22/2016
Number of Days to Update: 25	Next Scheduled EDR Contact: 06/06/2016
	Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: [REDACTED]
Last EDR Contact: 01/25/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/23/2015
Date Data Arrived at EDR: 02/06/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 01/08/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 33

Source: EPA
Telephone: [REDACTED]
Last EDR Contact: 01/12/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 06/26/2015
Date Data Arrived at EDR: 07/10/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 95

Source: Nuclear Regulatory Commission
Telephone: [REDACTED]
Last EDR Contact: 02/08/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 07/09/2015	Telephone: [REDACTED]
Date Made Active in Reports: 09/16/2015	Last EDR Contact: 01/07/2016
Number of Days to Update: 69	Next Scheduled EDR Contact: 04/18/2016
	Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/20/2015	Source: EPA
Date Data Arrived at EDR: 09/09/2015	Telephone: (415) [REDACTED]
Date Made Active in Reports: 11/03/2015	Last EDR Contact: 12/10/2015
Number of Days to Update: 55	Next Scheduled EDR Contact: 03/21/2016
	Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995	Source: EPA
Date Data Arrived at EDR: 07/03/1995	Telephone: [REDACTED]
Date Made Active in Reports: 08/07/1995	Last EDR Contact: 06/02/2008
Number of Days to Update: 35	Next Scheduled EDR Contact: 09/01/2008
	Data Release Frequency: No Update Planned

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2015	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/26/2015	Telephone: [REDACTED]
Date Made Active in Reports: 11/03/2015	Last EDR Contact: 01/25/2016
Number of Days to Update: 69	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: [REDACTED]
Last EDR Contact: 11/24/2015
Next Scheduled EDR Contact: 03/07/2016
Data Release Frequency: Biennially

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: [REDACTED]
Last EDR Contact: 12/22/2015
Next Scheduled EDR Contact: 04/11/2016
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: [REDACTED]
Last EDR Contact: 12/22/2015
Next Scheduled EDR Contact: 04/11/2016
Data Release Frequency: Annually

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: [REDACTED]
Last EDR Contact: 02/12/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931 and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: [REDACTED]
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 01/26/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Varies

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 02/12/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Varies

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 02/09/2016
Next Scheduled EDR Contact: 05/23/2016
Data Release Frequency: Quarterly

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 03/26/2015
Date Data Arrived at EDR: 04/08/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 01/06/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 12/11/2015
Next Scheduled EDR Contact: 03/21/2016
Data Release Frequency: Varies

FEMA UST: Underground Storage Tank Listing

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55

Source: FEMA
Telephone: [REDACTED]
Last EDR Contact: 01/08/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 01/29/2016
Next Scheduled EDR Contact: 05/09/2016
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/17/2015
Date Data Arrived at EDR: 12/04/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 76

Source: Drug Enforcement Administration
Telephone: [REDACTED]
Last EDR Contact: 08/31/2015
Next Scheduled EDR Contact: 12/14/2015
Data Release Frequency: No Update Planned

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/01/2015
Date Data Arrived at EDR: 09/03/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 02/16/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: [REDACTED]
Last EDR Contact: 01/13/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Varies

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: [REDACTED]
Last EDR Contact: 02/19/2016
Next Scheduled EDR Contact: 05/30/2016
Data Release Frequency: Varies

STATE AND LOCAL RECORDS

SHWS: Sites List

Facilities, sites or areas in which the Office of Hazard Evaluation and Emergency Response has an interest, has investigated or may investigate under HRS 128D (includes CERCLIS sites).

Date of Government Version: 12/02/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 36

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 01/26/2016
Next Scheduled EDR Contact: 03/07/2016
Data Release Frequency: Semi-Annually

SWF/LF: Permitted Landfills in the State of Hawaii

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/17/2012
Date Data Arrived at EDR: 04/03/2013
Date Made Active in Reports: 05/10/2013
Number of Days to Update: 37

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 10/02/2015
Next Scheduled EDR Contact: 01/11/2016
Data Release Frequency: Varies

UIC: Underground Injection Wells Listing

A listing of underground injection well locations.

Date of Government Version: 02/07/2013
Date Data Arrived at EDR: 02/12/2013
Date Made Active in Reports: 04/09/2013
Number of Days to Update: 56

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 11/24/2015
Next Scheduled EDR Contact: 03/14/2016
Data Release Frequency: Varies

LUST: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 09/04/2015
Date Data Arrived at EDR: 09/25/2015
Date Made Active in Reports: 11/06/2015
Number of Days to Update: 42

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 12/04/2015
Next Scheduled EDR Contact: 03/14/2016
Data Release Frequency: Semi-Annually

UST: Underground Storage Tank Database

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 09/04/2015
Date Data Arrived at EDR: 09/25/2015
Date Made Active in Reports: 11/06/2015
Number of Days to Update: 42

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 12/04/2015
Next Scheduled EDR Contact: 03/14/2016
Data Release Frequency: Semi-Annually

SPILLS: Release Notifications

Releases of hazardous substances to the environment reported to the Office of Hazard Evaluation and Emergency Response since 1988.

Date of Government Version: 12/02/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/28/2015
Number of Days to Update: 37

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 01/26/2016
Next Scheduled EDR Contact: 03/07/2016
Data Release Frequency: Varies

ENG CONTROLS: Engineering Control Sites

A listing of sites with engineering controls in place.

Date of Government Version: 12/02/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 36

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 01/26/2016
Next Scheduled EDR Contact: 03/07/2016
Data Release Frequency: Varies

INST CONTROL: Sites with Institutional Controls

Voluntary Remediation Program and Brownfields sites with institutional controls in place.

Date of Government Version: 12/02/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 36

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 01/26/2016
Next Scheduled EDR Contact: 03/07/2016
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

VCP: Voluntary Response Program Sites

Sites participating in the Voluntary Response Program. The purpose of the VRP is to streamline the cleanup process in a way that will encourage prospective developers, lenders, and purchasers to voluntarily cleanup properties.

Date of Government Version: 12/02/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 36

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 01/26/2016
Next Scheduled EDR Contact: 03/07/2016
Data Release Frequency: Varies

DRYCLEANERS: Permitted Drycleaner Facility Listing

A listing of permitted drycleaner facilities in the state.

Date of Government Version: 10/05/2015
Date Data Arrived at EDR: 10/08/2015
Date Made Active in Reports: 11/16/2015
Number of Days to Update: 39

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 01/04/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Varies

BROWNFIELDS: Brownfields Sites

With certain legal exclusions and additions, the term 'brownfield site' means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Date of Government Version: 12/02/2014
Date Data Arrived at EDR: 12/22/2014
Date Made Active in Reports: 01/27/2015
Number of Days to Update: 36

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 01/26/2016
Next Scheduled EDR Contact: 03/07/2016
Data Release Frequency: Varies

CDL: Clandestine Drug Lab Listing

A listing of clandestine drug lab site locations.

Date of Government Version: 08/04/2010
Date Data Arrived at EDR: 09/10/2010
Date Made Active in Reports: 10/22/2010
Number of Days to Update: 42

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 11/24/2015
Next Scheduled EDR Contact: 03/14/2016
Data Release Frequency: Varies

AIRS: List of Permitted Facilities

A listing of permitted facilities in the state.

Date of Government Version: 10/06/2015
Date Data Arrived at EDR: 10/08/2015
Date Made Active in Reports: 11/06/2015
Number of Days to Update: 29

Source: Department of Health
Telephone: [REDACTED]
Last EDR Contact: 01/04/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Varies

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: [REDACTED]
Last EDR Contact: 01/15/2016
Next Scheduled EDR Contact: 04/25/2016
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998

Date Data Arrived at EDR: 12/03/2007

Date Made Active in Reports: 01/24/2008

Number of Days to Update: 52

Source: Environmental Protection Agency

Telephone: [REDACTED]

Last EDR Contact: 02/01/2016

Next Scheduled EDR Contact: 05/16/2016

Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 11/04/2015

Date Data Arrived at EDR: 11/13/2015

Date Made Active in Reports: 01/04/2016

Number of Days to Update: 52

Source: EPA, Region 5

Telephone: [REDACTED]

Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/27/2015

Date Data Arrived at EDR: 10/29/2015

Date Made Active in Reports: 01/04/2016

Number of Days to Update: 67

Source: EPA Region 1

Telephone: [REDACTED]

Last EDR Contact: 02/22/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/30/2015

Date Data Arrived at EDR: 04/28/2015

Date Made Active in Reports: 06/22/2015

Number of Days to Update: 55

Source: EPA Region 7

Telephone: [REDACTED]

Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/13/2015

Date Data Arrived at EDR: 10/23/2015

Date Made Active in Reports: 02/18/2016

Number of Days to Update: 118

Source: EPA Region 8

Telephone: [REDACTED]

Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/08/2015

Date Data Arrived at EDR: 01/08/2015

Date Made Active in Reports: 02/09/2015

Number of Days to Update: 32

Source: Environmental Protection Agency

Telephone: [REDACTED]

Last EDR Contact: 01/27/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/07/2016

Date Data Arrived at EDR: 01/08/2016

Date Made Active in Reports: 02/18/2016

Number of Days to Update: 41

Source: EPA Region 10

Telephone: [REDACTED]

Last EDR Contact: 01/25/2016

Next Scheduled EDR Contact: 05/09/2016

Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 08/20/2015	Source: EPA Region 6
Date Data Arrived at EDR: 10/30/2015	Telephone: [REDACTED]
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 01/25/2016
Number of Days to Update: 111	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 11/24/2015	Source: EPA Region 4
Date Data Arrived at EDR: 12/01/2015	Telephone: [REDACTED]
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 01/25/2016
Number of Days to Update: 34	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014	Source: EPA Region 7
Date Data Arrived at EDR: 11/25/2014	Telephone: [REDACTED]
Date Made Active in Reports: 01/29/2015	Last EDR Contact: 01/25/2016
Number of Days to Update: 65	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 11/24/2015	Source: EPA Region 4
Date Data Arrived at EDR: 12/01/2015	Telephone: [REDACTED]
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 01/25/2016
Number of Days to Update: 34	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Semi-Annually

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 12/14/2014	Source: EPA Region 9
Date Data Arrived at EDR: 02/13/2015	Telephone: [REDACTED]
Date Made Active in Reports: 03/13/2015	Last EDR Contact: 01/27/2016
Number of Days to Update: 28	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 01/07/2016	Source: EPA Region 10
Date Data Arrived at EDR: 01/08/2016	Telephone: [REDACTED]
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 01/25/2016
Number of Days to Update: 41	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/13/2015	Source: EPA Region 8
Date Data Arrived at EDR: 10/23/2015	Telephone: [REDACTED]
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 01/25/2016
Number of Days to Update: 118	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Quarterly

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/20/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 10/29/2015	Telephone: [REDACTED]
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 02/22/2016
Number of Days to Update: 67	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2015	Source: EPA Region 5
Date Data Arrived at EDR: 11/13/2015	Telephone: [REDACTED]
Date Made Active in Reports: 01/04/2016	Last EDR Contact: 01/25/2016
Number of Days to Update: 52	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 08/20/2015	Source: EPA Region 6
Date Data Arrived at EDR: 10/30/2015	Telephone: [REDACTED]
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 01/25/2016
Number of Days to Update: 111	Next Scheduled EDR Contact: 05/09/2016
	Data Release Frequency: Semi-Annually

INDIAN VCP R7: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008	Source: EPA, Region 7
Date Data Arrived at EDR: 04/22/2008	Telephone: [REDACTED]
Date Made Active in Reports: 05/19/2008	Last EDR Contact: 04/20/2009
Number of Days to Update: 27	Next Scheduled EDR Contact: 07/20/2009
	Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015	Source: EPA, Region 1
Date Data Arrived at EDR: 09/29/2015	Telephone: [REDACTED]
Date Made Active in Reports: 02/18/2016	Last EDR Contact: 12/28/2015
Number of Days to Update: 142	Next Scheduled EDR Contact: 04/11/2016
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR PROPRIETARY RECORDS

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Health
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A

Source: Department of Health

Date Data Arrived at EDR: 07/01/2013

Telephone: N/A

Date Made Active in Reports: 01/17/2014

Last EDR Contact: 06/01/2012

Number of Days to Update: 200

Next Scheduled EDR Contact: N/A

Data Release Frequency: Varies

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health in Hawaii.

Date of Government Version: N/A

Source: Department of Health

Date Data Arrived at EDR: 07/01/2013

Telephone: N/A

Date Made Active in Reports: 01/08/2014

Last EDR Contact: 06/01/2012

Number of Days to Update: 191

Next Scheduled EDR Contact: N/A

Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines

Source: PennWell Corporation

Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data

Source: PennWell Corporation

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.

Telephone: [REDACTED]

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: [REDACTED]

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: [REDACTED]

Information on Medicare and Medicaid certified nursing homes in the United States.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Public Schools

Source: National Center for Education Statistics

Telephone: [REDACTED]

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: [REDACTED]

The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory

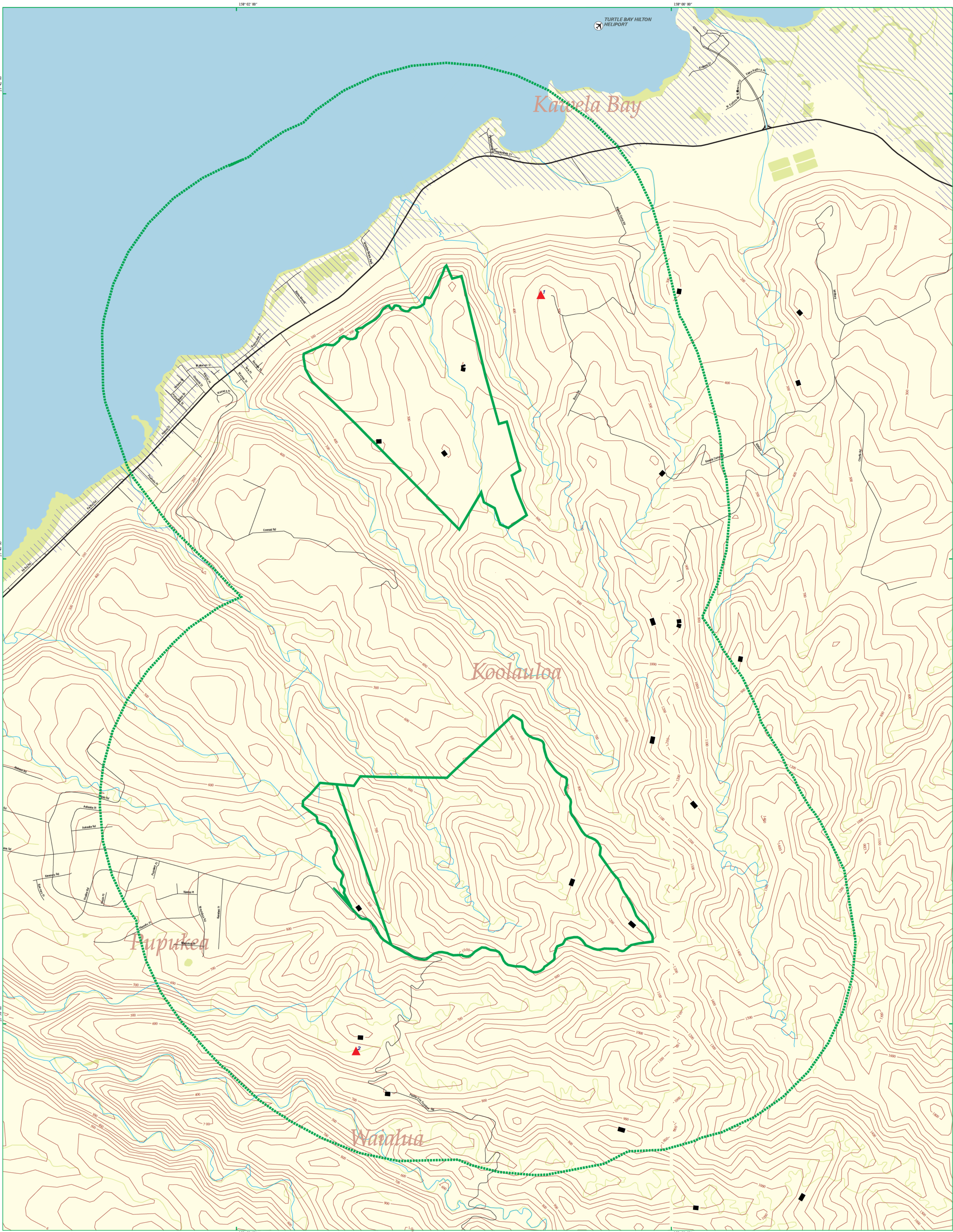
Source: Office of Planning

Telephone: [REDACTED]

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

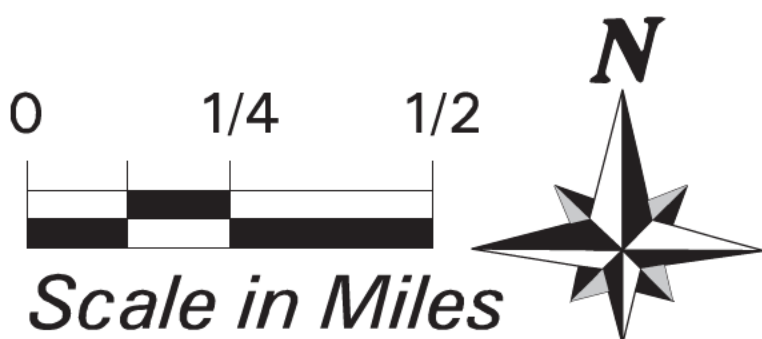
© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.



EDR DataMap® - Area Study

Kahuku

- | | | | | |
|--|---------------|-------------|-------------------------|----------------------------|
| Listed Sites | Major Roads | Pipelines | Superfund Sites | National Wetland Inventory |
| Earthquake Epicenters (Richter 5 or greater) | Waterways | Powerlines | Federal DOD Sites | |
| Search Boundary | Railroads | Fault Lines | Indian Reservations BIA | |
| Roads | Contour Lines | Water | 100-Yr Flood Zones | |



Count: 15 records

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HALEIWA	U003221987	PAUMALU EARTH STATION - COMSAT	COMSAT CORPORATION 58-350 KAMEHAMEHA HWY	96712	LUST
HALEIWA	1006819286	KAWAIILOA LANDFILL	KAWAIILOA RD	96712	SHWS
HALEIWA	1006820954	HALEIWA CANOE CLUB	C ST	96712	SHWS
HALEIWA	U004109520	KAWAIILOA CAMP	TURN IN AT ALUVION NURSERY (61-676 KAM HWY).	96712	UST
HALEIWA	S110061846	TWIN BRIDGE ROAD DRUM DUMPING-HALEIWA	TWIN BRIDGE GATE AREA (OPAEULA 3-D)	96712	SHWS
HONOLULU COUNTY	1008171354	KAHUKU ARMY ROAD	UNKNOWN	00000	FINDS
HONOLULU COUNTY	1008171355	KAHUKU WTP	UNKNOWN	00000	FINDS
KAHUKU	1012302854	COMBINED ARMS COLLECTIVE TRAINING FACILITY, KAHUKU TRAINING	ALONG DRUM ROAD IN THE KAHUKU TRAINING AREA, 2 MIL	96731	FINDS
KAHUKU	1008038588	BWS KAHUKU	BWS KAHUKU	96731	FINDS
KAHUKU	S108859852	UNKNOWN CYLINDER KAHUKU HPD	KAHUKU HPD STATION	96731	SPILLS
KAHUKU	S107025859	HECO KAHUKU WINDFARM	56-1160 KAMEHAMEHA HWY	96731	SPILLS
KAHUKU	S117312021	KAHUKU WIND POWER LLC	56-1050 KAMEHAMEHA HWY	96731	HAZNET
KAHUKU	1014697008	FIRST WIND KAHUKU	NEAR CHARLIE ROAD AND KAMEHAMEHA HWY	96731	FINDS
KAHUKU	S117037945	KAHUKU MEDICAL CENTER	56-117 PUALALEA ST	96731	LUST
KAHUKU	1008011987	KAHUKU SUGAR MILL	UNKNOWN	96731	FINDS

TABLE 1: Resolution of 15 Orphan Sites

EDR ID	Site Name and Address	Location relative to Kahuku Parcel(s)	Regulatory Database	Status	Potential Concern?
U003221987	Paumalu Earth Station – COMSAT Corporation 58-350 Kamehameha Highway, Haleiwa	< 1 mile (approximately .8 miles) distance south of Parcel B (TMK 5-9-06-26) southern property boundary	LUST	NFA (1994)	None: Site cleanup completed
1006819286	Kawailoa Landfill – Kawailoa Road (62-180 Kawailoa Dr, Haleiwa)	>1 mile distance from nearest site boundary	SHWS	ISST-NFA (1996)	None: Distance
1006820954	Haleiwa Canoe Club – C St.	>1 mile distance from nearest site boundary	SHWS	NFA (2004) *Former Haleiwa Canoe Club UST Closure - no address available	None: Distance
U004109520	Kawailoa Camp – 61-676 Kamehameha Hwy, Haleiwa	>1 mile distance from nearest site boundary	UST	Permanently out of use (1999)	None: Distance and permanent closure
S110061846	Twin Bridge Road Drum Dumping Area – Cane Haul Road between Opaeula Road and Twin Bridge Road	>1 mile distance from nearest site boundary	SHWS	Hazard Present – Priority Low. Ongoing response to abandoned leaking drums; including confirmation sampling.	None: Distance
1008171354	Kahuku Army Road	Within Kahuku Parcel B; 2 miles along Drum Road in the Kahuku Training area	FINDS	Hazardous waste/Enforcement and Compliance History Site NPDES permit # HIU000262 EPA #110020736435	None: No current NPDES permit Current EPA compliance status is No Violation and date of last inspection 7/9/2003.
1008171355	Kahuku WTP	>1 mile distance from nearest site boundary	FINDS	Hazardous waste/Enforcement and Compliance History Site NPDES permit # HIU000263 EPA #110020736444	None: No current NPDES permit Current EPA compliance status is No Violation and date of last inspection 10/3/2000.

EDR ID	Site Name and Address	Location relative to Kahuku Parcel(s)	Regulatory Database	Status	Potential Concern?
1012302854	Combined Arms Collective Training Facility, Kahuku Training	Within Kahuku Parcel B; 2 miles along Drum Road in the Kahuku Training area	FINDS	General Permit Covered Facility issued in August 2009 and permit expired in October 2012. NPDES permit # HIF005963 EPA #110040078411	None: No current NPDES permit
1008038588	BWS Kahuku, Kahuku Pump 2 4057-16 TMK 5-6-008:005 56-430 Pahelehala Loop	>1 mile distance from nearest site boundary	Safe Drinking Water Information Systems (SDWIS) FINDS	Hazardous Waste/Enforcement and Compliance History Site Program System ID# HI0000365 EPA #110013119767	None: Distance Kahuku community water system.
S108859852	Unknown Cylinder Kahuku HPD, Enos Rd, Kahuku, HI 96819	>1 mile distance from nearest site boundary	Spills	Closed May 19, 2007	None: Distance
S107025859	HECO Kahuku Windfarm, 56-1160 Kamehameha Highway, Kahuku	>1 mile distance from nearest site boundary	Spills	Power Battery Storage System Fire – Copper release Closed December 9, 2003	None: Distance
S117312021	Kahuku Wind Power LLC, 56-1050 Kamehameha Highway, Kahuku	>1 mile distance from nearest site boundary	HAZNET	2013 Metals recovery	None: Distance
1014697008	First Wind Kahuku, 56-1101 Kamehameha Hwy, Kahuku	>1 mile distance from nearest site boundary	FINDS	Hazardous Waste/Enforcement and Compliance History Site NPDES permit #s HIF006089 HIF006092	None: Distance; no violations and no current permits

EDR ID	Site Name and Address	Location relative to Kahuku Parcel(s)	Regulatory Database	Status	Potential Concern?
S117037945	Kahuku Medical Center, 56-117 Pualalea Street, Kahuku	>1 mile distance from nearest site boundary	LUST	Release 12/31/13	None: Distance
1008011987	Kahuku Sugar Mill, 55-565 Kamehameha Highway, Laie	>1 mile distance from nearest site boundary	FINDS	Hazardous waste/Enforcement and Compliance History Site NPDES permit # HIF000920 EPA # 110020718598	None: Distance and no current permits

Kahuku

TMK# 580020020000; 590060060000; 590060260000
Haleiwa, Hawaii 96712

Inquiry Number: 4542430.7
February 25, 2016

The EDR Environmental LienSearch™



EDR Environmental LienSearch™ Report

The EDR Environmental LienSearch Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied address information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' offices, registries of deeds, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved, and description); and
- provide a copy of the deed or cite documents reviewed.

Thank you for your business.
Please contact EDR at [REDACTED]
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This report was prepared for the use of Environmental Data Resources, Inc., and The Fox Group, LLC., exclusively. This report is neither a guarantee of title, a commitment to insure, or a policy of title insurance. **NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT.** Environmental Data Resources, Inc. (EDR) and The Fox Group, LLC. specifically disclaim the making of any such warranties, including without limitation, merchantability or fitness for a particular use or purpose. The information contained in this report is retrieved as it is recorded from the various agencies that make it available. The total liability is limited to the fee paid for this report.

Copyright 2014 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EDR Environmental LienSearch™ Report

TARGET PROPERTY INFORMATION

ADDRESS

KAHUKU
TMK# 580030030000; 590060060000; 590060260000
HALEIWA, HAWAII 96712

RESEARCH SOURCE

Source 1: Honolulu Assessor
Honolulu County, Hawaii

Source 2: Honolulu Recorder
Honolulu County, Hawaii

PROPERTY INFORMATION

Deed 1:

Title is vested in: State of Hawaii

Legal Description: 449.72 Acres

Legal Current Owner: State of Hawaii

Property Identifiers: 580020020000

Comments: Exhibit A

Comments: Public records of Honolulu County, Hawaii were searched from January 1, 1970 to February 8, 2016, and no deeds vesting title in the subject property were found of record during the period searched.

EDR Environmental LienSearch™ Report

Deed 1:

Title is vested in: State of Hawaii

Legal Description: 79.913 Acres

Legal Current Owner: State of Hawaii

Property Identifiers: 590060060000

Comments: Exhibit B

Comments: Public records of Honolulu County, Hawaii were searched from January 1, 1970 to February 8, 2016, and no deeds vesting title in the subject property were found of record during the period searched.

Deed 1:

Title is vested in: State of Hawaii

Legal Description: 700 Acres

Legal Current Owner: State of Hawaii

Property Identifiers: 590060260000

Comments: Exhibit C

Comments: Public records of Honolulu County, Hawaii were searched from January 1, 1970 to February 8, 2016, and no deeds vesting title in the subject property were found of record during the period searched.

EXAMINER'S NOTE: Lease agreement by the State of Hawaii, as fee simple owner and The United States of America, as tenant, recorded August 20, 1964 at DBV 4821, PG 145.

Comments: Exhibit D.

EDR Environmental LienSearch™ Report

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AUL's: Found ☐ Not Found ☒

EDR Environmental LienSearch™ Report

DEED EXHIBIT A-D

Previous Parcel	Next Parcel	Return to Main Search Page	Honolulu Home	Real Property Home
Owner and Parcel Information Print Owner Info				
Parcel Number	580020020000	Data current as of	February 24, 2016	
Owner Name	STATE OF HAWAII Fee Owner UNITED STATES OF AMERICA Lessee	Project Name		
Location Address	KAMEHAMEHA HWY	Plat Map	Plat Map PDF	
Property Class	AGRICULTURAL	Parcel Map	GIS Parcel Map	
Land Area (approximate sq ft)	19,589,803	Legal Information		
Land Area (acres)	449.72			

Assessment Information				Show Historical Assessments Print Assessment Info							
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
2016	AGRICULTURAL	\$ 17,988,800	\$ 0	\$ 17,988,800	\$ 0	\$ 0	\$ 0	\$ 0	\$ 17,988,800	\$ 17,988,800	\$ 0

<p>Appeal Information Print Appeal Info</p> <p>No appeal information on parcel.</p>
--

Land Information Print Land			
Property Class	Square Footage	Acreage	Agricultural Use Indicator
AGRICULTURAL	19,589,803	449.72	

Improvement Information
No improvement information available for this parcel.

Other Building and Yard Improvements			
Description	Quantity	Year Built	Area
No information associated with this parcel.			

Sales Information Print Sales Info								
Sale Date	Sale Amount	Instrument #	Instrument Type	Instrument Description	Date of Recording	Land Court Document Number	Cert #	Book/Page
06/28/2005		2005-128868	FEE CONVEYANCE	Grant of easement	06/29/2005			
06/05/1997								

Current Tax Bill Information			2016 Tax Payments	Show Historical Taxes	Treasury				
			Division	Current Bill					
Tax Period	Description	Original Due Date	Taxes Assessment	Tax Credits	Net Tax	Penalty	Interest	Other	Amount Due
									\$ 0.00
No Tax Information available on this parcel.									

Previous Parcel	Next Parcel	Return to Main Search Page	Honolulu Home	Real Property Home
---------------------------------	-----------------------------	--	-------------------------------	------------------------------------

The Honolulu Tax Assessor's Office makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation. Website Updated: February 24, 2016

© 2014 by City and County of Honolulu Real Property Tax Office | Website design by [qPublic.net](#)

Previous Parcel	Next Parcel	Return to Main Search Page	Honolulu Home	Real Property Home
Owner and Parcel Information Print Owner Info				
Parcel Number	590060060000	Data current as of	February 24, 2016	
Owner Name	STATE OF HAWAII Fee Owner	Project Name		
Location Address	KAMEHAMEHA HWY	Plat Map	Plat Map PDF	
Property Class	PRESERVATION	Parcel Map	GIS Parcel Map	
Land Area (approximate sq ft)	3,176,090	Legal Information		
Land Area (acres)	72.913			

Assessment Information Show Historical Assessments Print Assessment Info											
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
2016	PRESERVATION	\$ 218,700	\$ 0	\$ 218,700	\$ 0	\$ 0	\$ 0	\$ 0	\$ 218,700	\$ 218,700	\$ 0

Appeal Information Print Appeal Info											
No appeal information on parcel.											

Land Information Print Land			
Property Class	Square Footage	Acreage	Agricultural Use Indicator
PRESERVATION	3,176,090	72.913	

Improvement Information											
No improvement information available for this parcel.											

Other Building and Yard Improvements			
Description	Quantity	Year Built	Area
No information associated with this parcel.			

Permit Information Department of Planning and Permitting (DPP)			
Date	Permit Number	Reason	Permit Amount
11/21/1997	410844		\$ 15,000
09/08/1997	407818		\$ 32,000

Sales Information Print Sales Info								
Sale Date	Sale Amount	Instrument #	Instrument Type	Instrument Description	Date of Recording	Land Court Document Number	Cert #	Book/Page
No sales information associated with this parcel.								

Current Tax Bill Information 2016 Tax Payments Show Historical Taxes Treasury Division Current Bill										
Tax Period	Description	Original Due Date	Taxes Assessment	Tax Credits	Net Tax	Penalty	Interest	Other	Amount Due	
									\$ 0.00	

No Tax Information available on this parcel.

[Previous Parcel](#)

[Next Parcel](#)

[Return to Main Search Page](#)

[Honolulu Home](#)

[Real Property Home](#)

The Honolulu Tax Assessor's Office makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation. Website Updated: February 24, 2016

© 2014 by City and County of Honolulu Real Property Tax Office | Website design by [gPublic.net](#)

Previous Parcel	Next Parcel	Return to Main Search Page	Honolulu Home	Real Property Home
Owner and Parcel Information Print Owner Info				
Parcel Number	590060260000		Data current as of	February 24, 2016
Owner Name	STATE OF HAWAII Fee Owner UNITED STATES OF AMERICA Lessee		Project Name	
Location Address	KAMEHAMEHA HWY		Plat Map	Plat Map PDF
Property Class	PRESERVATION		Parcel Map	GIS Parcel Map
Land Area (approximate sq ft)	30,492,000		Legal Information	
Land Area (acres)	700			

Assessment Information Show Historical Assessments Print Assessment Info											
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
2016	PRESERVATION	\$ 1,050,000	\$ 0	\$ 1,050,000	\$ 0	\$ 9,000	\$ 9,000	\$ 0	\$ 1,059,000	\$ 1,059,000	\$ 0

Appeal Information Print Appeal Info	
No appeal information on parcel.	

Land Information Print Land			
Property Class	Square Footage	Acreage	Agricultural Use Indicator
PRESERVATION	30,492,000	700	

Improvement Information	
No improvement information available for this parcel.	

Other Building and Yard Improvements			
Description	Quantity	Year Built	Area
No information associated with this parcel.			

Sales Information Print Sales Info								
Sale Date	Sale Amount	Instrument #	Instrument Type	Instrument Description	Date of Recording	Land Court Document Number	Cert #	Book/Page
06/28/2005		2005-128868	FEE CONVEYANCE	Grant of easement	06/29/2005			

Current Tax Bill Information			2016 Tax Payments		Show Historical Taxes			Treasury	
			Division	Current Bill					
Tax Period	Description	Original Due Date	Taxes Assessment	Tax Credits	Net Tax	Penalty	Interest	Other	Amount Due
									\$ 0.00
No Tax Information available on this parcel.									

Previous Parcel	Next Parcel	Return to Main Search Page	Honolulu Home	Real Property Home
---------------------------------	-----------------------------	--	-------------------------------	------------------------------------

The Honolulu Tax Assessor's Office makes every effort to produce the most accurate information possible. No warranties, expressed or implied, are provided for the data herein, its use or interpretation. Website Updated: February 24, 2016

© 2014 by City and County of Honolulu Real Property Tax Office | Website design by gPublic.net

RECORDATION REQUESTED BY:

U. S. Army Engineer Division,
Pacific Ocean

AFTER RECORDATION, RETURN TO:

U. S. Army Engineer Division,
Pacific Ocean
Phone: 542986

STATE OF HAWAII
BUREAU OF CONVEYANCES
RECEIVED FOR RECORD

LIBER 4821 PAGE 445
64 AUG 20 PM 1:37

Certified to be a true and correct copy
of the original presented for record.
MICHIO ADACHI, Registrar.

Clerk

By:

RETURN BY: MAIL () PICKUP (X)

SPACE ABOVE THIS LINE FOR
REGISTRAR'S USE

**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

**STATE GENERAL LEASE NO. S-3850
U. S. LEASE, CONTRACT NO. DA-94-626-ENG-77**

1. THIS LEASE, made and entered into this 17th
day of AUGUST, in the year one thousand nine hundred
and sixty-four by and between the STATE OF HAWAII, represented
by its Board of Land and Natural Resources, whose address is
P. O. Box 621, Honolulu, Hawaii 96809, and whose interest in
the property hereinafter described is that of fee simple owner,
for itself, its administrators, successors, and assigns, here-
inafter called the "Lessor", and THE UNITED STATES OF AMERICA,
hereinafter called the "Government":

WITNESSETH: The parties hereto for the consideration
hereinafter mentioned covenant and agree as follows:

2. The Lessor hereby leases to the Government
two (2) parcels of land described on Exhibit "A" attached
hereto and hereby made a part hereof, all to be used for the
following purpose: Military purposes.

3. TO HAVE AND TO HOLD the said premises for a term of sixty-five (65) years beginning August 17, 1964 and ending August 16, 2029; subject, however, to the rights of the Lessor and the Government respectively to terminate this lease in accordance with provisions 6 and 19 hereof.

4. The Government shall pay the Lessor rent at the following rate: ONE DOLLAR (\$1.00) for the term of the lease, the receipt and sufficiency whereof is hereby acknowledged.

5. The Government shall have the right, during the existence of this lease, to attach fixtures, and erect structures or signs, in or upon the premises hereby leased, which fixtures and structures or signs, so placed in, upon or attached to the said premises shall be and remain the property of the Government and may be removed or otherwise disposed of by the Government. In addition, the Government shall post and maintain signs on roads and trails entering dangerous areas to provide a warning of any dangerous or hazardous activities; provided, that the information placed on the posted signs anywhere within the demised premises shall not be incompatible with the terms of this lease and, in those instances where joint use of an area is permitted, the information placed on the signs may include the permitted joint activities.

6. The Government may terminate this lease at any time by giving thirty (30) days' notice in writing to the Lessor.

7. The rights herein granted to the Government for use of the above-described Parcel 1 are subject to grazing rights held by J. J. Cambra, Jr., under Revocable Permit No. 868 dated 28 April 1963; consequently, the Government shall exercise caution when firing in Parcel 1. In addition, the Lessor reserves the right to outlease joint use of Parcel 1 hereof for grazing purposes; provided, however, that the Lessor hereby agrees to cancel any such grazing lease within sixty (60) days after receipt of written notice from the Government that grazing activities on the premises are contributing to excessive erosion or are seriously interfering with training activities.

8. The Lessor will not be responsible for any loss, liability, claim, or demand for property damage, property loss, or personal injury, including but not limited to death, arising out of any injury or damage caused by or resulting from any act or omission of the Federal Government in connection with the Federal Government's use of the premises described herein.

9. In recognition of public use of the demised premises, the Government shall make every reasonable effort to stockpile supplies and equipment in an orderly fashion and away from established roads and hiking trails and to remove or deactivate all live or blank ammunition upon completion of a training exercise or prior to entry by the said public, whichever is sooner.

10. The Government shall obtain the written consent of the Lessor prior to constructing any road or

building of the type for which design and construction plans are normally required; provided, however, that such consent shall not be arbitrarily withheld. The Government agrees that its training roads which provide primary access within or across the demised premises will be maintained to normal standards for training area roads with due regard for preventing unnecessary erosion; provided, however, that the Government shall be under no obligation to maintain roads during periods when the necessary engineer troops are absent from Oahu.

11. The Government shall take every reasonable precaution to prevent the start of any fire in the areas herein demised and shall take immediate and continuing action to extinguish any and all fires started by or resulting from Government activities. Further, the Government shall establish and at all times maintain a standard operating procedure for fighting fires within or adjacent to the subject leased property resulting from Government training activities during its use and occupancy of the premises; provided, further, that Government personnel actually using the premises shall be familiar with said standard procedure including the means of implementation.

12. In recognition of the limited amount of land available for public use, of the importance of forest reserves and watersheds in Hawaii, and of the necessity for preventing or controlling erosion, the Government hereby agrees that, commensurate with training activities, it will take reasonable action during its use of the premises herein demised to prevent

unnecessary damage to or destruction of vegetation, wild life and forest cover, geological features and related natural resources and improvements constructed by the Lessor, help preserve the natural beauty of the premises, avoid pollution or contamination of all ground and surface waters and remove or bury all trash, garbage and other waste materials resulting from Government use of the said premises.

13. Except as required for defense purposes in times of national emergency, the Government shall not deliberately appropriate, damage, remove, excavate, disfigure, deface or destroy any object of antiquity, prehistoric ruin or monument.

14. In the event at some future date it is deemed necessary by the Lessor to use ground or surface water on the premises herein demised as a source of public water supply, the area providing said ground or surface water shall be withdrawn from military use upon request of the Lessor and with the Government's concurrence.

15. The Government shall not use any portion of the demised premises as an impact area for explosive or incendiary munitions of any type and shall limit firing on the premises to weapons not larger than .50 caliber provided, however, the Government may also fire inert 3.5-inch rockets or weapons of similar size or purpose as long as such training will not cause fires.

16. When the demised premises or any part thereof is not scheduled for Government training purposes from dusk Friday to midnight Sunday and from dawn to midnight on national holidays, the said premises shall be available to the Lessor which may open them to the general public who shall be subject to the laws of the State of Hawaii during their

presence on the premises which shall be for such limited or unlimited purposes as may be designated by the Lessor; provided, that the Lessor may declare the whole or any portion of the demised premises during such open periods as a public shooting or fishing ground, and the Lessor shall have the right to issue written permits to hunters and fishermen, subject to rules and regulations issued by the said Lessor; and, provided further, however, that permitted hunting and fishing activities shall be coordinated with the training activities of the Government on the demised premises and the Lessor shall obtain from such permittees written releases which will hold the Government and the Lessor harmless from any accidental injuries or deaths suffered by the holders of such permits; and, provided still further, that the Government shall make an effort to schedule its training exercises in such a manner as to enable the general public to use the subject area during the periods hereinabove mentioned and shall publish a notice in two papers of general circulation at least three (3) days prior to each said weekend or holiday on which the premises or any portion thereof will be used for training exercises except when prohibited therefrom by overriding military contingencies. The Government shall not be responsible for the control or safety of the general public, nor shall the Government be responsible for the correction of unsanitary conditions due to general public use of the demised premises.

17. The Lessor hereby agrees that, commensurate with the public use of the premises herein demised, it will take reasonable action during the use of the said premises by the general public; to remove or bury trash, garbage and other waste material resulting from use of the said premises by the general public.

18. The Lessor shall have the right to erect signs and construct capital improvements within the leased property at locations mutually agreed upon by the parties hereto, in connection with water conservation, public water consumption, forestry, recreational and related purposes, said capital improvements including but not limited in any way to the construction, maintenance and/or improvements of roads and trails; provided, however, that notwithstanding any other provisions of this lease to the contrary, the Government hereby accepts the responsibility and liability for repairs of any damage which can be demonstrated to have been the direct result of military activities, to improvements constructed by the Lessor subsequent to the date of this lease.

19. In the event that the leased property is not used by the Government for a period of three (3) consecutive years, this lease may be terminated upon ninety (90) days' written notice from the Lessor to the Government, provided, however, that if prior to the expiration of the aforesaid 90-day period the Secretary of the Army shall find and determine that the leased property is required for military purposes and shall notify the Lessor in writing of this finding and determination, this lease will continue in effect; provided, further, that periods during which a national emergency has been declared by the President or the Congress of the United States and periods during which major combat elements are temporarily deployed away from the State of Hawaii shall not be included in the said three-year period. During such period of temporary deployment the parties hereto shall discuss and give consideration to and provide for

the additional public use of the demised premises compatible with then existing military training requirements. The Government will assure that current military standards concerning adequate utilization are applied to these premises and will assure that such use is known and is a matter of record and available to the Lessor upon request.

20. Subject to obtaining advance clearance from the plans and training office of the Government's controlling agency, or any other designated Government agency, officials and employees of the Lessor and any person or persons duly authorized by the Lessor shall have the right to enter upon the demised premises at all reasonable times to conduct any operations that will not unduly interfere with activities of the Government under the terms of this lease; provided, however, that such advance clearance shall not be unreasonably withheld.

21. All persons legally entitled under the provisions of this lease to be on the said premises shall have a nonexclusive right to use all Government roads and trails except when such use will interfere with the training activities of the Government or said roads and trails have been restricted, by a duly posted sign, as security or danger areas by the Government.

22. The Lessor reserves unto itself all ground and surface water, ores, minerals and mineral rights of every description on, in or under the demised premises but shall exploit or permit others to exploit the said ores, minerals and mineral rights only with the consent of the Government. Notwithstanding the foregoing reservation, the Government shall have the right to develop and use for road construction projects on the demised premises sources of coral, rock and similar

materials occurring naturally on the said premises and to use said ground and surface waters for purposes incident to the rights granted by this lease.

23. The Government will not be responsible for any loss, liability, claim or demand for any property damage, property loss, or personal injury, including but not limited to death, arising out of injury or damage caused by or resulting from any act or omission of the Lessor or the general public in connection with their use of the premises described herein.

24. Any notice under the terms of this lease shall be in writing signed by a duly authorized representative of the party giving such notice, and if given by the Government shall be addressed to the Lessor at P. O. Box 621, Honolulu, Hawaii 96809, and if given by the Lessor shall be addressed to the Division Engineer, U. S. Army Engineer Division, Pacific Ocean, Building 96, Fort Armstrong, Honolulu, Hawaii, Attention: Real Estate Division, or at such location and to such other agency as may be mutually agreed upon by the parties hereto.

25. The Government hereby agrees that the use and enjoyment of the land herein demised shall not be in support of any policy which discriminates against anyone based upon race, creed or color.

26. The Government shall not grant any interest in the demised premises; provided, however, that the Government shall have the right to grant the use of portions of the premises for temporary activities of Governmental agencies or their contractors in which case any land rental derived from such use of the premises shall be covered into the Treasury of the State of Hawaii

27. Subject to obtaining the prior approval of the Government, the Lessor reserves the right to grant rights or privileges to others not inconsistent with the terms of this lease affecting the whole or any portion of the demised premises.

28. The Government agrees to reforest areas, as expeditiously as practicable and within a period mutually agreed upon, where it can be demonstrated that substantial forest cover, including trees, has been destroyed as a direct result of Government activities; provided, however, that the Lessor shall obtain advance Government approval of all future plantings proposed by the Lessor

29. The Government shall surrender possession of the premises upon the expiration or sooner termination of this lease and, if required by the Lessor, shall within sixty (60) days thereafter, or within such additional time as may be mutually agreed upon, remove its signs and other structures; provided that in lieu of removal of structures the Government may abandon them in place. The Government shall also remove weapons and shells used in connection with its training activities to the extent that a technical and economic capability exists and provided that expenditures for removal of shells will not exceed the fair market value of the land.

30. (a) That, except as otherwise provided in this lease, any dispute concerning a question of fact arising under this lease which is not disposed of by agreement shall be decided by the Division Engineer, U. S. Army Engineer Division, Pacific Ocean, Honolulu, Hawaii, hereinafter referred to as said officer, who shall within a reasonable time reduce his decision and the reasons therefor to writing and mail or otherwise furnish a copy thereof to the Lessor. The decision of

the said officer shall be final and conclusive unless, within thirty (30) days from the date of receipt of such copy, the Lessor mails or otherwise furnishes to the said officer a written appeal addressed to the Secretary of the Army. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence. In connection with any appeal proceeding under this condition, the Lessor shall be afforded an opportunity to be heard and to offer evidence in support of its appeal.

(b) This Condition does not preclude consideration of law questions in connection with decisions provided for in paragraph (a) above; provided, that nothing in this Condition shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

(c) That all appeals under this provision shall be processed expeditiously.

31. The Government's compliance with all obligations placed on it by this lease shall be subject to the availability of funds.

32. The Lessor's compliance with any obligations which may be placed on it by this lease shall be subject to the availability of funds and/or personnel.

33. The Lessor warrants that no person or selling agency has been employed or retained to solicit or secure this lease upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide

employees or bona fide established commercial or selling agencies maintained by the Lessor for the purposes of securing business. For breach or violation of this warranty the Government shall have the right to annul this lease without liability or in its discretion to deduct from the lease price or consideration the full amount of such commission, percentage, brokerage, or contingent fee.

34. No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this lease or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this lease if made with a corporation for its general benefit.

35. (a) The Government may, by written notice to the Lessor, terminate the right of the Lessor to proceed under this lease if it is found, after notice and hearing, by the Secretary of the Army or his duly authorized representative, that gratuities (in the form of entertainment, gifts, or otherwise) were offered or given by the Lessor, or any agent or representative of the Lessor, to any officer or employee of the Government with a view toward securing a lease or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing of such lease; provided that the existence of facts upon which the Secretary of the Army or his duly authorized representative makes such findings shall be in issue and may be reviewed in any competent court.

(b) In the event this lease is terminated as provided in paragraph (a) hereof, the Government shall be entitled (i) to pursue the same remedies against the Lessor

as it could pursue in the event of a breach of the lease by the Lessor, and (ii) as a penalty in addition to any other damages to which it may be entitled by law, to exemplary damages in an amount (as determined by the Secretary of the Army or his duly authorized representative) which shall be not less than three or more than ten times the costs incurred by the Lessor in providing any such gratuities to any such officer or employee.

(c) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this lease.

36. This lease is not subject to Title 10, United States Code, Section 2662.

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names as of the date first above written.

STATE OF HAWAII

By

[Redacted Signature]

Board of Land and Natural Resources



And By

[Redacted Signature]

Member
Board of Land and Natural Resources

THE UNITED STATES OF AMERICA

By

[Redacted Signature]

Deputy Assistant Secretary of the Army (I&L)
(Installations)

APPROVED AS TO FORM:

[Redacted Signature]

Attorney General
State of Hawaii

[Redacted Signature]

Deputy Attorney General
State of Hawaii

On this 17th day of August, 1964, before me
appeared _____, to me personally known
who, being by me duly sworn, did say that he is the _____
DEPUTY ASSISTANT SECRETARY OF ARMY
(1441-Installations), and that the seal affixed to
said instrument is the seal of the Department of the Army and that the
said instrument was signed and sealed in behalf of said United States
of America under the authority therein mentioned, and said _____
acknowledged said instrument to be the free act and
deed of said United States of America.

In witness whereof I have hereunto set my hand and official seal.



NOTARY PUBLIC
Arlington County, Virginia

*My Commission
Expires November 6, 1966*

FORM 314 Certificate of Official Character.

Commonwealth of Virginia

County of Arlington

to wit:

I, _____ Clerk of the Circuit Court of the County aforesaid in the State of Virginia, the
same being a Court of record, do certify that _____
whose genuine signature is attached to the foregoing certificate is, and was at the time of signing the same,
a Notary Public in and for the said County, duly commissioned and qualified, residing in said County and
duly authorized, by virtue of his office, to take acknowledgements to deeds and other writings, and to
administer oaths under the laws of this State. I further certify that the official acts of the said
_____ are entitled to full faith and credit; that I am
well acquainted with the handwriting of the said _____
and verily believe his signature to the foregoing proof or acknowledgment to be genuine; and that his
attestation is in due form of law. I further certify that the laws of Virginia do not require the im-
print of the Notary's seal to be filed with the authenticating officer.

In testimony whereof I have hereunto set my hand and affixed the seal of the said Court this
17th day of August, 1964, and in the 189th year of the Common-
wealth.

_____, Clerk.

KAHUKU TRAINING AREAPARCEL 1

A parcel of land situate at Waialeale and Pahipahialua, Koolauloa, Oahu, Hawaii, and being the mauka portion of the Government (Crown) Land of Waialeale and a portion of the land of Pahipahialua (R.P. 5688, L.C.Aw. 8559-B, Apana 37 Part 1 to W. C. Lunalilo), conveyed to the Territory of Hawaii by Trustees of the Estate of James Campbell by deed dated May 19, 1910, recorded in Book 327 on Page 464. (Land Office Deed 1651.)

Beginning at a pipe in concrete marked 22 at the west corner of this parcel of land and at the top of the pali on the west side of Kupahu Gulch, on the boundary between the lands of Waialeale and Kaunala, and at the end of Course 7 of Land Court Application 1095, the coordinates of said point of beginning referred to Government Survey Triangulation Station "Waialeale" being 435.25 feet South and 2,395.43 feet West, and running by azimuths measured clockwise from true South:

1. 246° 51' 555.6 feet across Kupahu Gulch to the top of the pali on the east side of Kupahu Gulch;
 Thence along the top edge of the pali to the boundary between the lands of Waialeale and Pahipahialua, the traverse between points on the top edge of said pali being:
2. 246° 51' 500.0 feet to a pipe;
3. 242° 48' 714.90 feet to a pipe;
4. 227° 23' 603.20 feet to a pipe;
5. 237° 04' 174.70 feet to a pipe;
6. 272° 09' 305.70 feet to a pipe;
7. 297° 09' 30" 253.60 feet to a pipe;
8. 218° 32' 1,541.22 feet to the boundary between the lands of Waialeale and Pahipahialua;
9. 335° 23' 400.00 feet along the land of Pahipahialua (Land Court Application 1095);
10. 254° 05' 248.90 feet along the land of Pahipahialua (Land Court Application 1095);

11. 346° 53' 396.30 feet along the land of Pahipahialua (Land Court Application 1095);
12. 346° 19' 1,757.20 feet along the land of Pahipahialua (Land Court Application 1095) to a pipe in concrete marked 5;
13. 344° 27' 1,312.00 feet along the land of Pahipahialua (Land Court Application 1095);
14. 253° 48' 213.50 feet along portion of the land of Pahipahialua (Land Court Application 1095);
15. 344° 33' 1,329.30 feet along portion of the land of Pahipahialua (Land Court Application 1095);
16. 59° 59' 252.90 feet along portion of the land of Pahipahialua (Land Court Application 1095);
17. 346° 55' 270.60 feet along the land of Pahipahialua (Land Court Application 1095);
18. 337° 16' 808.20 feet along the land of Pahipahialua (Land Court Application 1095);
19. 55° 45' 583.00 feet along Grant 5277 to Trustees of the Estate of James Campbell (Land Court Application 1095);
20. 113° 45' 219.00 feet along Grant 5277 to Trustees of the Estate of James Campbell (Land Court Application 1095);
21. 161° 55' 456.00 feet along Grant 5277 to Trustees of the Estate of James Campbell (Land Court Application 1095);
22. 116° 00' 341.00 feet along Grant 5277 to Trustees of the Estate of James Campbell (Land Court Application 1095);
23. 166° 10' 273.00 feet along Grant 5277 to Trustees of the Estate of James Campbell (Land Court Application 1095);

24. 30° 51' 1,136.50 feet along Grant 5277 to Trustees of the Estate of James Campbell (Land Court Application 1095), to a pipe in concrete marked 17 on the boundary between the lands of Waialeale and Kaunala;
25. 135° 33' 3,759.00 feet along the land of Kaunala (Land Court Application 1095);
26. 134° 14' 1,623.00 feet along the land of Kaunala (Land Court Application 1095);
27. 152° 04' 365.00 feet along the land of Kaunala (Land Court Application 1095);
28. 170° 26' 322.30 feet along the land of Kaunala (Land Court Application 1095);
29. 193° 06' 86.10 feet along the land of Kaunala (Land Court Application 1095) to the point of beginning and containing an AREA OF 449.72 ACRES, more or less; together with a perpetual, assignable easement and a right-of-way to use, maintain and repair the existing access road across adjoining ceded land of the State of Hawaii.

PARCEL 2

A parcel of land situated at Koolauloa, Oahu, Hawaii.

Beginning at an inch pipe on a hill in the ridge bounding the lands of Paumalu and Kaunala and at the East corner of Lot 23 of the Pupukea-Paumalu Homesteads, from which pipe the true azimuth and distance to Government Survey Trig. Station "Waialeale" is 162° 43' 30" 10244.0 feet, as shown on Government Survey Registered Map No. 2252, and running by true azimuths;

1. On along the ridge along the land of Kaunala to "Puu Moa" a point in the ridge at the head of the Paumalu Gulch, the direct azimuth and distance being: 328° 00' 6785.0 feet;
2. Thence down the ridge along the land of Waimea to "Puu Ki" a point in the ridge at the head of the land of Pupukea, the direct azimuth and distance being: 86° 10' 6660.0 feet;
3. 162° 00' 500.00 feet along the remainder of Pupukea-Paumalu Forest Reserve to the center of Kaleleiki Stream;

4. Thence along the center of Kaleleiki Stream to the boundary of Lot 21 of Pupukea-Paumalu Homesteads, the direct azimuth and distance being: $159^{\circ} 30'$ 4117.00 feet;
5. $275^{\circ} 30'$ 507.00 feet along Lot 21 of Pupukea-Paumalu Homesteads to an iron pipe;
6. $219^{\circ} 37'$ 300.00 feet along same to an iron pipe;
7. $270^{\circ} 01' 30''$ 2,218.00 feet along same down bluff to the center of the Paumalu Stream, and up bluff along Lot 22 to an iron pipe;
8. $225^{\circ} 46'$ 2,417.00 feet along Lots 22 and 23 and across the Aimuu Gulch to the point of beginning and containing an AREA OF 700 ACRES, more or less.

Kahuku

Haleiwa, HI 96712

Inquiry Number: 4542430.5w

February 23, 2016

EDR DataMap™ Well Search Report

Thank you for your business.
Please contact EDR at [REDACTED]
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2016 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

GEOCHECK VERSION 2.1 SUMMARY

FEDERAL DATABASE WELL INFORMATION

MAP ID	WELL ID
1	USGS40000271443
2	USGS40000271442
4	USGS40000271439
4	USGS40000271438
4	USGS40000271437
5	USGS40000271435
6	USGS40000271434
7	USGS40000271430
7	USGS40000271429
8	USGS40000271427
8	USGS40000271428
8	USGS40000271423
8	USGS40000271426
8	USGS40000271425
8	USGS40000271424
7	USGS40000271422
10	USGS40000271416
11	USGS40000271400
12	USGS40000271399
14	USGS40000271397
14	USGS40000271396
13	USGS40000271398
15	USGS40000271395
15	USGS40000271394
16	USGS40000271379
18	USGS40000271347
19	USGS40000271346
20	USGS40000271345
21	USGS40000271343

STATE WATER WELL INFORMATION

MAP ID	WELL ID
2	HI9000000002624
3	HI9000000002628
4	HI9000000002627
4	HI9000000002625
4	HI9000000002626
6	HI9000000002637
5	HI9000000002636
7	HI9000000002631
7	HI9000000002630
8	HI9000000002639
8	HI9000000002635
8	HI9000000002632
8	HI9000000002634
8	HI9000000002633
7	HI9000000002629
9	HI9000000002638
12	HI9000000002600
13	HI9000000002599
14	HI9000000002594

GEOCHECK VERSION 2.1 SUMMARY

STATE WATER WELL INFORMATION

MAP ID	WELL ID
14	HI9000000002595
16	HI9000000002593
17	HI9000000002601
19	HI9000000002571
20	HI9000000002570
21	HI9000000002569

PUBLIC WATER SUPPLY SYSTEM INFORMATION

Map ID: 5
PWS ID: HI0000366
PWS Name: BWS WAIALEE
57-300 KAM HIGHWAY
WAIALEE, OAHU, HI 96712

PWS currently has or had major violation(s) or enforcement:

Map ID: 8
PWS ID: HI0000366
PWS Name: BWS WAIALEE
57-300 KAM HIGHWAY
WAIALEE, OAHU, HI 96712

PWS currently has or had major violation(s) or enforcement:

Map ID: 22
PWS ID: HI0000335
PWS Name: WAIPAHI-EWA-WAIAEAE
87-1070 FARRINGTON HWY
WAIAEAE, OAHU, HI 96792

PWS currently has or had major violation(s) or enforcement:

USGS TOPOGRAPHIC MAP(S)

21157-E8 HAUULA, HI
21157-F8 KAHUKU, HI
21158-E1 HALEIWA, HI
21158-F1 WAIMEA, HI

AREA RADON INFORMATION

Federal Area Radon Information for Zip Code: 96712

Number of sites tested: 1

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	-0.200 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

Federal EPA Radon Zone for HONOLULU County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

GEOCHECK VERSION 2.1 SUMMARY

AREA RADON INFORMATION

Federal Area Radon Information for HONOLULU COUNTY, HI

Number of sites tested: 209

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.015 pCi/L	100%	0%	0%
Living Area - 2nd Floor	0.125 pCi/L	100%	0%	0%
Basement	0.415 pCi/L	96%	4%	0%

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Water Well Information:

Map ID:	1	Site ID:	USGS40000271443
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214141158012701		
Monloc name:	3-4101.01		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6915404
Longitude:	-158.021413	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsyz:	NAD83	Vert measure val:	5.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsyz:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19720613	Welldepth:	15.2
Welldepth units:	ft	Wellholedepth:	15.2
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

Map ID:	2	Site ID:	USGS40000271442
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214140158002801		
Monloc name:	3-4100-02 W338-1		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.691263
Longitude:	-158.0050244	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsyz:	NAD83	Vert measure val:	37.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsyz:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Aquifer type:	Not Reported	Welldepth:	88
Construction date:	19391211	Wellholeddepth:	Not Reported
Welldepth units:	ft		
Wellholeddepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	4	Site ID:	USGS40000271439
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214133158003201		
Monloc name:	3-4100-05 KUILIMA OPANA 3		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6893188
Longitude:	-158.0061356	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsyz:	NAD83	Vert measure val:	125.5
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsyz:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19900820	Welldepth:	296
Welldepth units:	ft	Wellholeddepth:	296
Wellholeddepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel

1990-08-24	112.	

Map ID:	4	Site ID:	USGS40000271438
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214132158003401		
Monloc name:	3-4100-03 W338-2		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.689041
Longitude:	-158.006691	Sourcemap scale:	24000

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	140.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19690101	Welldepth:	307
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	4	Site ID:	USGS40000271437
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214132158003101		
Monloc name:	3-4100-04 KUILIMA		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.689041
Longitude:	-158.0058578	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	131.0
Vert measure units:	feet	Vertacc measure val:	.5
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19860805	Welldepth:	263
Welldepth units:	ft	Wellholedepth:	263
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

Map ID:	5	Site ID:	USGS40000271435
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214131158011601		
Monloc name:	3-4101-08 Waialeale II, Oahu, HI		
Monloc type:	Well		
Monloc desc:	former local no. W337-6		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6887631
Longitude:	-158.0183576	Sourcemap scale:	24000

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refs:	NAD83	Vert measure val:	63.00
Vert measure units:	feet	Vertacc measure val:	1
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refs:	HILOCAL	Countrycode:	US
Aquifername:	Hawaii volcanic-rock aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19570701	Welldepth:	141
Welldepth units:	ft	Wellholedepth:	141
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

Map ID:	6	Site ID:	USGS40000271434
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214130158013001		
Monloc name:	3-4101-09 W337-5		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6884854
Longitude:	-158.0222465	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refs:	NAD83	Vert measure val:	19.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refs:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19570101	Welldepth:	131
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	7	Site ID:	USGS40000271430
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214125158013401		
Monloc name:	3-4101-03 Waialeale, Oahu, HI		
Monloc type:	Well		
Monloc desc:	former local no. W337		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6870965
Longitude:	-158.0233576	Sourcemap scale:	24000

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refs:	NAD83	Vert measure val:	22
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refs:	HILOCAL	Countrycode:	US
Aquifername:	Hawaii volcanic-rock aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19210101	Welldepth:	61
Welldepth units:	ft	Wellholedepth:	63
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 52

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2004-08-03		13.02	2004-06-22		12.87
2004-04-21		12.54	2004-02-12		12.68
2003-12-05		12.61	2003-10-09		12.84
2003-08-08		12.51	2003-06-12		12.56
2003-04-22		12.52	2003-03-11		12.59
2003-01-30		12.90	2002-11-26		12.84
2002-10-09		12.63	2002-09-18		12.44
2002-07-24		12.16	2002-05-02		12.21
2002-02-19		12.26	2001-12-27		12.55
2001-09-20		12.42	2001-08-08		12.38
2001-06-29		12.44	2001-02-28		12.54
2000-12-13		12.59	2000-10-18		12.54
2000-09-18		12.56	2000-07-28		12.39
2000-05-23		12.42	2000-03-13		12.53
2000-01-14		12.81	1999-11-03		12.99
1999-09-10		12.84	1999-07-30		12.73
1999-05-26		13.01	1999-01-29		13.41
1979-12-14	8.83				
Note: Other conditions existed that would affect the measured water level.					
1979-11-02	9.02				
Note: Other conditions existed that would affect the measured water level.					
1979-09-14	9.00				
Note: Other conditions existed that would affect the measured water level.					
1979-08-03	9.14				
Note: Other conditions existed that would affect the measured water level.					
1979-06-22	9.30				
Note: Other conditions existed that would affect the measured water level.					
1979-05-11	9.45				
Note: Other conditions existed that would affect the measured water level.					
1979-03-30	9.40				
Note: Other conditions existed that would affect the measured water level.					
1979-02-09	9.52				
Note: Other conditions existed that would affect the measured water level.					
1979-01-05	9.54				
Note: Other conditions existed that would affect the measured water level.					
1978-11-17	9.50				
Note: Other conditions existed that would affect the measured water level.					
1978-10-06	9.90				
Note: Other conditions existed that would affect the measured water level.					
1978-08-25	10.30				
Note: Other conditions existed that would affect the measured water level.					

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1978-07-07	9.45				
Note: Other conditions existed that would affect the measured water level.					
1978-06-02	9.51				
Note: Other conditions existed that would affect the measured water level.					
1978-04-14	9.37				
Note: Other conditions existed that would affect the measured water level.					
1978-02-24	9.30				
Note: Other conditions existed that would affect the measured water level.					
1978-01-24	9.13				
Note: Other conditions existed that would affect the measured water level.					
1977-10-28	9.25				
Note: Other conditions existed that would affect the measured water level.					

Map ID:	7	Site ID:	USGS40000271429
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214124158013501		
Monloc name:	3-4101-02 W336		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6868188
Longitude:	-158.0236354	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refs:	NAD83	Vert measure val:	22.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refs:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19210101	Welldepth:	83
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	8	Site ID:	USGS40000271427
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214123158012504		
Monloc name:	3-4101-07 Waialeale Well I, Oahu, HI		
Monloc type:	Well		
Monloc desc:	former W337-4, NAWQA entry ver. 05/15/2002 Hunt C		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.68675
Longitude:	-158.0207222	Sourcemap scale:	24000

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Horiz Acc measure:	.1	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsyst:	NAD83	Vert measure val:	81
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsyst:	HILOCAL	Countrycode:	US
Aquifername:	Hawaii volcanic-rock aquifers		
Formation type:	Koolau Volcanic Series, Lava Flows		
Aquifer type:	Unconfined single aquifer		
Construction date:	19450101	Welldepth:	151
Welldepth units:	ft	Wellholedepth:	151
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

Map ID:	8		
Org. Identifier:	USGS-HI	Site ID:	USGS40000271428
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214123158012701		
Monloc name:	3-4101-11 W337-4A		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6865413
Longitude:	-158.0214132	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsyst:	NAD83	Vert measure val:	82.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsyst:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19700516	Welldepth:	263
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	8		
Org. Identifier:	USGS-HI	Site ID:	USGS40000271423
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214123158012500		
Monloc name:	3-4101-04 ,05		
Monloc type:	Well: Multiple wells		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6865413
Longitude:	-158.0208577	Sourcemap scale:	24000

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Horiz Acc measure: 5	Horiz Acc measure units: seconds
Horiz Collection method: Interpolated from map	
Horiz coord refs: NAD83	Vert measure val: 67
Vert measure units: feet	Vertacc measure val: 1
Vert accmeasure units: feet	
Vertcollection method: Unknown	
Vert coord refs: HILOCAL	Countrycode: US
Aquifername: Not Reported	
Formation type: Not Reported	
Aquifer type: Not Reported	
Construction date: Not Reported	Welldepth: Not Reported
Welldepth units: Not Reported	Wellholedepth: Not Reported
Wellholedepth units: Not Reported	

Ground-water levels, Number of Measurements: 0

Map ID: 8	
Org. Identifier: USGS-HI	Site ID: USGS40000271426
Formal name: USGS Hawaii Water Science Center	
Monloc Identifier: USGS-214123158012503	
Monloc name: 3-4101-06 W337-3	
Monloc type: Well	
Monloc desc: Not Reported	
Huc code: 20060000	Drainagearea value: Not Reported
Drainagearea Units: Not Reported	Contrib drainagearea: Not Reported
Contrib drainagearea units: Not Reported	Latitude: 21.6865413
Longitude: -158.0208577	Sourcemap scale: 24000
Horiz Acc measure: 1	Horiz Acc measure units: seconds
Horiz Collection method: Interpolated from map	
Horiz coord refs: NAD83	Vert measure val: 86.00
Vert measure units: feet	Vertacc measure val: 5
Vert accmeasure units: feet	
Vertcollection method: Interpolated from topographic map	
Vert coord refs: HILOCAL	Countrycode: US
Aquifername: Not Reported	
Formation type: Not Reported	
Aquifer type: Not Reported	
Construction date: 19410707	Welldepth: 105
Welldepth units: ft	Wellholedepth: Not Reported
Wellholedepth units: Not Reported	

Ground-water levels, Number of Measurements: 0

Map ID: 8	
Org. Identifier: USGS-HI	Site ID: USGS40000271425
Formal name: USGS Hawaii Water Science Center	
Monloc Identifier: USGS-214123158012502	
Monloc name: 3-4101-05 W337-2	
Monloc type: Well	
Monloc desc: Not Reported	
Huc code: 20060000	Drainagearea value: Not Reported
Drainagearea Units: Not Reported	Contrib drainagearea: Not Reported
Contrib drainagearea units: Not Reported	Latitude: 21.6865413
Longitude: -158.0208577	Sourcemap scale: 24000

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refs:	NAD83	Vert measure val:	75.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refs:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19390813	Welldepth:	90
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	8	Site ID:	USGS40000271424
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214123158012501		
Monloc name:	3-4101-04 W337-1		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6865413
Longitude:	-158.0208577	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refs:	NAD83	Vert measure val:	67.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refs:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19381012	Welldepth:	100
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	7	Site ID:	USGS40000271422
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214122158013501		
Monloc name:	3-4101-01 W335		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6862633
Longitude:	-158.0236354	Sourcemap scale:	24000

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refs:	NAD83	Vert measure val:	22.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refs:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19210101	Welldepth:	78
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	10	Site ID:	USGS40000271416
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214117158013701		
Monloc name:	3-4101-10 W335-10		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6848746
Longitude:	-158.024191	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refs:	NAD83	Vert measure val:	58.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refs:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19590101	Welldepth:	100
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	11	Site ID:	USGS40000271400
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214100158021001		
Monloc name:	3-4102.01A-C		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6809853
Longitude:	-158.032802	Sourcemap scale:	24000

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refs:	NAD83	Vert measure val:	20.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refs:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	Not Reported
Welldepth units:	Not Reported	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	12	Site ID:	USGS40000271399
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214059158021101		
Monloc name:	3-4002.01 -08		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6798743
Longitude:	-158.0336355	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refs:	NAD83	Vert measure val:	19.00
Vert measure units:	feet	Vertacc measure val:	2
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refs:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19720601	Welldepth:	130
Welldepth units:	ft	Wellholedepth:	130
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1972-01-21	19.50	

Map ID: 14

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Org. Identifier:	USGS-HI	Site ID:	USGS40000271397
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214058158021502		
Monloc name:	3-4002-03 W335-2B		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6795965
Longitude:	-158.0347466	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	21.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19410717	Welldepth:	100
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	14		
Org. Identifier:	USGS-HI	Site ID:	USGS40000271396
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214058158021501		
Monloc name:	3-4002-02 W335-2A		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6795965
Longitude:	-158.0347466	Sourcemap scale:	24000
Horiz Acc measure:	5	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	21.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19390901	Welldepth:	85
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Map ID:	13	Site ID:	USGS40000271398
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214058158022401		
Monloc name:	3-4002-07 W335-9		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6795962
Longitude:	-158.0372465	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	20.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19560901	Welldepth:	20
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	15	Site ID:	USGS40000271395
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214056158021002		
Monloc name:	3-4002.02B		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6790412
Longitude:	-158.0333577	Sourcemap scale:	24000
Horiz Acc measure:	10	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	20.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19770101	Welldepth:	130
Welldepth units:	ft	Wellholedepth:	130
Wellholedepth units:	ft		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1976-01-01	19.50	

Map ID:	15	Site ID:	USGS40000271394
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214056158021001		
Monloc name:	3-4002.02A		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6790412
Longitude:	-158.0333577	Sourcemap scale:	24000
Horiz Acc measure:	10	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	20.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19770101	Welldepth:	130
Welldepth units:	ft	Wellholedepth:	130
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1976-01-01	19.50	

Map ID:	16	Site ID:	USGS40000271379
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-214050158021301		
Monloc name:	3-4002-01 W335-1		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6773748
Longitude:	-158.034191	Sourcemap scale:	24000

GEOCHECK VERSION 2.1 **STATE DATABASE WELL INFORMATION**

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	30.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19390831	Welldepth:	50
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

Map ID:	18		
Org. Identifier:	USGS-HI	Site ID:	USGS40000271347
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-213928158024101		
Monloc name:	3-3902-04 PUPUKEA W-2		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6545995
Longitude:	-158.0419696	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	465.8
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19890820	Welldepth:	500
Welldepth units:	ft	Wellholedepth:	500
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1989-08-21	464.3	

Map ID: 19

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Org. Identifier:	USGS-HI	Site ID:	USGS40000271346
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-213925158022501		
Monloc name:	3-3902-03 PUPUKEA W-1		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6537663
Longitude:	-158.0375252	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	419.81
Vert measure units:	feet	Vertacc measure val:	.1
Vert accmeasure units:	feet		
Vertcollection method:	Level or other surveying method		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19881101	Welldepth:	454
Welldepth units:	ft	Wellholedepth:	454
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1988-11-07	415.96	

Map ID:	20		
Org. Identifier:	USGS-HI	Site ID:	USGS40000271345
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-213919158021701		
Monloc name:	3-3902-02 T58		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6520997
Longitude:	-158.035303	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	511.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19560101	Welldepth:	560
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK VERSION 2.1 **STATE DATABASE WELL INFORMATION**

Map ID:	21	Site ID:	USGS40000271343
Org. Identifier:	USGS-HI		
Formal name:	USGS Hawaii Water Science Center		
Monloc Identifier:	USGS-213909158024201		
Monloc name:	3-3902-01 W335-4		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	20060000	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	21.6493223
Longitude:	-158.0422476	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	499.00
Vert measure units:	feet	Vertacc measure val:	5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	HILOCAL	Countrycode:	US
Aquifername:	Not Reported		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19460101	Welldepth:	554
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Water Well Information:

Map ID:	2	Island:	Oahu
Wid:	3-4100-002	Old name:	Not Reported
Well name:	Opana		
Yr drilled:	1939		
Driller:	██████████		
Quad map:	7		
Long83dd:	-158.005		
Lat83dd:	21.691389		
Gps:	0	Utm:	-1
Owner user:	Turtle Bay Mauka Lands, LLC		
Land owner:	Turtle Bay Mauka Lands, LLC		
Pump insta:	Not Reported		
Old number:	338-1	Well type:	Not Reported
Casing dia:	6	Ground el:	37
Well depth:	88		
Solid case:	41	Perf case:	Not Reported
Use:	IRR - Irrigation (non-domestic, non-agriculture)		
Use year:	Not Reported		
Init head:	12.9	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	100		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	25.5	Test unit:	C
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-51
Bot solid:	-4	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 5-7-001:021
Aqui code:	30601		
Latest hd:	Not Reported	Wcr:	01-JAN-39
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002624

Map ID:	3	Island:	Oahu
Wid:	3-4100-006	Old name:	Not Reported
Well name:	Kawela Mauka		
Yr drilled:	2008		
Driller:	Valley Well Drilling, LLC		
Quad map:	7		
Long83dd:	-158.016111		
Lat83dd:	21.689444		
Gps:	-1	Utm:	0
Owner user:	Sean Ginella		
Land owner:	Sean Ginella		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Pump insta:	Valley Well Drilling, LLC	Well type:	ROT
Old number:	Not Reported	Ground el:	52
Casing dia:	8		
Well depth:	98	Perf case:	98
Solid case:	58		
Use:	IRR - Irrigation (non-domestic, non-agriculture)		
Use year:	Not Reported		
Init head:	18.74	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	44		
Test date:	12/4/2008	Test gpm:	360
Test ddown:	3.3	Test chlor:	42
Test temp:	68.8	Test unit:	F
Pump gpm:	280		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	2009		
Draft yr:	Not Reported	Bot hole:	-46
Bot solid:	-6	Bot perf:	-46
Spec capac:	109		
Pump mgd:	.403		
Draft mgd:	Not Reported	Pump elev:	-11
Pump depth:	63	Tmk:	(1) 5-7-001:036
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	06-FEB-09
Pir:	9/9/2009		
Surveyor:	Wilfred Chun		
T:	24000	Site id:	HI9000000002628

Map ID:	4		
Wid:	3-4100-005	Island:	Oahu
Well name:	Opana 3 BWS 338-3	Old name:	Not Reported
Yr drilled:	1990		
Driller:	Roscoe Moss Hawaii Inc		
Quad map:	7		
Long83dd:	-158.006111		
Lat83dd:	21.689444		
Gps:	0	Utm:	-1
Owner user:	Board of Water Supply, BWS		
Land owner:	Turtle Bay Resort LLC		
Pump insta:	Not Reported		
Old number:	Not Reported	Well type:	PER
Casing dia:	12	Ground el:	125
Well depth:	298		
Solid case:	154	Perf case:	Not Reported
Use:	MUN - County		
Use year:	Not Reported		
Init head:	13.5	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	40		
Test date:	9/6/1990	Test gpm:	830

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Test ddown:	19.1	Test chlor:	50
Test temp:	19.6	Test unit:	C
Pump gpm:	700		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-173
Bot solid:	-29	Bot perf:	Not Reported
Spec capac:	43		
Pump mgd:	1.008		
Draft mgd:	Not Reported	Pump elev:	-31
Pump depth:	156	Tmk:	(1) 5-7-002:019
Aqui code:	30601		
Latest hd:	Not Reported	Wcr:	01-SEP-90
Pir:	5/18/2011		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002627

Map ID:	4		
Wid:	3-4100-003	Island:	Oahu
Well name:	Opana 2	Old name:	Not Reported
Yr drilled:	1969		
Driller:	Roscoe Moss Hawaii Inc		
Quad map:	7		
Long83dd:	-158.006667		
Lat83dd:	21.689167		
Gps:	0	Utm:	-1
Owner user:	Board of Water Supply, BWS		
Land owner:	Turtle Bay Resort LLC		
Pump insta:	Not Reported		
Old number:	338-2	Well type:	PER
Casing dia:	16	Ground el:	140
Well depth:	307		
Solid case:	159	Perf case:	Not Reported
Use:	MUN - County		
Use year:	Not Reported		
Init head:	10	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	31		
Test date:	8/18/1969	Test gpm:	1780
Test ddown:	21.6	Test chlor:	31
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-167
Bot solid:	-19	Bot perf:	Not Reported
Spec capac:	82		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Pump mgd:	0	Pump elev:	Not Reported
Draft mgd:	Not Reported	Tmk:	(1) 5-7-002:019
Pump depth:	Not Reported		
Aqui code:	30601	Wcr:	29-AUG-69
Latest hd:	Not Reported		
Pir:	Not Reported		
Surveyor:	Not Reported	Site id:	HI9000000002625
T:	Not Reported		

Map ID:	4	Island:	Oahu
Wid:	3-4100-004	Old name:	Not Reported
Well name:	Opana 1 BWS 338-1		
Yr drilled:	1986		
Driller:	Roscoe Moss Hawaii Inc		
Quad map:	7		
Long83dd:	-158.005833		
Lat83dd:	21.689167		
Gps:	0	Utm:	-1
Owner user:	Turtle Bay Resort LLC		
Land owner:	Turtle Bay Resort LLC		
Pump insta:	Not Reported		
Old number:	Not Reported	Well type:	PER
Casing dia:	12	Ground el:	131
Well depth:	263		
Solid case:	160	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	8/6/1986	Test gpm:	700
Test ddown:	1.9	Test chlor:	26
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	700		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-132
Bot solid:	-29	Bot perf:	Not Reported
Spec capac:	368		
Pump mgd:	1.008		
Draft mgd:	Not Reported	Pump elev:	-27
Pump depth:	158	Tmk:	(1) 5-7-002:019
Aqui code:	30601		
Latest hd:	Not Reported	Wcr:	01-SEP-86
Pir:	5/18/2011		
Surveyor:	Not Reported	Site id:	HI9000000002626
T:	Not Reported		

GEOCHECK VERSION 2.1 **STATE DATABASE WELL INFORMATION**

Map ID:	6	Island:	Oahu
Wid:	3-4101-009	Old name:	Not Reported
Well name:	Waialeale		
Yr drilled:	1957		
Driller:	Samson/Smock		
Quad map:	7		
Long83dd:	-158.022222		
Lat83dd:	21.688611		
Gps:	0	Utm:	-1
Owner user:	Y. Koki		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	Not Reported	Well type:	Not Reported
Casing dia:	8	Ground el:	19
Well depth:	131		
Solid case:	52	Perf case:	Not Reported
Use:	IRR - Irrigation (non-domestic, non-agriculture)		
Use year:	Not Reported		
Init head:	7.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	180		
Test date:	Not Reported	Test gpm:	110
Test ddown:	0.6	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKDC		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-112
Bot solid:	-33	Bot perf:	Not Reported
Spec capac:	183		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 5-8-001:055
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-57
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002637

Map ID:	5	Island:	Oahu
Wid:	3-4101-008	Old name:	Not Reported
Well name:	Waialeale II		
Yr drilled:	1957		
Driller:	Samson/Smock		
Quad map:	7		
Long83dd:	-158.018996		
Lat83dd:	21.688531		
Gps:	-1	Utm:	0
Owner user:	Board of Water Supply, BWS		
Land owner:	Board of Water Supply, BWS		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Pump insta:	Not Reported	Well type:	Not Reported
Old number:	Not Reported	Ground el:	63
Casing dia:	10		
Well depth:	141	Perf case:	Not Reported
Solid case:	74		
Use:	MUN - County		
Use year:	Not Reported	Init head2:	Not Reported
Init head:	19.6		
Init head3:	Not Reported		
Init cl:	39	Test gpm:	375
Test date:	Not Reported	Test chlor:	Not Reported
Test ddown:	1.5	Test unit:	C
Test temp:	21		
Pump gpm:	500	Head feet:	Not Reported
Draft mgy:	Not Reported	Min chlor:	Not Reported
Max chlor:	Not Reported		
Geology:	TKDC		
Pump yr:	1977	Bot hole:	-78
Draft yr:	Not Reported	Bot perf:	Not Reported
Bot solid:	-11		
Spec capac:	250		
Pump mgd:	.72	Pump elev:	Not Reported
Draft mgd:	Not Reported	Trnk:	(1) 5-8-001:062
Pump depth:	Not Reported		
Aqui code:	30403	Wcr:	01-JAN-57
Latest hd:	Not Reported		
Pir:	1/1/1983		
Surveyor:	Not Reported	Site id:	HI9000000002636
T:	Not Reported		

Map ID:	7	Island:	Oahu
Wid:	3-4101-003	Old name:	Not Reported
Well name:	Waialeale		
Yr drilled:	1921		
Driller:	Hobart		
Quad map:	3	Utm:	-1
Long83dd:	-158.023333		
Lat83dd:	21.687222		
Gps:	0		
Owner user:	Not Reported	Well type:	Not Reported
Land owner:	Not Reported	Ground el:	22
Pump insta:	Not Reported		
Old number:	337-	Perf case:	Not Reported
Casing dia:	8		
Well depth:	61		
Solid case:	36	Init head2:	Not Reported
Use:	OBS - Observation		
Use year:	Not Reported		
Init head:	15.6	Test gpm:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported		

GEOCHECK VERSION 2.1 **STATE DATABASE WELL INFORMATION**

Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-39
Bot solid:	-14	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 5-8-001:007
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-21
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002631

Map ID:	7	Island:	Oahu
Wid:	3-4101-002	Old name:	Not Reported
Well name:	Waialeale		
Yr drilled:	1921		
Driller:	██████		
Quad map:	3		
Long83dd:	-158.023611		
Lat83dd:	21.686944		
Gps:	0	Utm:	-1
Owner user:	Not Reported		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	336-	Well type:	Not Reported
Casing dia:	8	Ground el:	22
Well depth:	83		
Solid case:	20	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-61
Bot solid:	2	Bot perf:	Not Reported
Spec capac:	Not Reported		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Pump mgd:	0	Pump elev:	Not Reported
Draft mgd:	Not Reported	Tmk:	Not Reported
Pump depth:	Not Reported		
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-21
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002630

Map ID:	8		
Wid:	3-4101-011	Island:	Oahu
Well name:	Waialeale	Old name:	Not Reported
Yr drilled:	1970		
Driller:	Roscoe Moss Hawaii Inc		
Quad map:	7		
Long83dd:	-158.021389		
Lat83dd:	21.686667		
Gps:	0	Utm:	-1
Owner user:	Board of Water Supply, BWS		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	Not Reported	Well type:	PER
Casing dia:	12	Ground el:	82
Well depth:	127		
Solid case:	112	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	Not Reported		
Init head:	18.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	260		
Test date:	Not Reported	Test gpm:	577
Test ddown:	26.8	Test chlor:	260
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	350		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-45
Bot solid:	-30	Bot perf:	Not Reported
Spec capac:	22		
Pump mgd:	.504		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 5-8-001:046
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-70
Pir:	6/29/2011		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002639

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Map ID:	8	Island:	Oahu
Wid:	3-4101-007	Old name:	Not Reported
Well name:	Waialeale I		
Yr drilled:	1945		
Driller:	Directorate of Public Works, Environmental Div., DPW, U.S. Army Garrison		
Quad map:	7		
Long83dd:	-158.020833		
Lat83dd:	21.686667		
Gps:	-1	Utm:	0
Owner user:	Board of Water Supply, BWS		
Land owner:	Board of Water Supply, BWS		
Pump insta:	Melvin Lima, Deceased		
Old number:	337-4	Well type:	Not Reported
Casing dia:	14	Ground el:	81
Well depth:	151		
Solid case:	94	Perf case:	Not Reported
Use:	MUN - County		
Use year:	Not Reported		
Init head:	17.1	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	63		
Test date:	Not Reported	Test gpm:	450
Test ddown:	12	Test chlor:	Not Reported
Test temp:	20.5	Test unit:	C
Pump gpm:	350		
Draft mgd:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKDC		
Pump yr:	2008		
Draft yr:	Not Reported	Bot hole:	-70
Bot solid:	-13	Bot perf:	Not Reported
Spec capac:	38		
Pump mgd:	.504		
Draft mgd:	Not Reported	Pump elev:	-15
Pump depth:	96	Tmk:	(1) 5-8-001:046
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-45
Pir:	10/8/2008		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002635

Map ID:	8	Island:	Oahu
Wid:	3-4101-004	Old name:	Not Reported
Well name:	Waialeale		
Yr drilled:	1938		
Driller:	W. Mullin		
Quad map:	7		
Long83dd:	-158.020833		
Lat83dd:	21.686667		
Gps:	0	Utm:	-1
Owner user:	Not Reported		
Land owner:	Not Reported		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Pump insta:	Not Reported	Well type:	Not Reported
Old number:	337-1	Ground el:	67
Casing dia:	6		
Well depth:	100	Perf case:	Not Reported
Solid case:	5		
Use:	ABN - Sealed		
Use year:	Not Reported	Init head2:	Not Reported
Init head:	18.2		
Init head3:	Not Reported		
Init cl:	49	Test gpm:	80
Test date:	Not Reported	Test chlor:	Not Reported
Test ddown:	Not Reported	Test unit:	Not Reported
Test temp:	Not Reported		
Pump gpm:	0	Head feet:	Not Reported
Draft mgy:	Not Reported	Min chlor:	Not Reported
Max chlor:	Not Reported		
Geology:	TKDC		
Pump yr:	0	Bot hole:	-33
Draft yr:	Not Reported	Bot perf:	Not Reported
Bot solid:	62		
Spec capac:	Not Reported		
Pump mgd:	0	Pump elev:	Not Reported
Draft mgd:	Not Reported	Trnk:	Not Reported
Pump depth:	Not Reported		
Aqui code:	30403	Wcr:	01-JAN-38
Latest hd:	Not Reported		
Pir:	Not Reported		
Surveyor:	Not Reported	Site id:	HI9000000002632
T:	Not Reported		

Map ID:	8	Island:	Oahu
Wid:	3-4101-006	Old name:	Not Reported
Well name:	Waialeale		
Yr drilled:	1941		
Driller:	██████████		
Quad map:	7	Utm:	-1
Long83dd:	-158.020833		
Lat83dd:	21.686667		
Gps:	0		
Owner user:	Not Reported	Well type:	Not Reported
Land owner:	Not Reported	Ground el:	86
Pump insta:	Not Reported	Perf case:	Not Reported
Old number:	337-3		
Casing dia:	6	Init head2:	Not Reported
Well depth:	105		
Solid case:	93	Test gpm:	Not Reported
Use:	UNU - Unused		
Use year:	Not Reported		
Init head:	19.4		
Init head3:	Not Reported		
Init cl:	40		
Test date:	Not Reported		

GEOCHECK VERSION 2.1 **STATE DATABASE WELL INFORMATION**

Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKDC		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-19
Bot solid:	-7	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 5-8-001:007
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-41
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002634

Map ID:	8	Island:	Oahu
Wid:	3-4101-005	Old name:	Not Reported
Well name:	Waialeale		
Yr drilled:	1939		
Driller:	██████████		
Quad map:	7		
Long83dd:	-158.020833		
Lat83dd:	21.686667		
Gps:	0	Utm:	-1
Owner user:	Not Reported		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	337-2	Well type:	Not Reported
Casing dia:	8	Ground el:	75
Well depth:	90		
Solid case:	65	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	Not Reported		
Init head:	21.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	75		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKDC		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-15
Bot solid:	10	Bot perf:	Not Reported
Spec capac:	Not Reported		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Pump mgd:	0	Pump elev:	Not Reported
Draft mgd:	Not Reported	Tmk:	(1) 5-8-001:007
Pump depth:	Not Reported		
Aqui code:	30403	Wcr:	01-JAN-39
Latest hd:	Not Reported		
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002633

Map ID:	7	Island:	Oahu
Wid:	3-4101-001	Old name:	Not Reported
Well name:	Waialeale		
Yr drilled:	1921		
Driller:	██████		
Quad map:	3		
Long83dd:	-158.023611		
Lat83dd:	21.686389		
Gps:	0	Utm:	-1
Owner user:	Not Reported		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	335-	Well type:	Not Reported
Casing dia:	8	Ground el:	22
Well depth:	78		
Solid case:	35	Perf case:	Not Reported
Use:	ABN - Sealed		
Use year:	Not Reported		
Init head:	13.2	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	73		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-56
Bot solid:	-13	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	Not Reported
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-21
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002629

GEOCHECK VERSION 2.1 **STATE DATABASE WELL INFORMATION**

Map ID:	9	Island:	Oahu
Wid:	3-4101-010	Old name:	Not Reported
Well name:	Waialeale UH		
Yr drilled:	1959		
Driller:			
Quad map:	7		
Long83dd:	-158.023883		
Lat83dd:	21.685483		
Gps:	-1	Utm:	0
Owner user:	College of Tropical Agriculture and Human Resources, CTAHR - UH Manoa		
Land owner:	University of Hawaii Manoa, UHM		
Pump insta:	Not Reported		
Old number:	335-10	Well type:	Not Reported
Casing dia:	10	Ground el:	58
Well depth:	100		
Solid case:	46	Perf case:	75
Use:	AGR - Livestock and Processing, and Pasture		
Use year:	Not Reported		
Init head:	3.6	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	111		
Test date:	Not Reported	Test gpm:	255
Test ddown:	0.4	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	200		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	1998		
Draft yr:	Not Reported	Bot hole:	-42
Bot solid:	12	Bot perf:	-17
Spec capac:	638		
Pump mgd:	.288		
Draft mgd:	Not Reported	Pump elev:	-10
Pump depth:	68	Tmk:	(1) 5-8-001:007
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-59
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002638

Map ID:	12	Island:	Oahu
Wid:	3-4002-008	Old name:	Not Reported
Well name:	Sunset Beach		
Yr drilled:	1972		
Driller:	W Lum Assoc.		
Quad map:	3		
Long83dd:	-158.033611		
Lat83dd:	21.68		
Gps:	0	Utm:	-1
Owner user:	Not Reported		
Land owner:	Not Reported		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Pump insta:	Not Reported	Well type:	Rot
Old number:	Not Reported	Ground el:	19
Casing dia:	4		
Well depth:	130	Perf case:	80
Solid case:	40		
Use:	Other		
Use year:	Not Reported	Init head2:	Not Reported
Init head:	0		
Init head3:	Not Reported		
Init cl:	0	Test gpm:	100
Test date:	6/14/1972	Test chlor:	Not Reported
Test ddown:	19.4	Test unit:	Not Reported
Test temp:	Not Reported		
Pump gpm:	0	Head feet:	Not Reported
Draft mgy:	Not Reported	Min chlor:	Not Reported
Max chlor:	Not Reported		
Geology:	Not Reported		
Pump yr:	0	Bot hole:	-111
Draft yr:	Not Reported	Bot perf:	-61
Bot solid:	-21		
Spec capac:	5		
Pump mgd:	0	Pump elev:	Not Reported
Draft mgd:	Not Reported	Tmk:	(1) 5-8-004:045
Pump depth:	Not Reported		
Aqui code:	30403	Wcr:	01-JUN-72
Latest hd:	Not Reported		
Pir:	Not Reported		
Surveyor:	Not Reported	Site id:	HI9000000002600
T:	Not Reported		

Map ID:	13	Island:	Oahu
Wid:	3-4002-007	Old name:	Not Reported
Well name:	Sunset Beach		
Yr drilled:	1956		
Driller:	Hawaiian Drilling		
Quad map:	3	Utm:	-1
Long83dd:	-158.037222		
Lat83dd:	21.679722		
Gps:	0		
Owner user:	Timothy Welch (Federal Energy Regulatory Comm.)		
Land owner:	Not Reported		
Pump insta:	Not Reported	Well type:	Not Reported
Old number:	335-9	Ground el:	20
Casing dia:	8		
Well depth:	20	Perf case:	Not Reported
Solid case:	20		
Use:	ABN - Sealed	Init head2:	Not Reported
Use year:	Not Reported		
Init head:	13.1		
Init head3:	Not Reported	Test gpm:	Not Reported
Init cl:	1500		
Test date:	Not Reported		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	0
Bot solid:	0	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 5-9-001:023
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-56
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002599

Map ID:	14	Island:	Oahu
Wid:	3-4002-002	Old name:	Not Reported
Well name:	Sunset Bch		
Yr drilled:	1939		
Driller:	██████████		
Quad map:	3		
Long83dd:	-158.034722		
Lat83dd:	21.679722		
Gps:	0	Utm:	-1
Owner user:	W. Rathburn		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	335-2A	Well type:	Not Reported
Casing dia:	5	Ground el:	21
Well depth:	85		
Solid case:	72	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	Not Reported		
Init head:	2.6	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	1510		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-64
Bot solid:	-51	Bot perf:	Not Reported
Spec capac:	Not Reported		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Pump mgd:	0	Pump elev:	Not Reported
Draft mgd:	Not Reported	Tmk:	(1) 5-8-003:013
Pump depth:	Not Reported		
Aqui code:	30403	Wcr:	01-JAN-39
Latest hd:	Not Reported		
Pir:	Not Reported		
Surveyor:	Not Reported	Site id:	HI9000000002594
T:	Not Reported		

Map ID:	14	Island:	Oahu
Wid:	3-4002-003	Old name:	Not Reported
Well name:	Sunset Bch		
Yr drilled:	1941		
Driller:	██████████		
Quad map:	3	Utm:	-1
Long83dd:	-158.034722		
Lat83dd:	21.679722		
Gps:	0		
Owner user:	W. Rathburn	Well type:	Not Reported
Land owner:	Not Reported	Ground el:	21
Pump insta:	Not Reported		
Old number:	335-2B	Perf case:	Not Reported
Casing dia:	6		
Well depth:	100		
Solid case:	Not Reported		
Use:	UNU - Unused		
Use year:	Not Reported	Init head2:	Not Reported
Init head:	2.3		
Init head3:	Not Reported		
Init cl:	1510		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-79
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 5-8-003:013
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-41
Pir:	Not Reported		
Surveyor:	Not Reported	Site id:	HI9000000002595
T:	Not Reported		

GEOCHECK VERSION 2.1 **STATE DATABASE WELL INFORMATION**

Map ID:	16	Island:	Oahu
Wid:	3-4002-001	Old name:	Not Reported
Well name:	Sunset Sch		
Yr drilled:	1939		
Driller:			
Quad map:	3		
Long83dd:	-158.034167		
Lat83dd:	21.6775		
Gps:	0	Utm:	-1
Owner user:	W. Rathburn		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	335-1	Well type:	Not Reported
Casing dia:	6	Ground el:	31
Well depth:	50		
Solid case:	36	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	Not Reported		
Init head:	5.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	212		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-19
Bot solid:	-5	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 5-8-005:051
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-JAN-39
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002593

Map ID:	17	Island:	Oahu
Wid:	3-4002-009	Old name:	Not Reported
Well name:	Sunset-Nakamura		
Yr drilled:	1900		
Driller:	Hawaiian Pine		
Quad map:	3		
Long83dd:	-158.035556		
Lat83dd:	21.676944		
Gps:	0	Utm:	-1
Owner user:	Takemitsu Nakamura Trust EST		
Land owner:	Takemitsu Nakamura Trust EST		

GEOCHECK VERSION 2.1 **STATE DATABASE WELL INFORMATION**

Pump insta:	Not Reported	Well type:	DUG
Old number:	Not Reported	Ground el:	Not Reported
Casing dia:	96		
Well depth:	0		
Solid case:	Not Reported	Perf case:	Not Reported
Use:	AGR - Crops and Processing		
Use year:	Not Reported		
Init head:	Not Reported	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	Not Reported
Bot solid:	Not Reported	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Trnk:	(1) 5-9-016:003
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	02-JAN-00
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002601

Map ID:	19	Island:	Oahu
Wid:	3-3902-003	Old name:	Not Reported
Well name:	Pupukea G C 1		
Yr drilled:	1988		
Driller:	Roscoe Moss Hawaii Inc		
Quad map:	3		
Long83dd:	██████		
Lat83dd:	21.653889		
Gps:	0	Utm:	-1
Owner user:	Obayashi Hawaii Corp.		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	Not Reported	Well type:	PER
Casing dia:	12	Ground el:	420
Well depth:	454		
Solid case:	420	Perf case:	454
Use:	UNU - Unused		
Use year:	Not Reported		
Init head:	3.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	11/7/1988	Test gpm:	500

GEOCHECK VERSION 2.1 **STATE DATABASE WELL INFORMATION**

Test ddown:	2.3	Test chlor:	255
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	Not Reported		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-34
Bot solid:	0	Bot perf:	-34
Spec capac:	217		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 5-9-005:038
Aqui code:	30403		
Latest hd:	Not Reported	Wcr:	01-NOV-88
Pir:	Not Reported		
Surveyor:	Not Reported		
T:	Not Reported	Site id:	HI9000000002571

Map ID:	20	Island:	Oahu
Wid:	3-3902-002	Old name:	Not Reported
Well name:	Pupukea		
Yr drilled:	1956		
Driller:	Hawaiian Drilling		
Quad map:	3		
Long83dd:	-158.035278		
Lat83dd:	21.652222		
Gps:	0	Utm:	-1
Owner user:	Not Reported		
Land owner:	Not Reported		
Pump insta:	Not Reported		
Old number:	T58-	Well type:	Not Reported
Casing dia:	1	Ground el:	511
Well depth:	560		
Solid case:	530	Perf case:	Not Reported
Use:	Not Reported		
Use year:	Not Reported		
Init head:	130	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	0		
Test date:	Not Reported	Test gpm:	Not Reported
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	TKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-49
Bot solid:	-19	Bot perf:	Not Reported
Spec capac:	Not Reported		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Pump mgd:	0	Pump elev:	Not Reported
Draft mgd:	Not Reported	Tmk:	(1) 5-9-005:040
Pump depth:	Not Reported		
Aqui code:	30403	Wcr:	01-JAN-56
Latest hd:	Not Reported		
Pir:	Not Reported		
Surveyor:	Not Reported	Site id:	HI9000000002570
T:	Not Reported		

Map ID:	21	Island:	Oahu
Wid:	3-3902-001	Old name:	Wilson
Well name:	Wallace		
Yr drilled:	1946		
Driller:	W. Mullin		
Quad map:	3		
Long83dd:	-158.042222		
Lat83dd:	21.649444		
Gps:	0	Utm:	-1
Owner user:	Lois Wallace		
Land owner:	Lois Wallace		
Pump insta:	Not Reported		
Old number:	335-4	Well type:	Not Reported
Casing dia:	12	Ground el:	499
Well depth:	554		
Solid case:	425	Perf case:	Not Reported
Use:	UNU - Unused		
Use year:	Not Reported		
Init head:	2.8	Init head2:	Not Reported
Init head3:	Not Reported		
Init cl:	225		
Test date:	Not Reported	Test gpm:	600
Test ddown:	Not Reported	Test chlor:	Not Reported
Test temp:	Not Reported	Test unit:	Not Reported
Pump gpm:	0		
Draft mgy:	Not Reported	Head feet:	Not Reported
Max chlor:	Not Reported	Min chlor:	Not Reported
Geology:	KTKB		
Pump yr:	0		
Draft yr:	Not Reported	Bot hole:	-55
Bot solid:	74	Bot perf:	Not Reported
Spec capac:	Not Reported		
Pump mgd:	0		
Draft mgd:	Not Reported	Pump elev:	Not Reported
Pump depth:	Not Reported	Tmk:	(1) 5-9-005:081
Aqui code:	30403	Wcr:	01-JAN-46
Latest hd:	Not Reported		
Pir:	Not Reported		
Surveyor:	Not Reported	Site id:	HI9000000002569
T:	Not Reported		

GEOCHECK VERSION 2.1
PUBLIC WATER SUPPLY SYSTEM INFORMATION

PWS SUMMARY:

Map ID: 5

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

PWS Water Well Information:

Epa region:	09	State:	HI
Pwsid:	HI0000366		
Pwsname:	WAIALEE-SUNSET BEACH		
City served:	SUNSET BEACH	State served:	HI
Zip served:	Not Reported	Fips county:	Not Reported
Status:	Active	Pop srvd:	4219
Pwssvconn:	833	Source:	Groundwater
Pws type:	CWS	Owner:	Local_Govt
Contact:	KAWATA, ERWIN		
Contact gname:	KAWATA, ERWIN		
Contact phone:	[REDACTED]	Contact address1:	Honolulu Board of Water Supply
Contact address2:	630 S. Beretania St., Rm. 308	Contact city:	HONOLULU
Contact state:	HI	Contact zip:	96843
Activity code:	A		

Facid:	374		
Facname:	WAIALEE PUMP 1		
Facility type:	Treatment_plant	Activity code:	A
Treatment obj:	disinfection	Treatment process:	hypochlorination, post
Treatment obj:	organics removal	Treatment process:	gaseous chlorination, pre

Facid:	375		
Facname:	WAIALEE WELLS I & II CHLORINATOR		
Facility type:	Treatment_plant	Activity code:	A
Treatment obj:	disinfection	Treatment process:	hypochlorination, post
Treatment obj:	organics removal	Treatment process:	gaseous chlorination, pre

Location Information:			
Name:	WAIALEE-SUNSET BEACH		
Pwstypcd:	CWS	Prmsrccd:	GW
Poperved:	4341		
Add1:	HONOLULU BOARD OF WATER SUPPLY		
Add2:	630 S. BERETANIA ST., RM. 308		
City:	HONOLULU	State:	HI
Zip:	96843	Phone:	[REDACTED]
Cityserv:	SUNSET BEACH	Cntysew:	Not Reported
Stateserv:	HI	Zipsew:	Not Reported

PWS ID:	HI0000366		
Date Initiated:	Not Reported	Date Deactivated:	Not Reported
PWS Name:	BWS WAIALEE		
	57-300 KAM HIGHWAY		
	WAIALEE, OAHU, HI 96712		

Addressee / Facility: System Owner/Responsible Party

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

GEOCHECK VERSION 2.1

PUBLIC WATER SUPPLY SYSTEM INFORMATION

PWS SUMMARY:

Facility Latitude:	21 40 20.0000	Facility Longitude:	158 2 36.0000
Facility Latitude:	21 41 31.0000	Facility Longitude:	158 1 18.0000
Facility Latitude:	21 41 23.0000	Facility Longitude:	158 1 25.0000
City Served:	WAIALEE		
Treatment Class:	Mixed (treated and untreated)	Population:	3679

Violations information not reported.

Map ID: 8

Epa region:	09	State:	HI
Pwsid:	HI0000366		
Pwsname:	WAIALEE-SUNSET BEACH		
City served:	SUNSET BEACH	State served:	HI
Zip served:	Not Reported	Fips county:	Not Reported
Status:	Active	Pop srvd:	4219
Pwssvconn:	833	Source:	Groundwater
Pws type:	CWS	Owner:	Local_Govt
Contact:	KAWATA, ERWIN		
Contact gname:	KAWATA, ERWIN		
Contact phone:	[REDACTED]	Contact address1:	Honolulu Board of Water Supply
Contact address2:	630 S. Beretania St., Rm. 308	Contact city:	HONOLULU
Contact state:	HI	Contact zip:	96843
Activity code:	A		

Facid:	374		
Facname:	WAIALEE PUMP 1		
Facility type:	Treatment_plant	Activity code:	A
Treatment obj:	disinfection	Treatment process:	hypochlorination, post
Treatment obj:	organics removal	Treatment process:	gaseous chlorination, pre

Facid:	375		
Facname:	WAIALEE WELLS I & II CHLORINATOR		
Facility type:	Treatment_plant	Activity code:	A
Treatment obj:	disinfection	Treatment process:	hypochlorination, post
Treatment obj:	organics removal	Treatment process:	gaseous chlorination, pre

Location Information:

Name:	WAIALEE-SUNSET BEACH		
Pwstypcd:	CWS	Primsrccd:	GW
Poperved:	4341		
Add1:	HONOLULU [REDACTED]		
Add2:	630 S. BERETANIA ST., RM. 308		
City:	HONOLULU	State:	HI
Zip:	96843	Phone:	[REDACTED]
Cityserv:	SUNSET BEACH	Cntysew:	Not Reported
Stateserv:	HI	Zipserv:	Not Reported

PWS ID:	HI0000366		
Date Initiated:	Not Reported	Date Deactivated:	Not Reported
PWS Name:	BWS WAIALEE		
	57-300 KAM HIGHWAY		
	WAIALEE, OAHU, HI 96712		

GEOCHECK VERSION 2.1

PUBLIC WATER SUPPLY SYSTEM INFORMATION

PWS SUMMARY:

Addressee / Facility: System Owner/Responsible Party

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Facility Latitude:	21 40 20.0000	Facility Longitude:	158 2 36.0000
Facility Latitude:	21 41 31.0000	Facility Longitude:	158 1 18.0000
Facility Latitude:	21 41 23.0000	Facility Longitude:	158 1 25.0000
City Served:	WAIALEE		
Treatment Class:	Mixed (treated and untreated)	Population:	3679

Violations information not reported.

Map ID: 22

Epa region:	09	State:	HI
Pwsid:	HI0000335		
Pwsname:	WAIPAHU-EWA-WAIAANAE		
City served:	WAIPAHU-EWA-WAIAANAE	State served:	HI
Zip served:	Not Reported	Fips county:	Not Reported
Status:	Active	Pop srvd:	175326
Pwssvconn:	36449	Source:	Groundwater
Pws type:	CWS	Owner:	Local_Govt
Contact:	KAWATA, ERWIN		
Contact or gname:	KAWATA, ERWIN		
Contact phone:	[REDACTED]	Contact address1:	Honolulu Board of Water Supply
Contact address2:	630 S. Beretania St., Rm. 308	Contact city:	HONOLULU
Contact state:	HI	Contact zip:	96843
Activity code:	A		

Facid:	1022		
Facname:	KUNIA WELLS I, III GAC (EPD)		
Facility type:	Treatment_plant	Activity code:	A
Treatment obj:	disinfection	Treatment process:	chlorination (frds-1.5)

Facid:	1322		
Facname:	MAKAHA WELL IV		
Facility type:	Treatment_plant	Activity code:	A
Treatment obj:	organics removal	Treatment process:	gaseous chlorination, pre

Facid:	1323		
Facname:	MAKAHA WELLS II CHLORINATOR		
Facility type:	Treatment_plant	Activity code:	A
Treatment obj:	organics removal	Treatment process:	gaseous chlorination, pre

Facid:	1325		
Facname:	MAKAHA WELLS I CHLORINATOR		
Facility type:	Treatment_plant	Activity code:	A
Treatment obj:	organics removal	Treatment process:	gaseous chlorination, pre

Facid:	1326		
Facname:	MAKAHA WELLS III CHLORINATOR		
Facility type:	Treatment_plant	Activity code:	A
Treatment obj:	organics removal	Treatment process:	gaseous chlorination, pre

Facid:	1327		
Facname:	MAKAHA WELLS V CHLORINATOR		
Facility type:	Treatment_plant	Activity code:	TC#542430.5w Page 41 of 44
Treatment obj:	organics removal	Treatment process:	gaseous chlorination, pre

Facid:	1328		
Facname:	MAKAHA WELLS VI CHLORINATOR		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Location Information:

Name:	WAIPAHAU-EWA-WAIAANAE		
Pwstypcd:	CWS	Prmsrccd:	GW
Popservcd:	188539		
Add1:	HONOLULU [REDACTED]		
Add2:	630 S. BERETANIA ST., RM. 308		
City:	HONOLULU	State:	HI
Zip:	96843	Phone:	[REDACTED]
Cityserv:	WAIPAHAU-EWA-WAIAANAE	Cntyserv:	Not Reported
Stateserv:	HI	Zipserv:	Not Reported

Enforcement Information:

Violation id:	197	Orig cd:	S
Enf fy:	2013	Enf act date:	05/21/2013
Enf act detail:	St Compliance achieved	Enf act cat:	Resolving

Enforcement Information:

Violation id:	197	Orig cd:	S
Enf fy:	2013	Enf act date:	07/16/2013
Enf act detail:	St Public Notif received	Enf act cat:	Informal

Enforcement Information:

Violation id:	197	Orig cd:	S
Enf fy:	2013	Enf act date:	06/25/2013
Enf act detail:	St Violation/Reminder Notice	Enf act cat:	Informal

Enforcement Information:

Violation id:	196	Orig cd:	S
Enf fy:	2013	Enf act date:	07/16/2013
Enf act detail:	St Public Notif received	Enf act cat:	Informal

Enforcement Information:

Violation id:	196	Orig cd:	S
Enf fy:	2013	Enf act date:	05/21/2013
Enf act detail:	St Compliance achieved	Enf act cat:	Resolving

Enforcement Information:

Violation id:	196	Orig cd:	S
Enf fy:	2013	Enf act date:	06/25/2013
Enf act detail:	St Violation/Reminder Notice	Enf act cat:	Informal

Enforcement Information:

Violation id:	195	Orig cd:	S
Enf fy:	2013	Enf act date:	06/25/2013
Enf act detail:	St Violation/Reminder Notice	Enf act cat:	Informal

Enforcement Information:

Violation id:	195	Orig cd:	S
Enf fy:	2013	Enf act date:	05/21/2013
Enf act detail:	St Compliance achieved	Enf act cat:	Resolving

Enforcement Information:

Violation id:	195	Orig cd:	S
Enf fy:	2013	Enf act date:	07/16/2013
Enf act detail:	St Public Notif received	Enf act cat:	Informal

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Enforcement Information:

Violation id:	194	Orig cd:	S
Enf fy:	2013	Enf act date:	06/25/2013
Enf act detail:	St Violation/Reminder Notice	Enf act cat:	Informal

Enforcement Information:

Violation id:	194	Orig cd:	S
Enf fy:	2013	Enf act date:	05/21/2013
Enf act detail:	St Compliance achieved	Enf act cat:	Resolving

Enforcement Information:

Violation id:	194	Orig cd:	S
Enf fy:	2013	Enf act date:	07/16/2013
Enf act detail:	St Public Notif received	Enf act cat:	Informal

Violations Information:

Violocation id:	197	Orig cd:	S
State:	HI	Viol fy:	2012
Contamcd:	1041		
Contamnm:	Nitrite		
Viol code:	03		
Viol name:	Monitoring, Regular		
Rule code:	331		
Rule name:	Nitrates		
Violmeasur:	Not Reported	Unitmeasur:	Not Reported
State mcl:	Not Reported	Cmpbdt:	01/01/2012
Cmpedt:	12/31/2012		

Violations Information:

Violocation id:	196	Orig cd:	S
State:	HI	Viol fy:	2011
Contamcd:	1041		
Contamnm:	Nitrite		
Viol code:	03		
Viol name:	Monitoring, Regular		
Rule code:	331		
Rule name:	Nitrates		
Violmeasur:	Not Reported	Unitmeasur:	Not Reported
State mcl:	Not Reported	Cmpbdt:	01/01/2011
Cmpedt:	12/31/2011		

Violations Information:

Violocation id:	195	Orig cd:	S
State:	HI	Viol fy:	2012
Contamcd:	1040		
Contamnm:	Nitrate		
Viol code:	03		
Viol name:	Monitoring, Regular		
Rule code:	331		
Rule name:	Nitrates		
Violmeasur:	Not Reported	Unitmeasur:	Not Reported
State mcl:	Not Reported	Cmpbdt:	01/01/2012
Cmpedt:	12/31/2012		

GEOCHECK VERSION 2.1

STATE DATABASE WELL INFORMATION

Violations Information:

Violation id:	194	Orig cd:	S
State:	HI	Viol fy:	2011
Contamcd:	1040		
Contamnm:	Nitrate		
Viol code:	03		
Viol name:	Monitoring, Regular		
Rule code:	331		
Rule name:	Nitrates		
Violmeasur:	Not Reported	Unitmeasur:	Not Reported
State mcl:	Not Reported	Cmpbdt:	01/01/2011
Cmpedt:	12/31/2011		

PWS ID: HI0000335
 Date Initiated: Not Reported Date Deactivated: Not Reported
 PWS Name: [REDACTED]

Addressee / Facility: System Owner/Responsible Party
 [REDACTED]

Facility Latitude:	21 23 18.0000	Facility Longitude:	158 2 3.0000
Facility Latitude:	21 24 14.0000	Facility Longitude:	158 0 53.0000
Facility Latitude:	21 27 52.0000	Facility Longitude:	158 12 2.0000
Facility Latitude:	21 28 15.0000	Facility Longitude:	158 10 23.0000
Facility Latitude:	21 29 25.0000	Facility Longitude:	158 8 42.0000
Facility Latitude:	21 30 16.0000	Facility Longitude:	158 10 58.0000
Facility Latitude:	21 36 16.0000	Facility Longitude:	158 2 5.0000
Facility Latitude:	21 24 8.0000	Facility Longitude:	158 2 30.0000
Facility Latitude:	21 24 15.0000	Facility Longitude:	158 0 26.0000
Facility Latitude:	21 38 18.0000	Facility Longitude:	158 2 8.0000
Facility Latitude:	21 57 52.0000	Facility Longitude:	158 12 3.0000
Facility Latitude:	21 20 43.0000	Facility Longitude:	158 4 46.0000
Facility Latitude:	21 23 16.0000	Facility Longitude:	158 2 5.0000
Facility Latitude:	21 28 22.0000	Facility Longitude:	158 11 36.0000
Facility Latitude:	21 29 59.0000	Facility Longitude:	158 11 13.0000
Facility Latitude:	21 28 57.0000	Facility Longitude:	158 12 46.0000
Facility Latitude:	21 24 10.0000	Facility Longitude:	158 2 31.0000
Facility Latitude:	21 30 16.0000	Facility Longitude:	158 11 2.0000
Facility Latitude:	21 30 30.0000	Facility Longitude:	158 10 53.0000
Facility Latitude:	21 3 25.0000	Facility Longitude:	158 10 56.0000
Facility Latitude:	21 23 21.0000	Facility Longitude:	158 1 37.0000
Facility Latitude:	21 23 26.0000	Facility Longitude:	158 3 16.0000
Facility Latitude:	21 28 27.0000	Facility Longitude:	158 9 20.0000
Facility Latitude:	21 30 25.0000	Facility Longitude:	158 10 56.0000
City Served:	MAKAKILO		
City Served:	WAIANAE		
City Served:	EWA BEACH		
City Served:	WAIPAHU		
City Served:	KUNIA		
City Served:	WAIPAHU EWA		
Treatment Class:	Mixed (treated and untreated)	Population:	122166

Violations information not reported.

HAWAII GOVERNMENT WELL RECORDS SEARCHED

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: [REDACTED]

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: [REDACTED]

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

State Wetlands Data: Wetlands Inventory

Source: Office of Planning

Telephone: [REDACTED]

Well Index Database

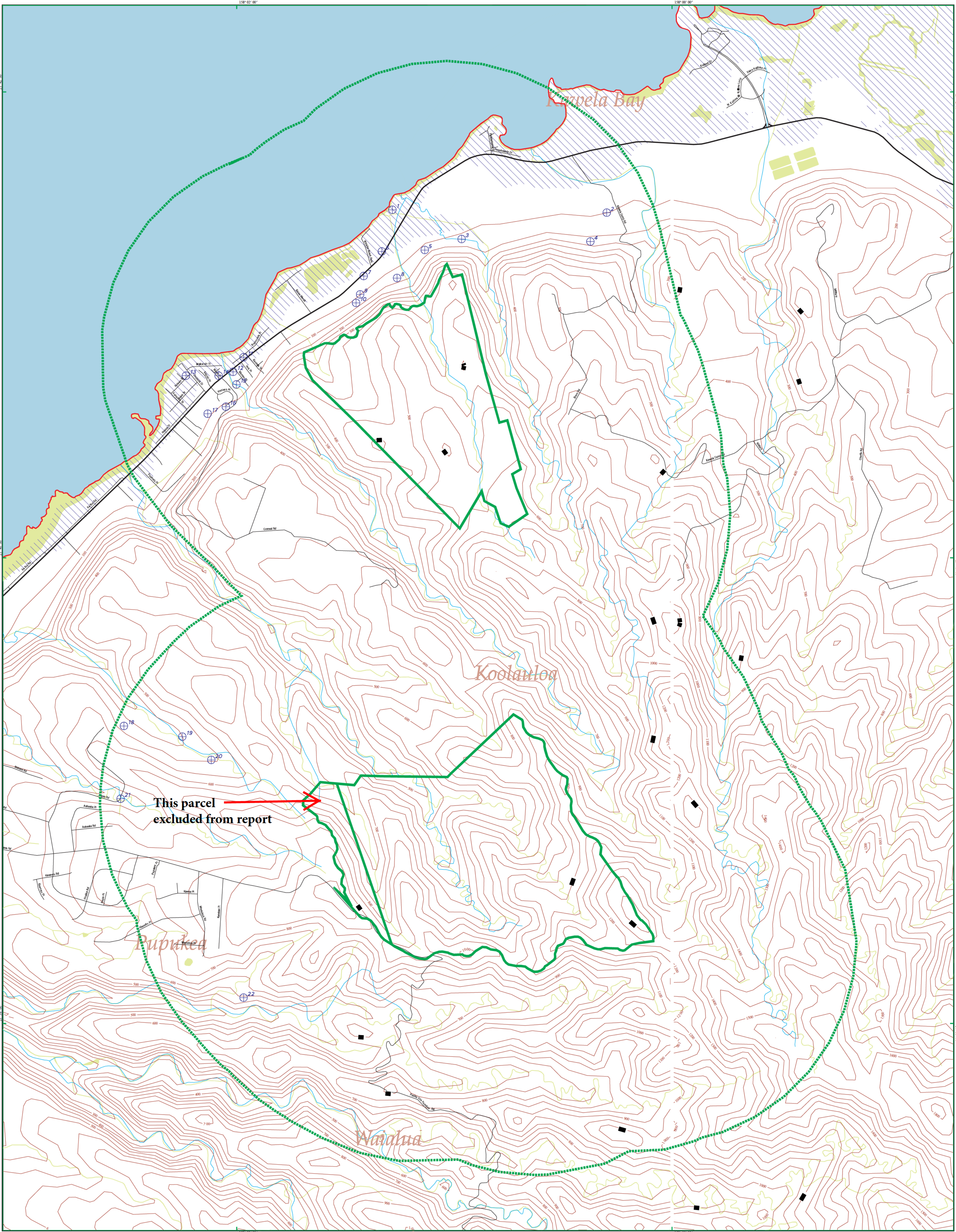
Source: Commission on Water Resource Management

[REDACTED]

CWRM maintains a Well Index Database to track specific information pertaining to the construction and installation of production wells in Hawaii

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.



EDR DataMap® - Well Search

Kahuku



Haleiwa, HI

- | | | |
|--------------------|---------------|--------------------|
| Listed Water Wells | Waterways | Water |
| Study Boundary | Railroads | Superfund Sites |
| Roads | Contour Lines | 100-Yr Flood Zones |
| Major Roads | Fault Lines | Wetlands |



0 1/4 1/2



Scale in Miles

APPENDIX B – HISTORICAL RECORDS

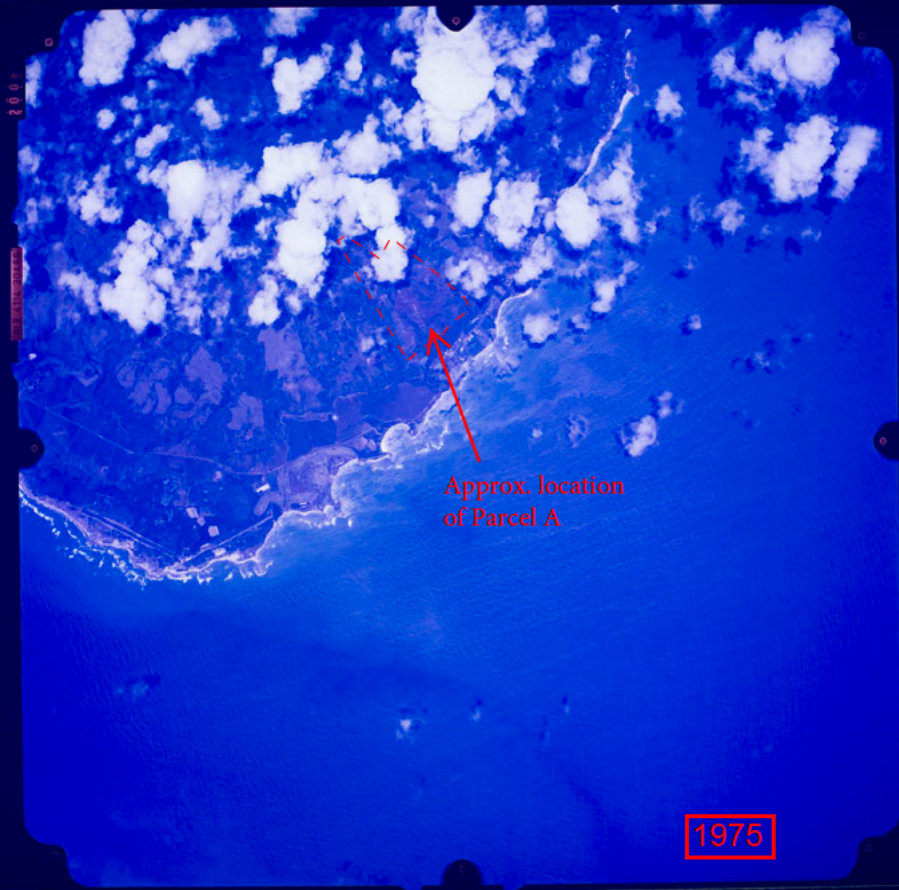
AERIAL PHOTOGRAPHS

TOPOGRAPHIC MAPS

KAHUKU TRAINING AREA SOPS

OISC SURVEY AND CONTROL OF DEVIL WEED IN THE KTA

CACTF at KTA Map

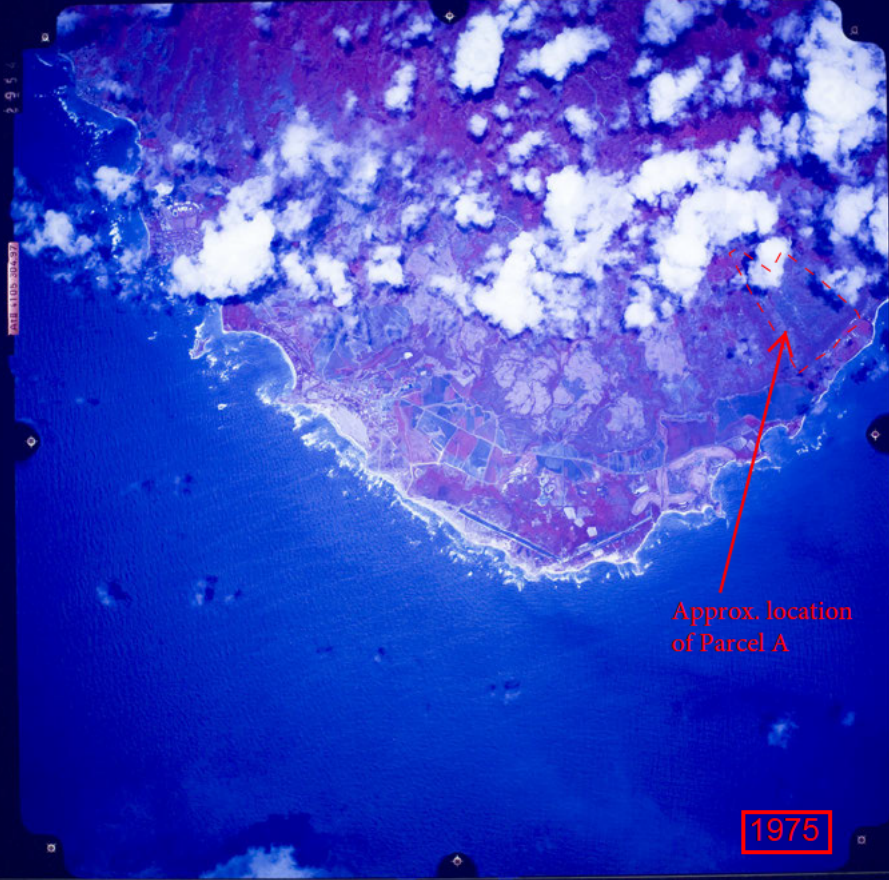


Approx. location
of Parcel A

1975

295

AR 1100-04437



Approx. location
of Parcel A

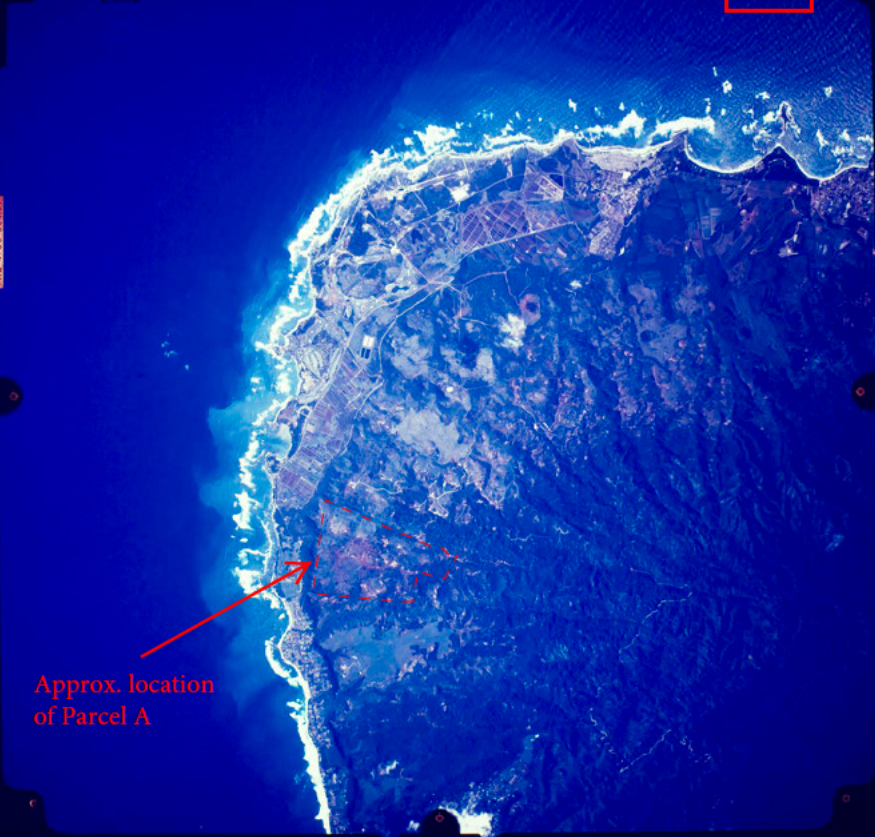
1975

2400

04100

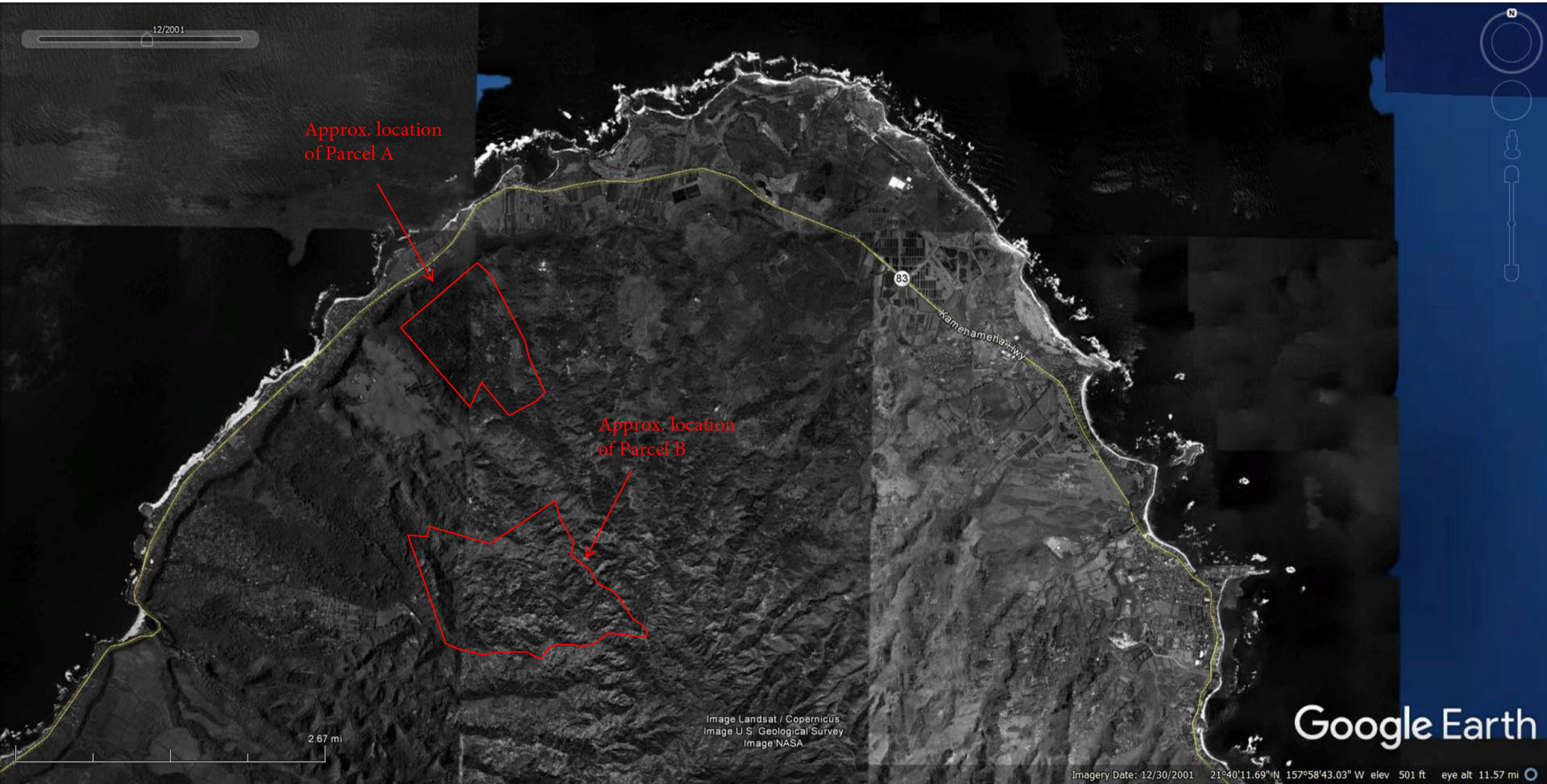
1992

ATE 4105 304.97



Approx. location
of Parcel A

2001



2004



2006

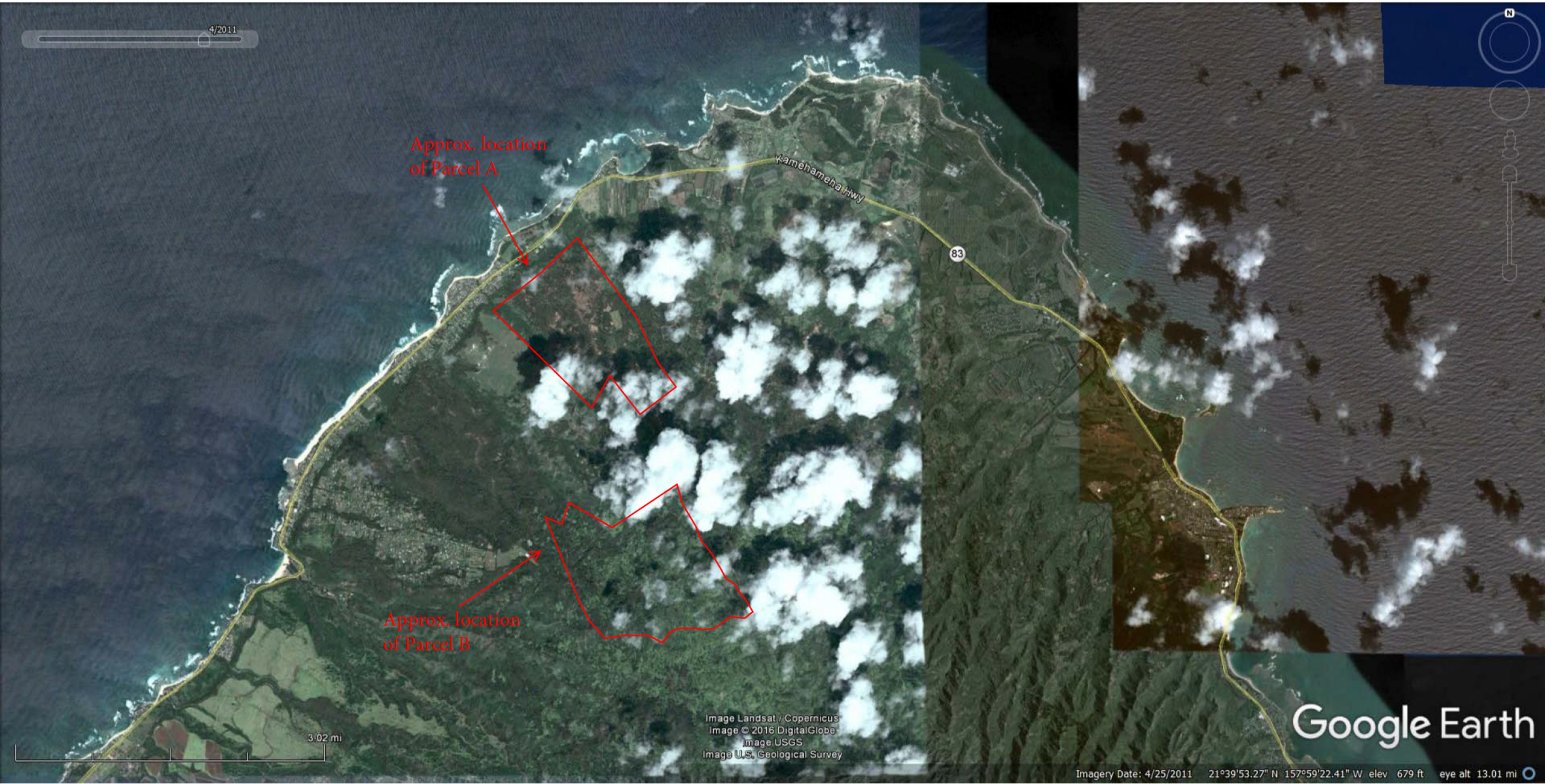


Image NASA
Image © 2016 DigitalGlobe
Image U.S. Geological Survey
Image Landsat / Copernicus

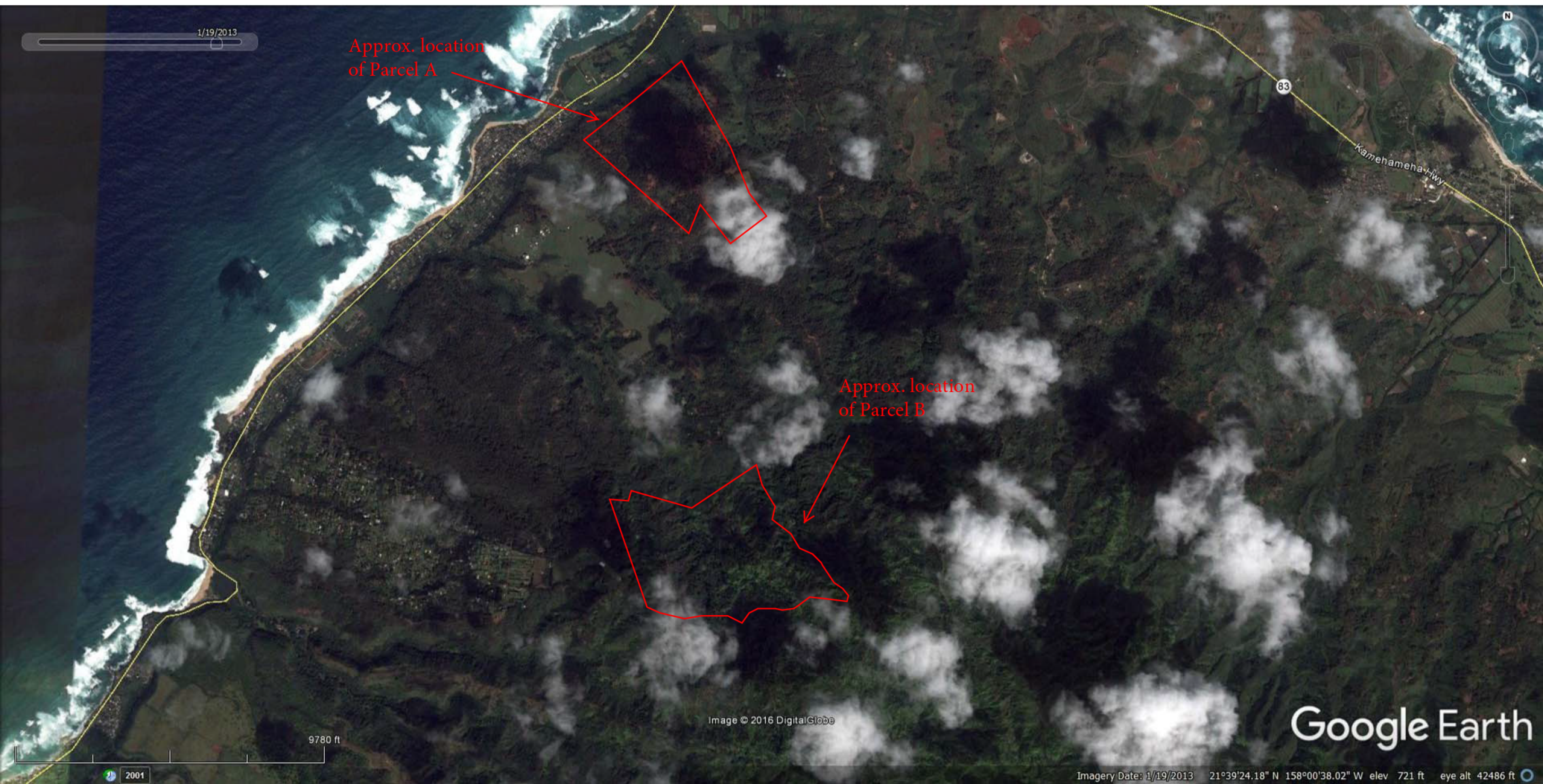
Google Earth

Imagery Date: 6/30/2006 21°40'06.05" N 157°59'37.38" W elev 524 ft eye alt 13.36 mi

2011



2013



2015 USDA Aerial



Service Layer Credits: 2015 Digital Ortho
MrSID Island Imagery, Date Accessed: March 1, 2017

0 0.25 0.5 0.75 1
Mile

Kahuku

TMK #580020020000 #590060260000 and #59006006000

Haleiwa, HI 96712

Inquiry Number: 4542430.6

February 22, 2016

EDR Historical Topo Map Report

with QuadMatch™



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: [REDACTED]
www.edrnet.com

EDR Historical Topo Map Report

02/22/16

Site Name:

Kahuku

TMK #580020020000 #590061

Haleiwa, HI 96712

EDR Inquiry # 4542430.6



EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Hart Crowser, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDR's Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:**Coordinates:**

Site Name: Kahuku

Address: TMK #580020020000 #590061

City, State, Zip: Haleiwa, HI 96712

P.O.# 3131-003-03

Project: NA

Latitude: 21.662355 21° 39' 44" North

Longitude: -158° 0' 52" West

UTM Zone: Zone 4 North

UTM X Meters: 601966.87

UTM Y Meters: 2395778.88

Elevation: 498.68' above sea level

Maps Provided:

2013	1954
1998	1952, 1953, 1954
1998, 1999	1952, 1954
1992	
1983	
1965	
1965, 1966	
1960, 1965	

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2016 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Topo Sheet Thumbnails

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2013 Source Sheets



Hauula
2013
7.5-minute, 24000



Kahuku
2013
7.5-minute, 24000



Haleiwa
2013
7.5-minute, 24000

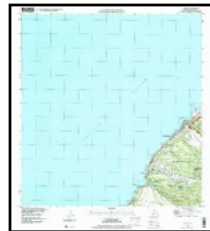


Waimea
2013
7.5-minute, 24000

1998 Source Sheets



Kahuku
1998
7.5-minute, 24000
Aerial Photo Revised 1998



Waimea
1998
7.5-minute, 24000
Aerial Photo Revised 1998

1998, 1999 Source Sheets



Haleiwa
1999
7.5-minute, 24000
Aerial Photo Revised 1999

1992 Source Sheets



Hauula
1992
7.5-minute, 24000
Aerial Photo Revised 1992

Note: EDR has combined topographic maps as noted to obtain site coverage. Combined maps that did not include the site have been omitted.

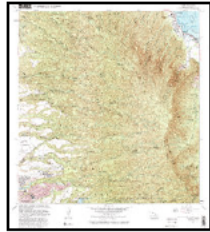
Topo Sheet Thumbnails

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1983 Source Sheets



Kahuku
1983
7.5-minute, 24000
Aerial Photo Revised 1977
Edited 1983



Hauula
1983
7.5-minute, 24000
Aerial Photo Revised 1977
Edited 1983



Waimea
1983
7.5-minute, 24000
Aerial Photo Revised 1966
Edited 1983



Haleiwa
1983
7.5-minute, 24000
Aerial Photo Revised 1977
Edited 1983

1965 Source Sheets



Kahuku
1965
7.5-minute, 24000
Aerial Photo Revised 1951
Edited 1965

1965, 1966 Source Sheets



Waimea
1966
7.5-minute, 24000
Aerial Photo Revised 1951
Edited 1966



Hauula
1966
7.5-minute, 24000
Aerial Photo Revised 1952

1960, 1965 Source Sheets



Haleiwa
1960
7.5-minute, 24000
Aerial Photo Revised 1952

Topo Sheet Thumbnails

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1954 Source Sheets



Hauula
1954
7.5-minute, 24000
Aerial Photo Revised 1952



Kahuku
1954
7.5-minute, 24000
Aerial Photo Revised 1951

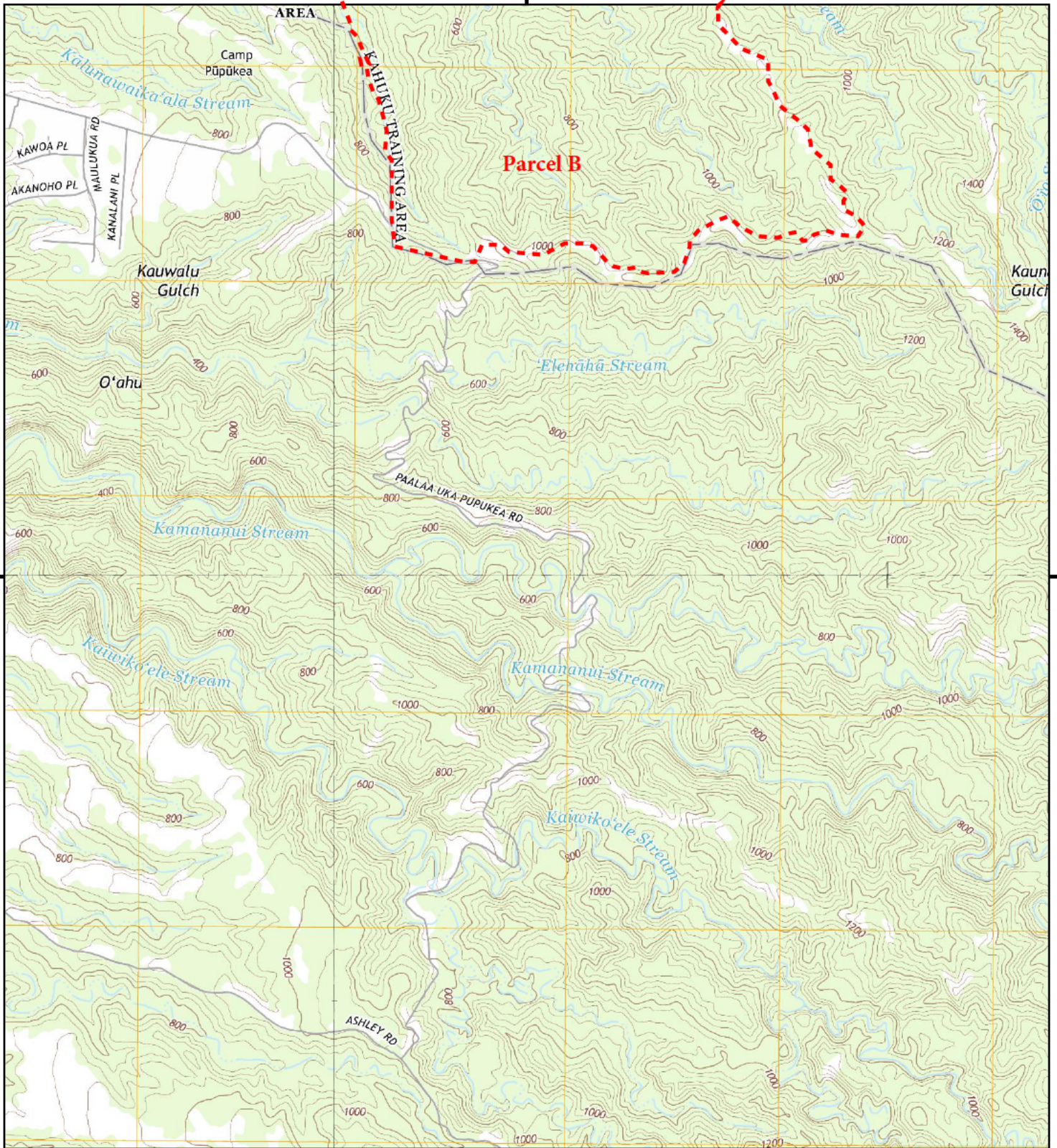
1952, 1953, 1954 Source Sheets



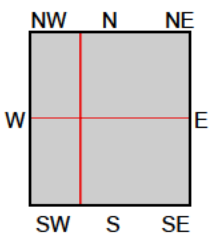
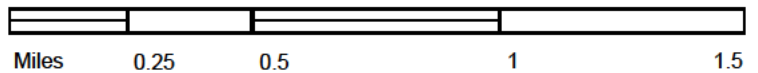
Waimea
1952
7.5-minute, 24000
Aerial Photo Revised 1951



Haleiwa
1953
7.5-minute, 24000



This report includes information from the following map sheet(s).



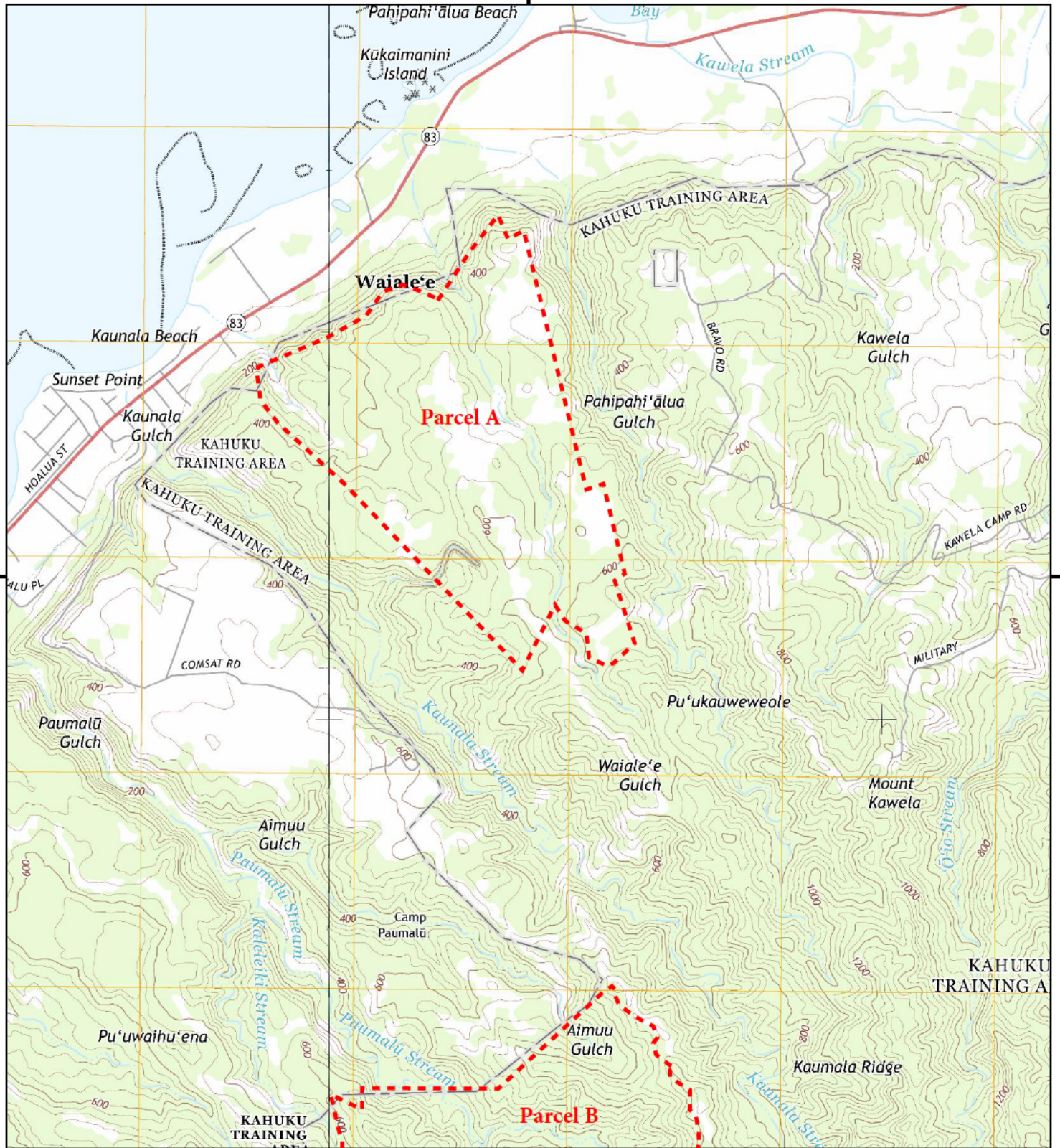
TP, Hauula, 2013, 7.5-minute
 N, Waimea, 2013, 7.5-minute
 NE, Kahuku, 2013, 7.5-minute
 SW, Haleiwa, 2013, 7.5-minute

SITE NAME: Kahuku
 ADDRESS: TMK #580020020000 #590060260000 &
 Haleiwa, HI 96712
 CLIENT: Hart Crowser, Inc.

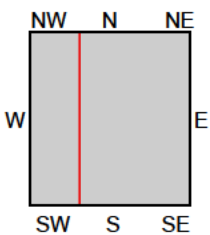


Historical Topo Map

2013



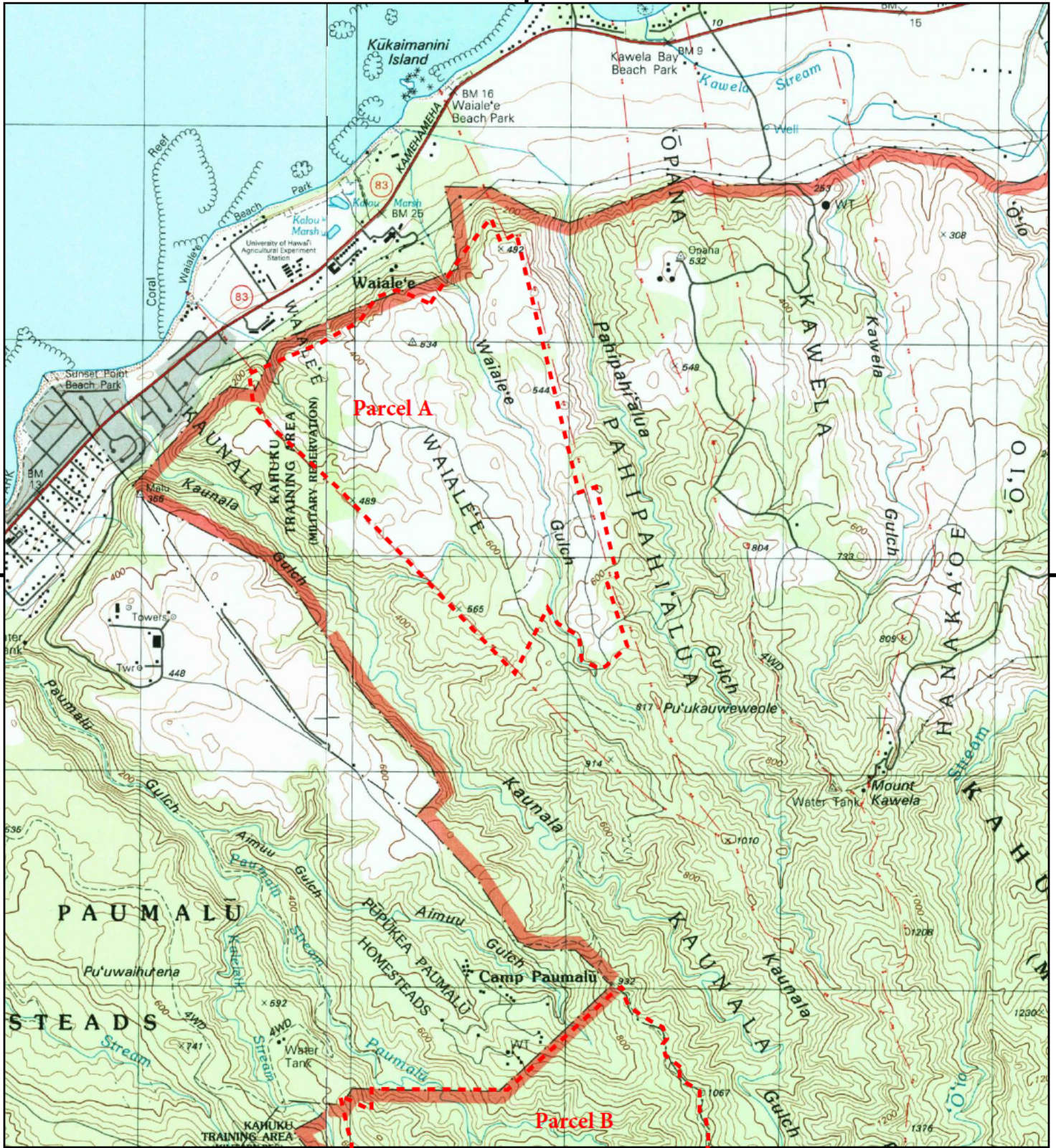
This report includes information from the following map sheet(s).



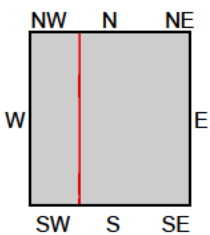
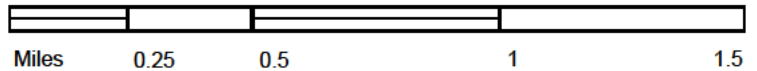
TP, Kahuku, 2013, 7.5-minute
W, Waimea, 2013, 7.5-minute

SITE NAME: Kahuku
ADDRESS: TMK #580020020000 #590060260000 &
Haleiwa, HI 96712
CLIENT: Hart Crowser, Inc.





This report includes information from the following map sheet(s).



TP, Kahuku, 1998, 7.5-minute
W, Waimea, 1998, 7.5-minute

SITE NAME: Kahuku
ADDRESS: TMK #580020020000 #590060260000 &
Haleiwa, HI 96712
CLIENT: Hart Crowser, Inc.

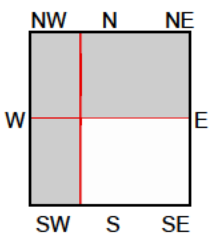


Historical Topo Map

1998, 1999



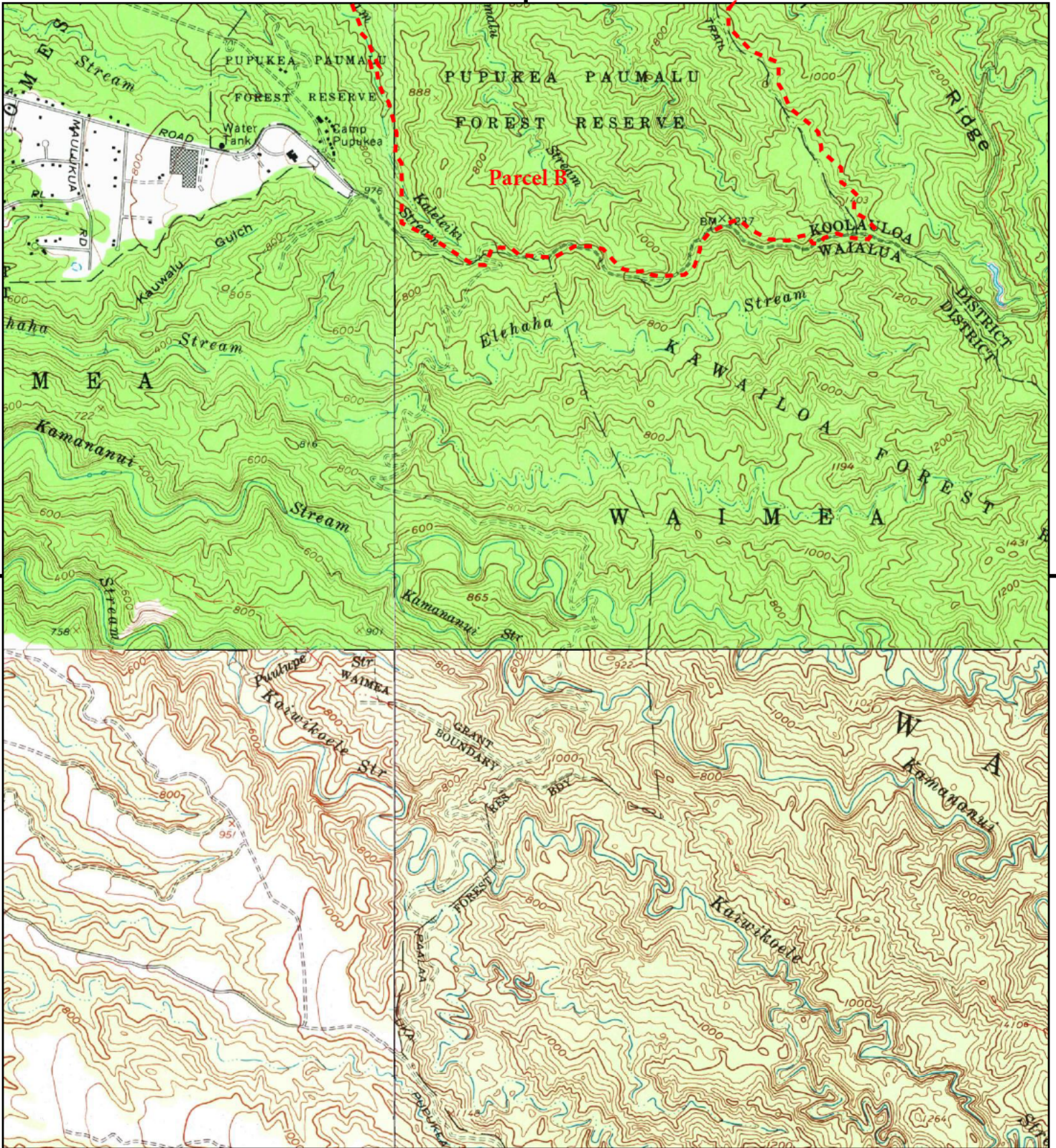
This report includes information from the following map sheet(s).



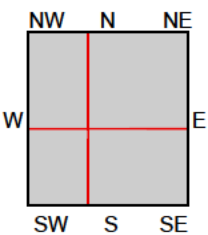
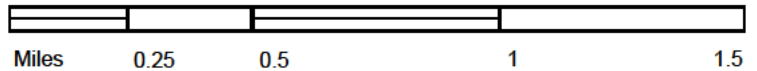
NE, Kahuku, 1998, 7.5-minute
SW, Haleiwa, 1999, 7.5-minute
NW, Waimea, 1998, 7.5-minute

SITE NAME: Kahuku
ADDRESS: TMK #580020020000 #590060260000 &
Haleiwa, HI 96712
CLIENT: Hart Crowser, Inc.





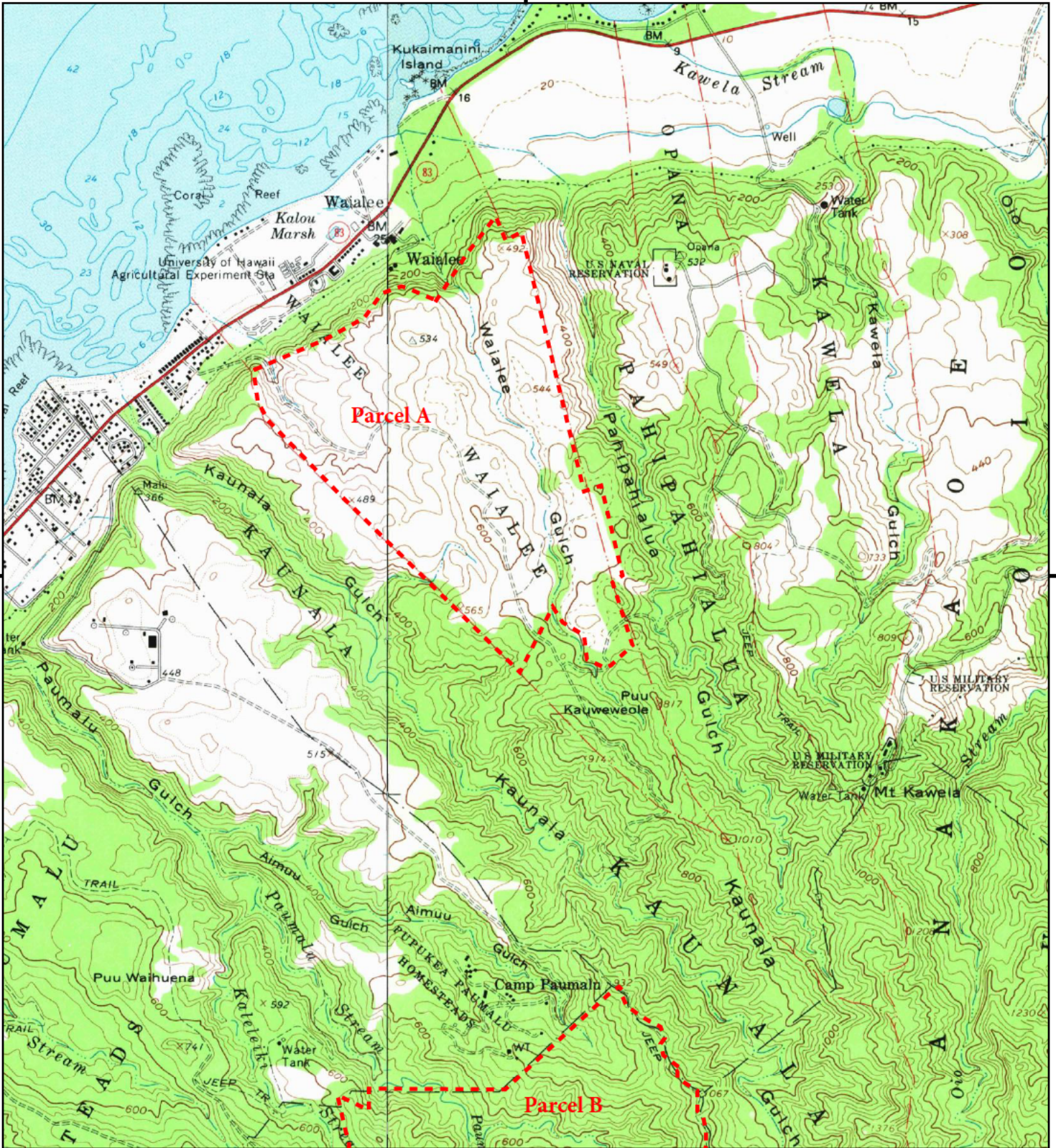
This report includes information from the following map sheet(s).



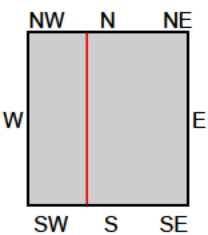
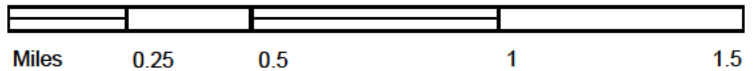
TP, Hauula, 1983, 7.5-minute
NE, Kahuku, 1983, 7.5-minute
S, Haleiwa, 1983, 7.5-minute
NW, Waimea, 1983, 7.5-minute

SITE NAME: Kahuku
ADDRESS: TMK #580020020000 #590060260000 &
Haleiwa, HI 96712
CLIENT: Hart Crowser, Inc.





This report includes information from the following map sheet(s).



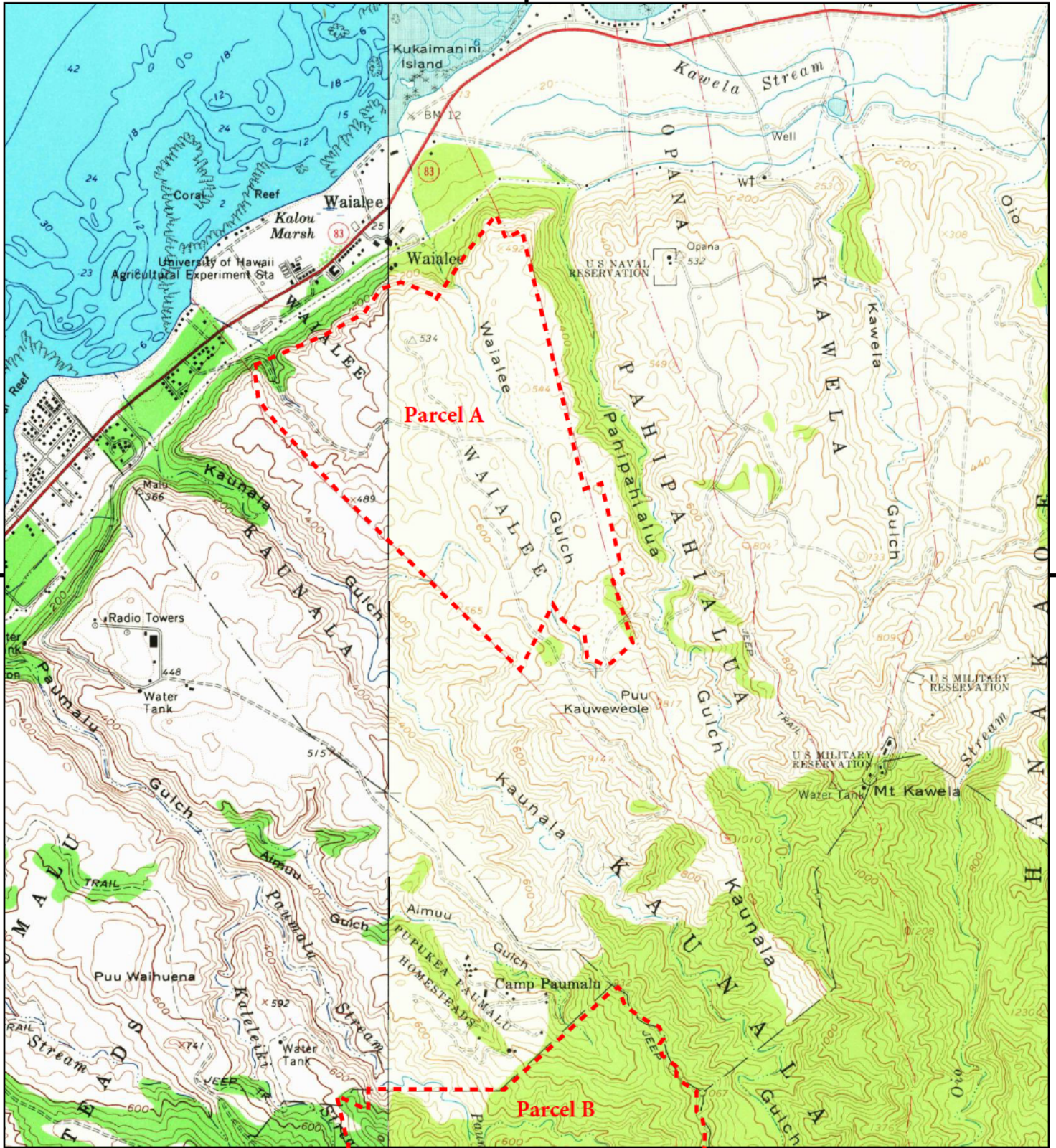
TP, Kahuku, 1983, 7.5-minute
W, Waimea, 1983, 7.5-minute

SITE NAME: Kahuku
ADDRESS: TMK #580020020000 #590060260000 &
Haleiwa, HI 96712
CLIENT: Hart Crowser, Inc.

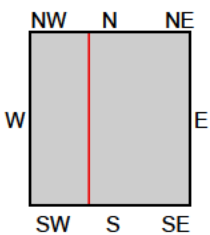


Historical Topo Map

1965, 1966



This report includes information from the following map sheet(s).



TP, Kahuku, 1965, 7.5-minute
W, Waimea, 1966, 7.5-minute

SITE NAME: Kahuku
ADDRESS: TMK #580020020000 #590060260000 &
Haleiwa, HI 96712
CLIENT: Hart Crowser, Inc.

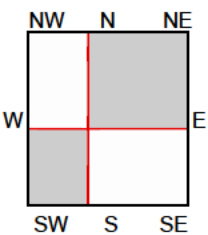


Historical Topo Map

1960, 1965



This report includes information from the following map sheet(s).



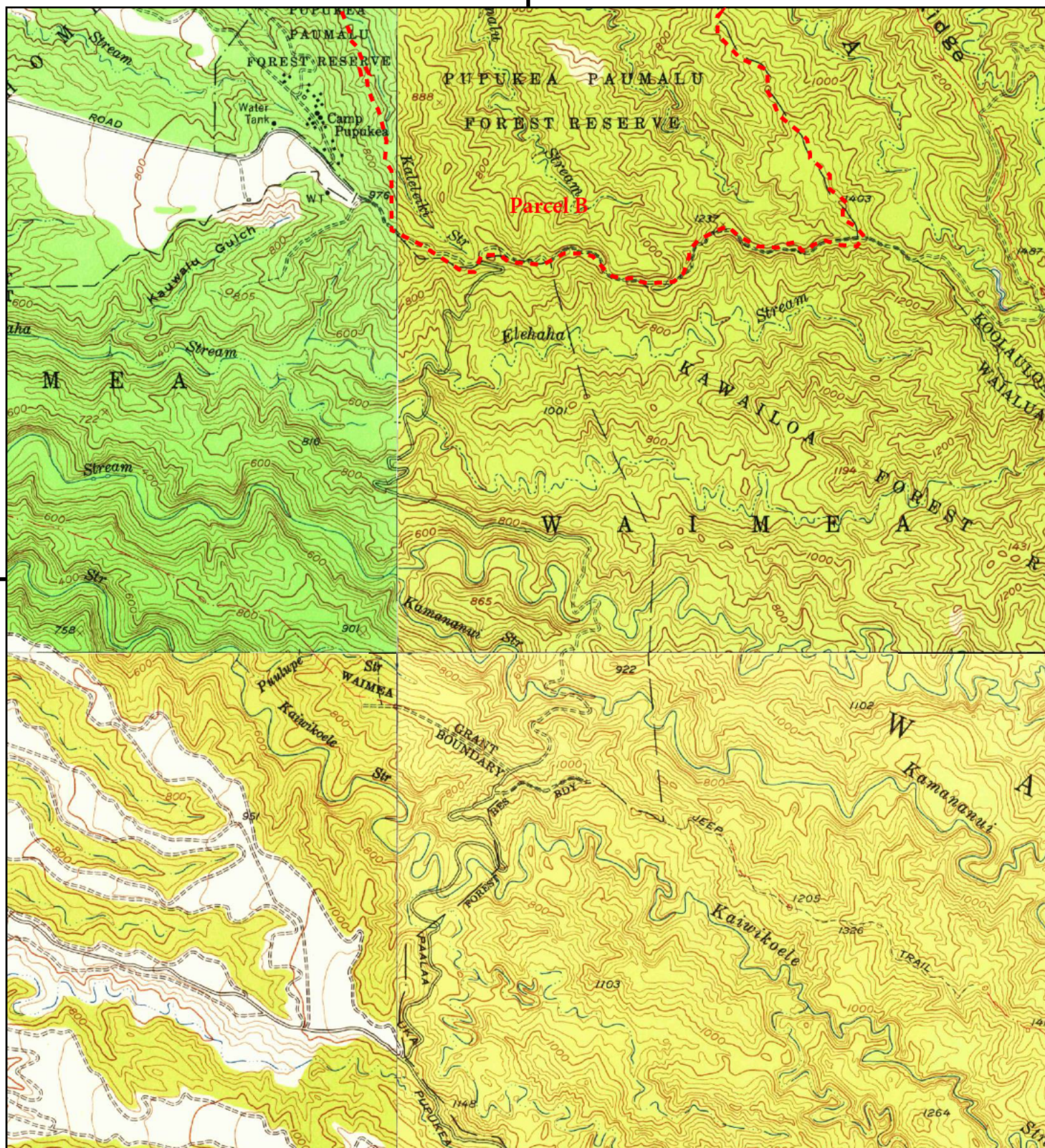
NE, Kahuku, 1965, 7.5-minute
SW, Haleiwa, 1960, 7.5-minute

SITE NAME: Kahuku
ADDRESS: TMK #580020020000 #590060260000 &
Haleiwa, HI 96712
CLIENT: Hart Crowser, Inc.

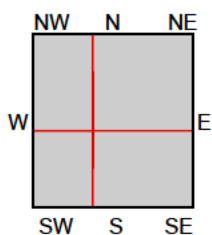
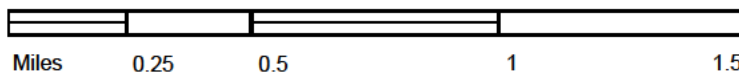


Historical Topo Map

1952, 1953, 1954



This report includes information from the following map sheet(s).



TP, Hauula, 1954, 7.5-minute
N, Kahuku, 1954, 7.5-minute
SW, Haleiwa, 1953, 7.5-minute
NW, Waimea, 1952, 7.5-minute

SITE NAME: Kahuku
ADDRESS: TMK #580020020000 #590060260000 a
Haleiwa, HI 96712
CLIENT: Hart Crowser, Inc.

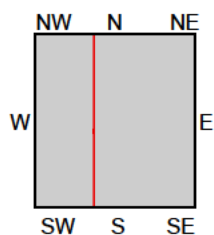
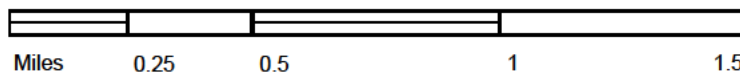


Historical Topo Map

1952, 1954



This report includes information from the following map sheet(s).



TP, Kahuku, 1954, 7.5-minute

W, Waimea, 1952, 7.5-minute

SITE NAME: Kahuku

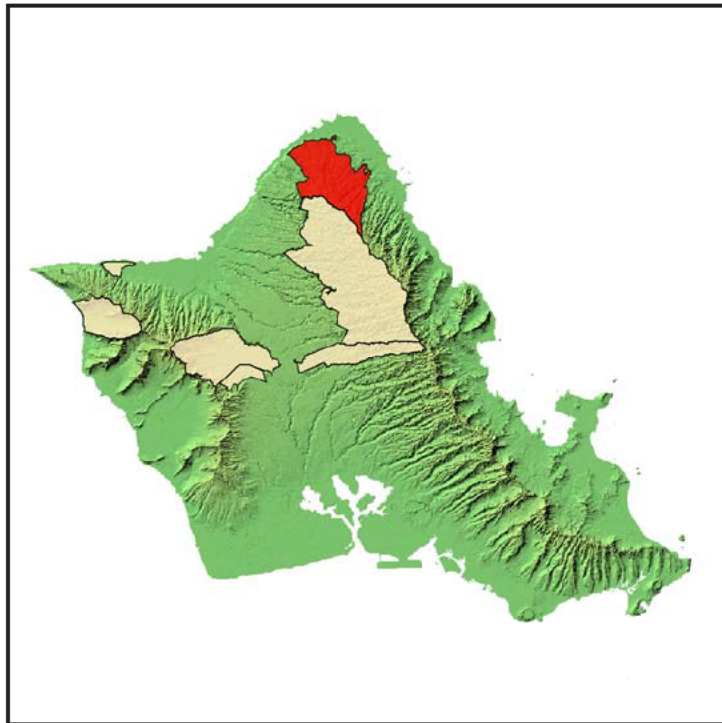
ADDRESS: TMK #580020020000 #590060260000 a
Haleiwa, HI 96712

CLIENT: Hart Crowser, Inc.



KAHUKU TRAINING AREA

STANDING OPERATING PROCEDURES



KAHUKU TRAINING AREA WILDFIRE SOP

1. GENERAL

1.1. Purpose.

The purpose of this Standing Operating Procedure (SOP) is to provide specific requirements that delineates the responsibilities of Federal fire department, Range Control personnel and using training units in the prevention and suppression of wildland fires at Kahuku Training Area (KTA). Its primary objective is to prevent unplanned ignitions through sound preventive measures. It also establishes procedures toward fire control and the protection of natural/cultural resources from wildfires.

1.2. Scope and Applicability.

The provisions outlined in this SOP are applicable to all military training units and personnel assigned to or utilizing KTA. Senior unit commanders, regardless of service or component, whose unit has been allocated the use of KTA, will ensure compliance with this SOP. All officers and noncommissioned officers will familiarize themselves with the contents of this SOP or receive a fire prevention briefing prior to use of the KTA range facilities. It is imperative that awareness on the part of all commanders is maintained and that all persons are instructed in fire prevention and fire suppression. It is the intent of this SOP that all persons are made so aware, and that the instructions and guidance contained herein is employed with a view towards accomplishing training with an absolute minimum of unwanted fire(s).

1.3. Responsibilities

- a. Installation Commander. The Installation Commander has the overall responsibility for fire prevention and protection requirements and environmental management at KTA.
- b. Director of Installation Fire and Safety Office. The Director of Installation Fire and Safety has overall responsibility for the wildland fire management program.
- c. Fire Chief, Federal Fire Department (FFD). The installation Fire Chief is responsible for the organization, supervision, and management of all aspects of the fire prevention and protection program in accordance with the provisions of DoDI 6055.6, Fire Protection.
- d. Range Officer, G3/DPTM, Range Division Hawaii. The Range Officer has overall responsibility for enforcing the provisions of the Integrated Wildland Fire Management Plan (IWFMP) and other applicable training directives and regulations, including restrictions on or cessation of training activities based on the day's fire danger rating.
- e. Range Operations Supervisor, Schofield Barracks. The SB Range Operations Supervisor is responsible to the Installation Commander for ensuring proper fire prevention measures are taken by troops in rear areas; fires in forested and other training areas, when discovered, are promptly reported; and augment the Federal Fire Department in fighting any fires at KTA.

KAHUKU TRAINING AREA WILDFIRE SOP

f. Wildland Fire Program Manager, IFSO. The Wildland Fire Program Manager is responsible for the execution of the Army's wildland fire program. Collaborates with other resource managers, FFD and other cooperative fire agencies to ensure that supplies, equipment, training, and qualified personnel are available to meet the goals and objectives of the IWFMP.

g. Unit Commanders and Division Chiefs. Commanders, managers, and supervisors at all levels of the organization are responsible for ensuring unit personnel are familiar with and comply with the provisions of this SOP and applicable regulations, fire prevention restrictions, training activities within biologically sensitive areas, providing qualified personnel to support the wildland fire management program.

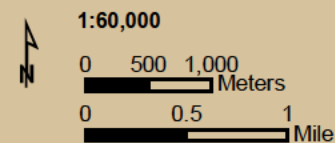
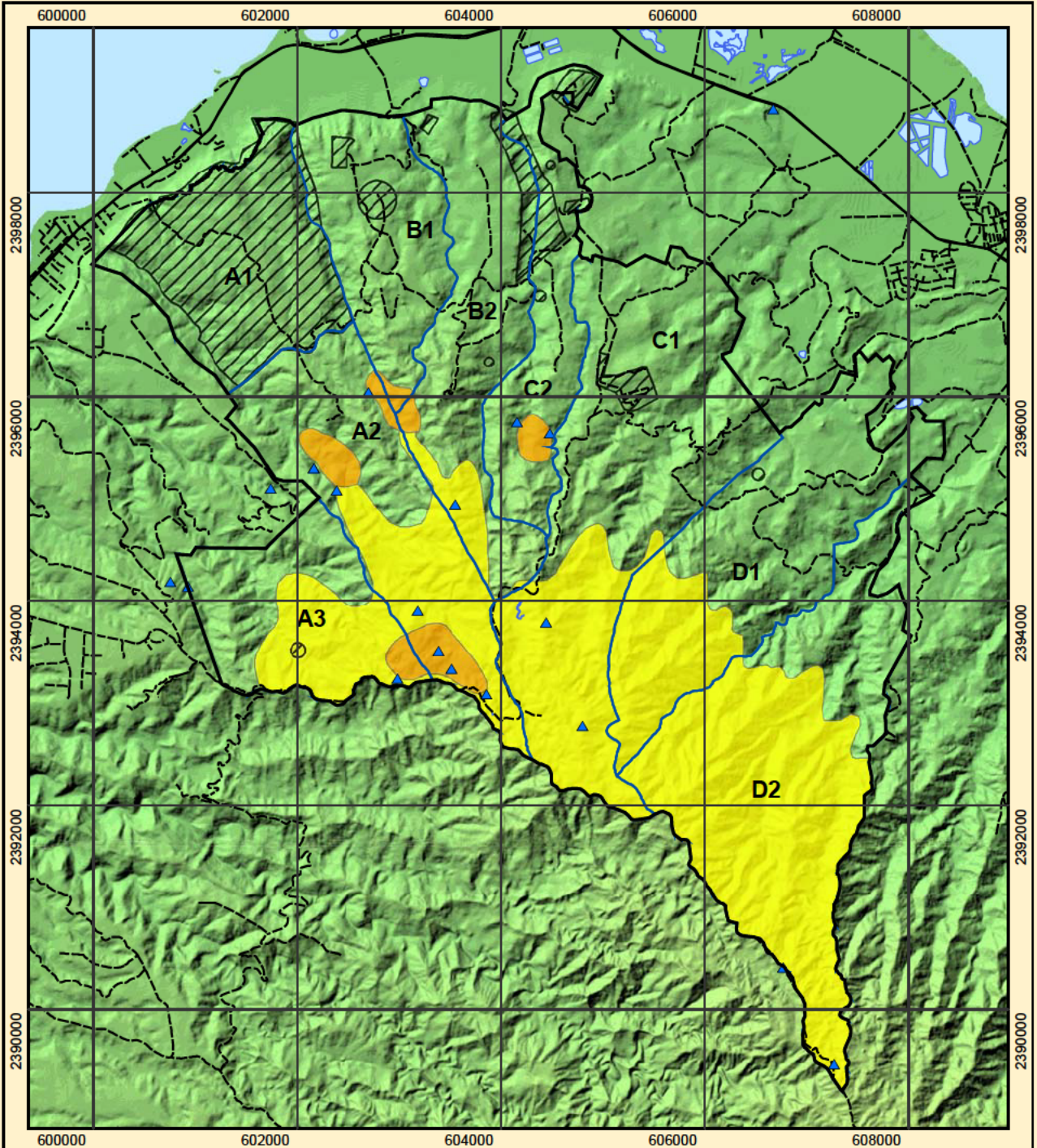
1.4. Environmental Considerations

a. Wildfires pose significant risks to threatened and endangered species of plants and animals and their native habitat. These habitats are located throughout various areas of the training ranges and adjacent outside the installation's boundary of KTA (Figure KTA-1). Cultural resources to include known archaeological sites are also found within the installation. Significant threats to the archaeological sites at KTA have generally been identified as explosive ordnance detonation, maneuvering activities, unmonitored ground disturbing activities and vegetation clearance. Fire is also a potential threat to archaeological sites from fire suppression activities.

b. Environmental Stewardship. Applicable environmental laws mandate the protection and conservation of natural/cultural resources. The use of various ammunitions, weapon systems, and pyrotechnics during live-fire training exercises increases the risk of wildfire and human or vehicular activity that can destroy native habitat. In the past, live-fire activities on Army training lands have burned large areas of native vegetation and threatened endangered species of plants and animals. The continued use of Army training lands in Hawaii greatly depends upon the Army's ability to reduce the number of fire starts and control fires within the installation boundary.

Kahuku Training Area Protected Resources

Figure KTA - 2



Data Source: Biological Assessment for Endangered Species Act, Section 7 Consultation on Routine Military Training and Transformation of the Second Brigade to a Stryker Brigade Combat Team, 25th Infantry Division (Light), U.S. Army Hawaii. Various Sites, Island of Oahu. 21 March, 2003.

USAG HI DPW 2003.

Biological Sensitive Areas

- BSA-2
- BSA-3
- Sensitive Archeological Areas
- Federally Listed Species
- Installation Boundary
- Training Areas
- Surface Water Body

Legend

- Roads**
- Primary
 - Tertiary



Survey and Control of Devil Weed (*Chromolaena odorata*) in the Kahuku Training Area, O'ahu, Hawai'i
Progress Report
October 1, 2014—March 31, 2015



Mature devil weed (*Chromolaena odorata*) in the Kahuku Training Area

Summary of Project Objectives

The O‘ahu Invasive Species Committee (OISC) was founded by a concerned group of citizens and land managers volunteering their weekends to control fountain grass and miconia on O‘ahu. Since then, OISC has grown into a partnership of federal, state and municipal agencies with a full-time field crew that works across all land ownerships.

OISC now systematically controls the island’s most damaging forest invaders, employs 16 people and educates the public about forest health and invasive species. OISC’s partners include the Hawai‘i Department of Land and Natural Resources/Division of Forestry and Wildlife, Honolulu Board of Water Supply, Hawai‘i Department of Transportation, Hawai‘i Department of Agriculture, Honolulu Botanical Gardens, and other state and federal agencies. The O‘ahu Army Natural Resources Program (OANRP) is a founding partner of OISC and one of OISC’s most supportive partners throughout its ten-year history. OISC is a project of the Pacific Cooperative Studies Unit of the University of Hawai‘i at Mānoa.

During the reporting period, OISC dedicated an average of 235 field hours a month to the detection and control of *Chromolaena odorata* at Kahuku Training Area (KTA). 1,849 plants were treated over 767 acres during OISC’s surveys of subunits 3, 4, 7, 8 and 10.

The FY2015 survey and control plan is to:

- Sweep once through all hotspots to count plants prior to OANRP conducting aerial or power sprayer drench with Oust, and delimit hotspots with flagging, or something equivalent.
- Follow up with on the ground “spot” chemical or mechanical control of OANRP treated hotspot areas.
- Survey once through subunits 3, 4, 7, 8, and 10 twice a year and treat plant population of five plants or less when encountered.
Communicate with OANRP via a google docs spreadsheet the locations where spray operations of large patches are needed. OISC also uses the spreadsheet to note if treatment was effective.

OISC continues to obtain permission from private landowners on the northern side of KTA to survey their properties. These efforts will complement the surveys on KTA. Non-OANRP funds are supporting this work.

OISC conducts monthly management camping trips to reduce the time spent commuting to the work site in order to increase logistics efficiency. OISC works with OANRP to acquire access using KTA’s range control protocols. OANRP staff observed that *C. odorata* tends to set seed between March and April so management actions are scheduled to minimize the chance that control work will inadvertently spread this species.

OISC also conducts survey and control efforts outside the property boundaries of the KTA. The OISC outreach specialist obtains permission from private landowners on the northwestern side of KTA to survey and control populations on their properties. These efforts complement work efforts on KTA to prevent the spread of *C. odorata* to other locations on the island. Non-OANRP funds are supporting this work.

PROJECT ACCOMPLISHMENTS: OCTOBER 1, 2014-MARCH 31, 2015

Chromolaena odorata, commonly known as devil weed is a state-listed noxious weed, toxic to other plants, livestock and humans, possesses the ability to root vegetatively, produces up to 800,000 wind-dispersed seeds a year and is a fire promoting species that forms dense, monotypic stands of vegetation. The OANRP discovered *C. odorata* at the Kahuku Training Area (KTA) on the north shore of O‘ahu in January 2011. The Biological Opinion for military activities on O‘ahu requires the Army to respond immediately to incipient weeds brought in via training operations. What is currently known about *C. odorata* supports the assumptions that the center of the population is the Kahuku Training Area and that *C. odorata* was introduced to KTA because of military activities:



Between 2006 and 2009, botanical surveys of all publicly accessible roads on O‘ahu were conducted by OISC’s O‘ahu Early Detection program. *C. odorata* was not found during these surveys. This means that it is unlikely *C. odorata* was introduced somewhere else and dispersed onto KTA. *C. odorata* is a major pest on the island of Guam, and units from Hawai‘i sometimes train in Guam. The seeds are wind dispersed and readily attach to clothing. One plant can produce approximately 800,000 seeds a year. Given these factors, it is highly likely the pathway of introduction was military activities.

OISC conducts survey and treatment for *C. odorata* at KTA in partnership with OANRP and the Hawai‘i Department of Agriculture. The OISC field crew conducted delimiting surveys to determine population distribution and density in the Kahuku region and some limited control work. The management trips averaged 241.5 fieldwork hours per month. During the reporting period, OISC staff dedicated 1,449 personnel hours, of which 1,360 were field personnel hours. OISC surveyed 767 acres and treated 316 mature and 1,533 immature plants for a total of 1,849 plants. It should be noted that these control numbers are not a reflection on the total amount of plants detected or that actually exist within the subunits OISC manages, just the total that were treated by OISC staff. Large “hotspots” suitable for ground or aerial spraying were flagged for later treatment by OANRP.

CHALLENGES

The area to be treated poses logistical challenges and some safety concerns that OISC is working to resolve. Crewmembers find they must carry more than three liters of water to ensure adequate hydration and heat exhaustion is a concern. The amount of ground covered when it is extremely hot will be reduced due to the need to take frequent breaks to prevent heat-related illnesses.

Surveys through guinea grass have a low confidence level because it is difficult to see even a short distance to the next crewmember. Guinea grass also presents a safety hazard

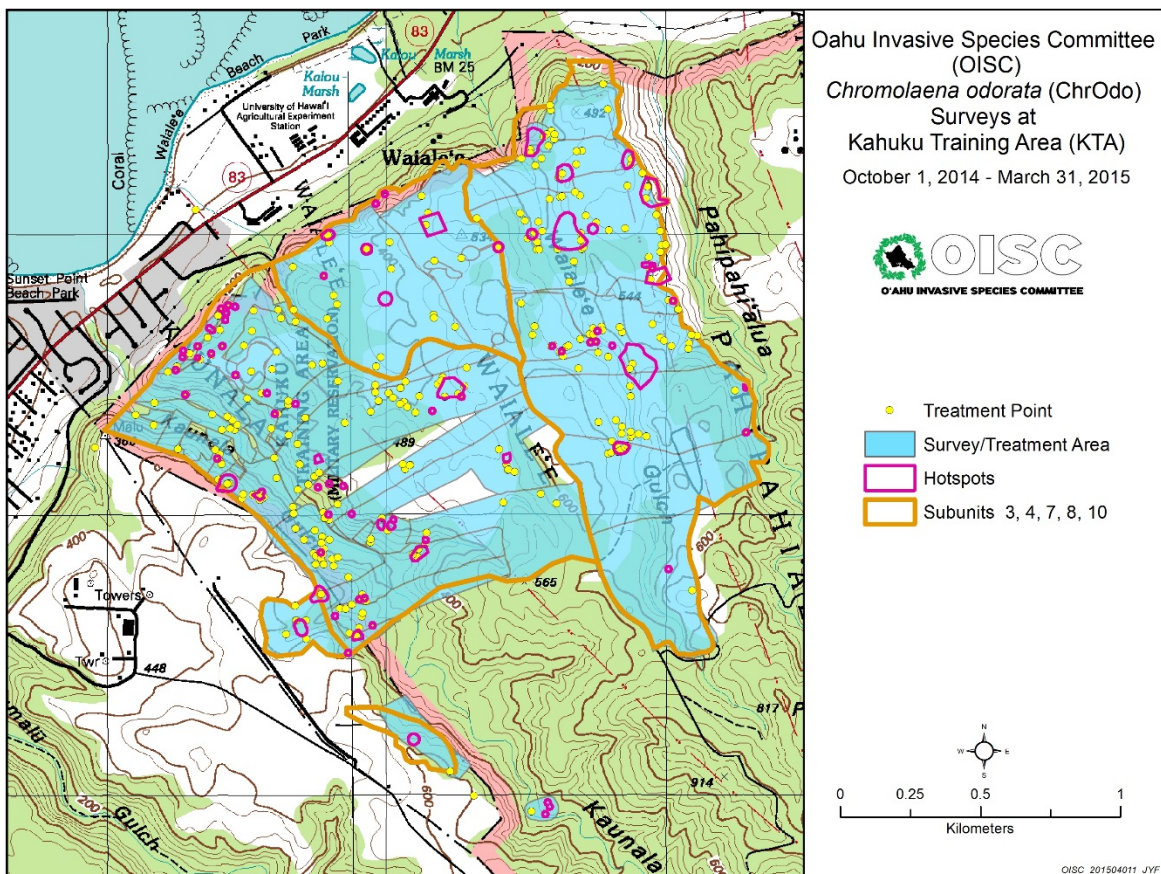
because it obscures the steep drop-offs and cliffs common in the area. As a result, OISC crews are treading more carefully and covering less acres per hour.

Additional acreage has been added to the area OISC needs to survey. Subunit 4 was extended to add 37 acres and subunit 10 was added. OISC had previously been able to sweep the entire area in 6 months and estimated that we could be finished in five months. However, the heat and terrain that have forced the crew to go more slowly and the additional acreage mean that we may not be able to complete all the surveys.

**Table 1: OISC *Chromolaena odorata* Work Effort Summary
October 1, 2014-March 31, 2015**

Location	Acres Surveyed	Mature Plants Treated	Immature Plants Treated	Total Plants Treated	Effort (Hours)
KTA Subunits 3, 4, 7, 8, 10	767	316	1,533	1,849	1,449

**Figure 1: OISC *Chromolaena odorata* Work Effort in Kahuku Training Area
October 1, 2014 – March 31, 2015**



DATA MANAGEMENT

OISC tracks its survey and control efforts in Microsoft Access and ArcGIS databases. It uses this data to plan field operations and report on progress. The OISC field crew completes field forms daily and is trained in the use of ArcPad and ArcGIS programs and the OISC Access database. The OISC Operations Planner and Data Analyst compiles and analyzes data collected in the field to assess work effort and if target work goals are being met.

OANRP and OISC jointly update a google doc spreadsheet to communicate hotspot treatment efficacy. OISC communicates to OANRP via the spreadsheet if a location is still a hotspot or if plants are present and OANRP lets OISC know when treatments have been completed.

PUBLIC EDUCATION & OUTREACH

OISC's outreach specialist provided an informational update to the Ko'olauloa Neighborhood Board and an identification and reporting workshop to Board of Water Supply maintenance crew at their Kalihi baseyard.



OTHER

In January 2013, botanists confirmed a satellite population of *C. odorata* in Kahana Valley. Since then, OISC obtained funding from the Watershed Partnership Program Grants to conduct surveys and control in this region. OISC's Outreach Specialist obtained Annual Special Use Permits for the survey and control of *C. odorata* populations at Kahana Heiau and Kea'iwa Heiau State Parks. Summaries of these efforts at the State Parks are provided by the outreach specialist to the respective Park Coordinators on a quarterly basis. As of March 31, the initial 200 meters around hotspots were surveyed and 2,008 plants controlled. Unfortunately, more plants were found within this initial buffer and the crew will continue to survey outward until they have delimited the population.

In addition to the Kahana population, a significant infestation of *C. odorata* was discovered by off-duty OANRP employees in 'Aiea. OISC is still working to delimit and treat the population. Plants are spread across Navy, State Park, State Forest Reserve, and Honolulu Board of Water Supply land. Staff from Marine Corps Base Hawai'i and OANRP have joined OISC staff during surveys and treatment. Staff from MCBH also assisted with gaining access to the Navy managed portion of the land.

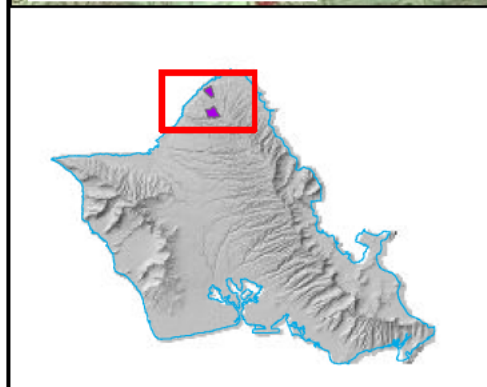
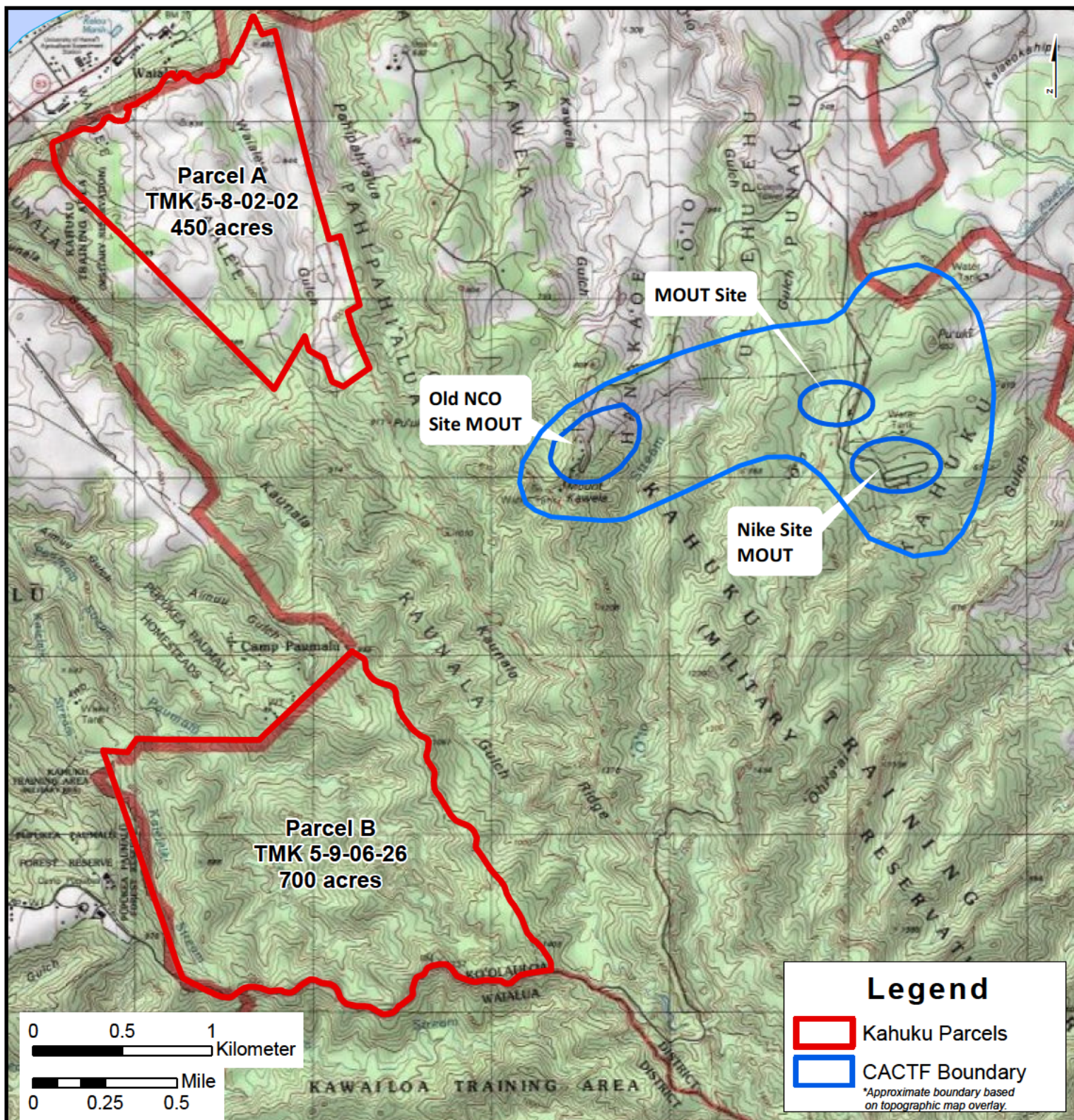
**Table 2: OISC *Chromolaena odorata* Work Effort Summary in Kahana Valley
October 1, 2014 – March 31, 2015**

Location	Acres Surveyed	Mature Plants Treated	Immature Plants Treated	Total Plants Treated	Effort (Hours)
Kahana Valley	25.36	11	290	301	209
'Aiea	109.33	125	95	220	300

In January, the OISC field crew found one *C. odorata* plant while doing surveys for *Senecio madagascariensis* in the Keamanea watershed at a spot that OISC visits frequently. OISC has dedicated gear for *C. odorata* surveys and washes the trucks in between species but there is a possibility that OISC dispersed it to this area. However there are other possible vectors. This area is near KTA, but close enough that wind dispersal is a possibility. Drum Road also runs through this area. OISC will continue to watch for *C. odorata* in this area and to closely follow decontamination protocols.

COMPLIANCE

OISC is a project of the Pacific Cooperative Studies Unit through the Research Corporation of the University of Hawaii, an equal opportunity employer. OISC utilizes RCUH and PCSU standard operating procedures and employee guidelines. OISC employees are trained in wilderness first aid, off-trail hiking safety and pesticide safety.



Contract No. W9128A-12-D-0005
Date: March 2017

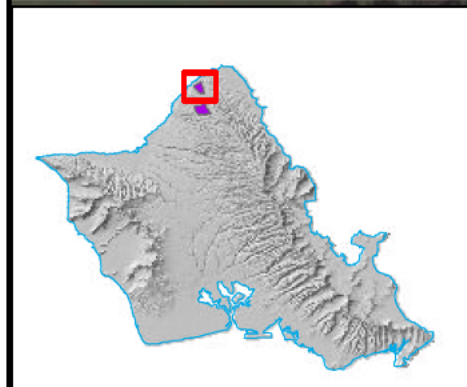
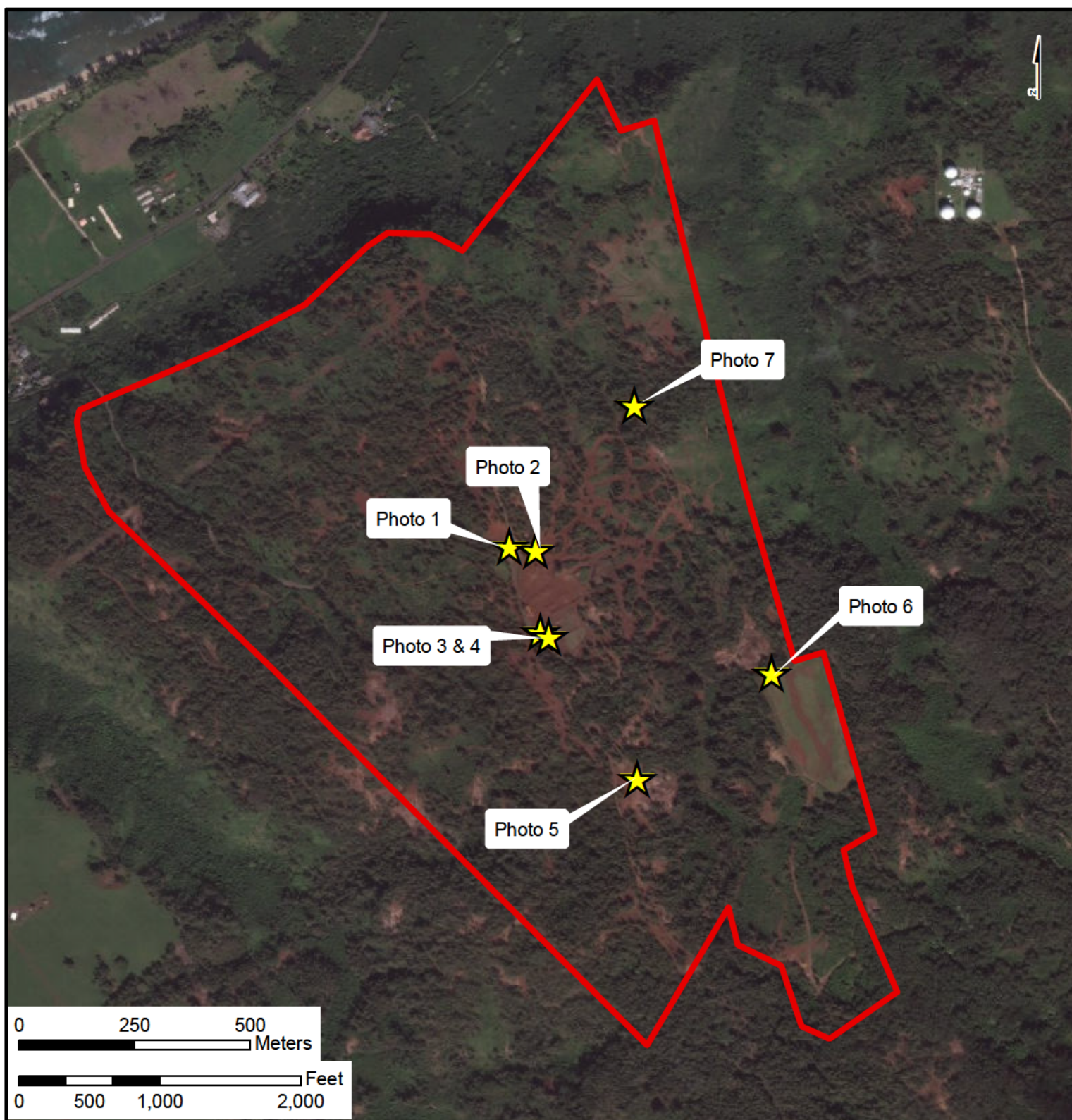
MOUT sites digitized from the Final Environmental Impact Statement Transformation of the 2nd Brigade, 25th Infantry Division (L) to a Stryker Brigade Combat Team in Hawai'i

Combined Arms Collective Training Facility at KTA

Kahuku Parcels

Environmental Condition of Property (ECoP)
Report for U.S. Army Land Acquisition, Oahu

APPENDIX **C** – SITE RECONNAISSANCE PHOTOGRAPHS



Contract No. W9128A-12-D-0005
Date: March 2017

Appendix C

Kahuku Parcel A

Photo Directory

Environmental Condition
of Property (ECoP)
Report for U.S. Army
Land Acquisition, Oahu

Parcel A: 5-8-02-02



Photograph 1 - Water tank trailer with 23-gallon fuel tank, facing east from center of Parcel A.



Photograph 2 - Kahuku Motocross Track, facing east from center of Parcel A.



Photograph 3 - Kahuku Motocross Park maintenance area, facing west from center of Parcel A.



Photograph 4 - Tank in maintenance area, facing west from center of Parcel A.



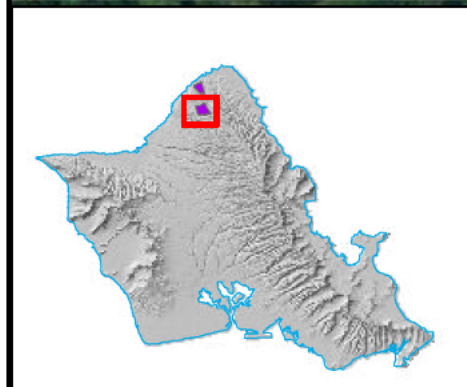
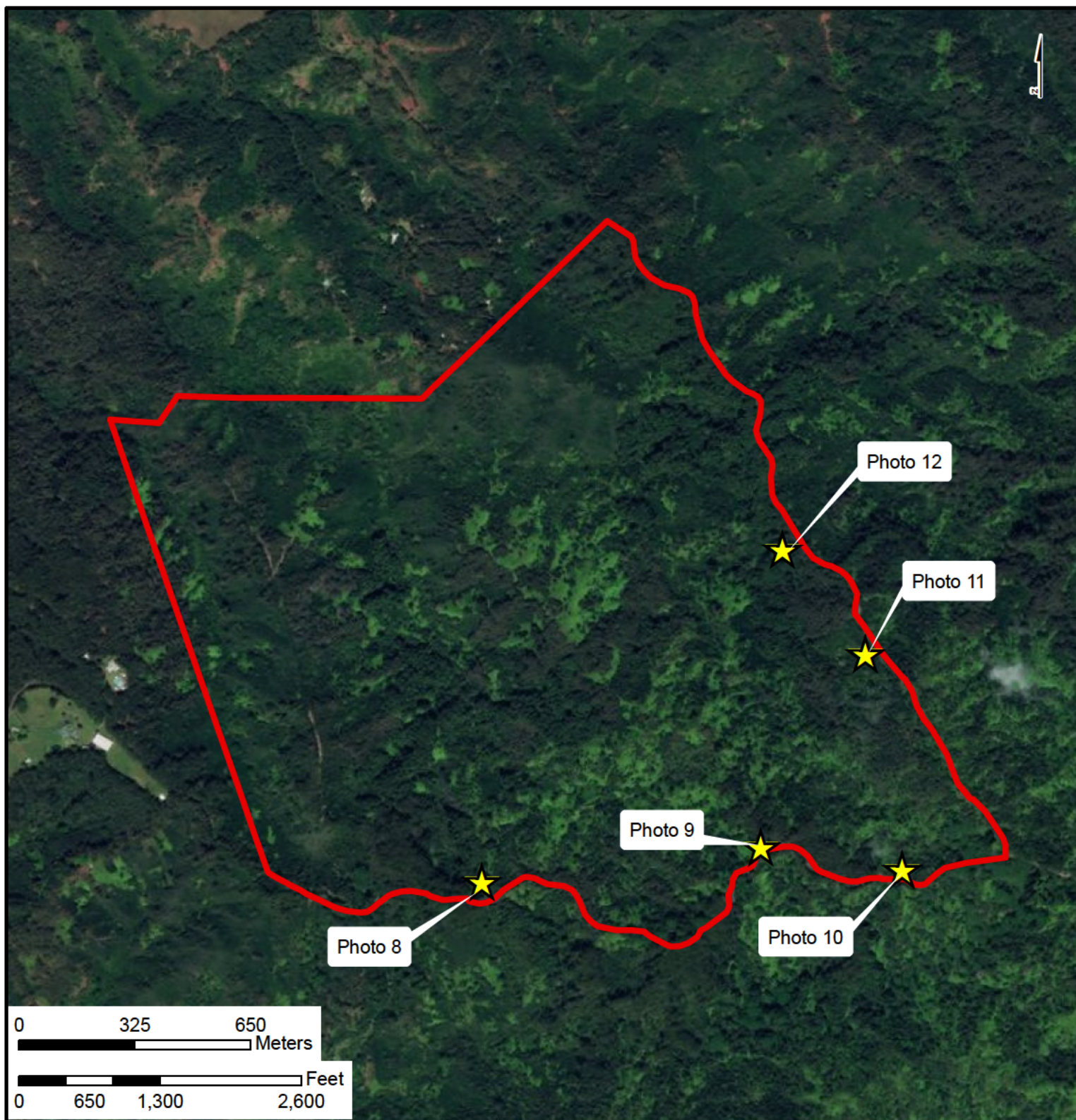
Photograph 5 - Southern portion of Kahuku Motocross Park, facing east from center of Parcel A.



Photograph 6 - X-Strip Landing Zone, facing south from eastern corner of Parcel A.



Photograph 7 - Example of typical motocross trail in ironwood forest, facing north from northern portion of Parcel A.



Contract No. W9128A-12-D-0005
Date: March 2017

Appendix C

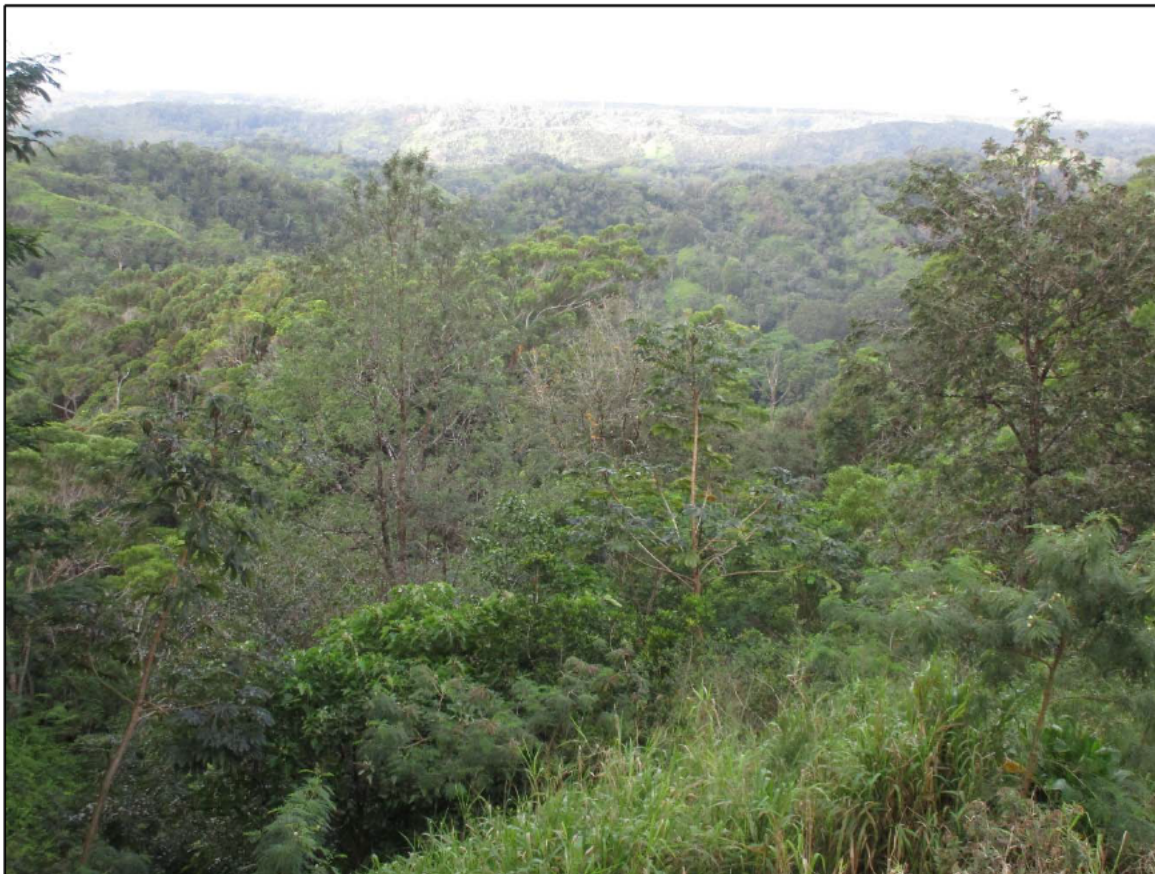
Kahuku Parcel B Photo Directory

Environmental Condition
of Property (ECoP)
Report for U.S. Army
Land Acquisition, Oahu

Parcel B: 5-9-06-26



Photograph 8 - Access road on southern portion of parcel, facing east of Parcel B.



Photograph 9 - Central portions of parcel, facing north from southern portion of Parcel B.



Photograph 10 - Boy Scouts of America Troop 162 picnic pavilion, facing south from southern portion of Parcel B.



Photograph 11 - Trail on eastern portion of parcel, facing north of Parcel B.



Photograph 12 - Central portions of parcel, facing north from eastern portion of Parcel B.

APPENDIX D – INTERVIEWS AND CORRESPONDENCE

**ENVIRONMENTAL SITE ASSESSMENT
USER QUESTIONNAIRE**

Project or Facility Name: Kahuku Properties

Facility address: Various TMKs, Northern O'ahu

Facility TMK Parcel(s): 5-8-02-02 (450 acres), 5-9-06-26 (720 acres), 5-9-06-06 (61 acres)

Type of Property Transaction: ☒ Purchase ☐ Sale ☒ Lease ☐ Exchange

1. Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

- ☒ I have reviewed reasonably ascertainable recorded land title records and lien records and am not aware of environmental cleanup liens against the *property*.
- ☐ I am aware of cleanup liens against the *property*, and provide the following information:

2. Activity and land use limitations (AULs) that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26 (a)(1)(v) and (vi)).

Are you aware of any AULs, such as engineering controls (e.g., engineered caps, liners, treatment systems), land use restrictions, or institutional controls in place at the *property* that are filed or recorded in a registry under federal, tribal, state or local law?

- ☐ I have reviewed reasonably ascertainable recorded land title records and lien records and am not aware of AULs in place at the *property* or that have been filed or recorded.
- ☒ I am aware of AULs associated with the *property*, and provide the following information: Part of Conservation Area

3. Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

As the User of this ESA, do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an adjoining *property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

- ☒ I have no specialized knowledge or experience related to the *property* or nearby properties.
- ☐ I have specialized knowledge or experience, and provide the following related information:

**ENVIRONMENTAL SITE ASSESSMENT
USER QUESTIONNAIRE**

4. Relationship of the purchase price to the fair market value of the property if it were contaminated (40 CFR 312.29).

Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*??

- ☒ The purchase price reasonably reflects the fair market of the *property*.
☐ The purchase price may not reflect the fair market value of the *property*, for the following reasons:

5. Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).

Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:

a) Do you know the past uses of the *property*?

☒ Yes ☐ No If yes, provide info: *Training Land and Motor Road.*

b) Do you know of specific chemicals that are present or once were present at the *property*?

☐ Yes ☒ No If yes, provide info:

c) Do you know of spills or other chemical releases that have taken place at the *property*?

☐ Yes ☒ No If yes, provide info:

d) Do you know of any environmental cleanups that have taken place at the *property*?

☐ Yes ☒ No If yes, provide info:

**ENVIRONMENTAL SITE ASSESSMENT
USER QUESTIONNAIRE**

e) Do you know of any environmental documents relative to the *property*?

☐ Yes ☒ No If yes, check applicable document:

- | | |
|---|---|
| <input type="checkbox"/> <i>ESA reports</i> | <input type="checkbox"/> <i>Reports regarding hydrogeologic conditions on the property or for the surrounding area</i> |
| <input type="checkbox"/> <i>Environmental compliance audit reports</i> | <input type="checkbox"/> <i>Notices or other correspondence from any government agency relating to past or current violation of environmental laws with respect to the property or relating to environmental liens encumbering the property</i> |
| <input type="checkbox"/> <i>Environmental permits (waste water, hazardous waste, etc.)</i> | <input type="checkbox"/> <i>Hazardous waste generator notices or reports</i> |
| <input type="checkbox"/> <i>Under/above-ground storage tank registration</i> | <input type="checkbox"/> <i>Geotechnical studies</i> |
| <input type="checkbox"/> <i>Underground injection systems registration</i> | <input type="checkbox"/> <i>Risk assessments</i> |
| <input type="checkbox"/> <i>Safety Data Sheets</i> | <input type="checkbox"/> <i>Recorded Activity and Land Use Limitations</i> |
| <input type="checkbox"/> <i>Community right-to-know plan</i> | |
| <input type="checkbox"/> <i>Safety plans; preparedness & prevention plans; spill prevention, countermeasures, control plans, etc.</i> | |

Checked documents are attached. ☐ Yes ☐ No

6. The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the *user* of this *ESA*, based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of contamination at the *property*?

- ☒ I am not aware of obvious indicators of the presence or likely presence of contamination.
- ☐ I am aware of the presence or likely presence of contamination, and provide the following related information:

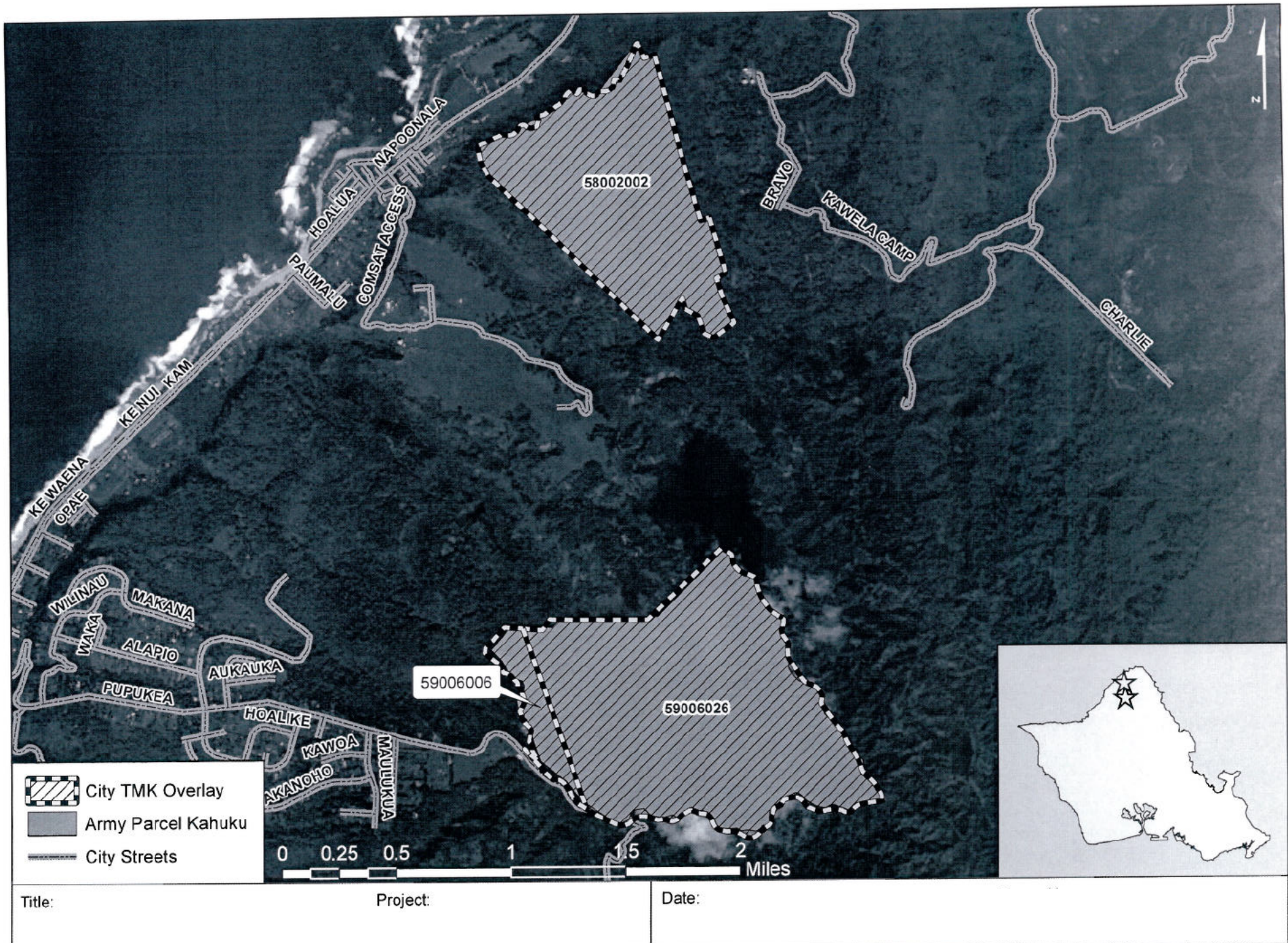
I have _____ edge and belief.

Signature _____

Print Name _____

Title: Real Property Accountable Officer

Date: 28 Mar 17



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Record of Interview with DLNR

February 19, 2016

Present: Hart Crowser: [REDACTED] [REDACTED] and [REDACTED]

Department of Land & Natural Resources: Aaron Lowe

I. Agenda

- Discussion of Kahuku Parcel 5-8-02-02 in relation to Kahuku Motorcross Park and Army lease.

II. Discussion

- a. [REDACTED] gave background on the Phase I Environmental Site Assessment (ESA) project goals and parcel locations.
- b. Aaron discussed his role in DLNR's Na Ala Hele Trails & Access Program in relation to Kahuku parcels. Overall he focuses on negative impact mitigation or natural resource improvement.

III. Summary

1. After project discussion, Aaron stated that there is a complex ownership and use situation with the parcels. The DLNR currently leases land to the Army.
2. Aaron expressed concern over potential purchase of Kahuku Parcel 5-8-02-02 as it currently contains the only authorized motocross park in the State of Hawai'i.
 - The Motocross Park has a revocable permit with DLNR; managed by [REDACTED]
 - DLNR receives federal funding by receiving a small percentage of the gas tax for supporting off-highway vehicle activities through the Motorcross Park eligibility. This income accounts for approximately 80% of total budget and supports the Recreational Trail Program.
 - Hawai'i Motorsports Association includes large military presence and has about five to six hundred members overall.
 - Currently the Motocross Park Manager [REDACTED] coordinates with range control for use of the Park for drills. [REDACTED] is a landscaper by trade; Aaron has found government decision processes are sometimes difficult to communicate.
 - Past use conflicts on the weekends related to the improper use of the landing area by motocross park users.
 - Discussed need to discourage use of certain areas and prohibit unauthorized access to the park from adjacent training areas and into adjacent training areas from the park; fencing potential solution.
3. Aaron mentioned that improvement funds had been allocated to the park to upgrade sanitation, waste removal, and fix heavy equipment for park improvement purposes.

- Aaron stated that Army Environmental, Kahuku Motorsports Association, and DLNR need to work together to create a dirt bike washing station to prevent weed seed dispersal.

- [REDACTED]

4. Briefly discussed development of a management plan for Kahuku Motocross Park that would involve proper design and vegetation plan for mitigation.
 - Adjacent roadways have reverse grading to reduce runoff overflow from park system;
 - Currently no record of spills, releases or leaks on property related to motocross activity; and
 - Aaron said more money coming in every year related to this activity and DLNR may create a position to manage the area as well as identify other potential areas for this type of recreational use.
5. Aaron said the next project specific to Motocross Park would be perimeter fencing as there is a need to discourage use of certain areas and prohibit unauthorized access to the park from other areas.

ENVIRONMENTAL ASSESSMENT QUESTIONNAIRE

DATE: April 18, 2016

FACILITY NAME: Kahuku Motorsports Association

FACILITY TMK Parcel(s): 5-8-02-02

OWNER: Department of Land and Natural Resources, State of Hawai'i

1. Name/title/phone number of person being interviewed.

■■■■ Yasuda, Treasurer & Secretary for three years.

2. Role relative to and years associated with the property.

■■■■ second year on the board. Since 2013 she started going up to Kahuku Motor Park regularly on weekends.

3. How long has the property been in the same use? Do you know what the property was used for prior to its current use?

■■■■ said the park became used for motor sports in the late 60's/early 70's per John DeSota; John could provide more information as he is an honorary board member with family history as they helped open the park.

4. Do you have any permits from the County, State, or Federal government for the facility?

DLNR permit issued Kahuku Motorsports Association a revocable permit for annual off-roading use on weekends and holidays. Kahuku Motorsports Association will get bumped in June for two weekends for military use. ■■■■ stated that the military utilize the park for training operations and live fire in June. The military have priority over utilizing the area.

5. What is the source of water (county/well/catchment) to the property? Do you know of any issues related to groundwater contamination at the site?

Two pump houses on the north and south sides of the entrance road but each pump have had ongoing issues with getting the running water tank in operable condition as well as the pump house not strong enough. Operating condition of the pump house is not consistent.

6. Do you know of any environmental liens or government notifications relating to past or recurrent violations of environmental laws with respect to the property?

None to her knowledge. Plant specialists visit the property and provide outreach materials related to invasive species. Focus has been on devil weed *Chromolaena odorata*.

7. Is there a sewer system (cesspool/septic tank/injection well/county system) on the property? Is the waste treated?

None – using porta potties which are maintained weekly. Dumpsters are emptied weekly as well.

8. Do you know if wastewater or storm water is or was discharged at the property? Do you have a wastewater discharge permit or a NPDES permit?

None.

9. Do you know if there are or were any drains or sumps on the property? What do/did they drain? Where do/did they discharge?

None. Catchment system would require pumps so currently just using for the track area nearest to catchment.

10. Do you know if there are or were any electrical transformers (on the ground or pole-mounted) on the property? If so, who owns/owned the transformers? Have they been tested for PCBs?

No electrical transformers at the property. Generators are used for events, speaker system.

11. Do you know of any current or past vent pipes, fill pipes, or access ways on the property?

No past vent pipes, fill pipes, or access ways on the property.

12. Do you know if there are or were any registered or unregistered above ground or underground storage tanks on the property?

<u>SIZE/TYPE</u>	<u>CONTENT</u>	<u>AGE</u>	<u>LOCATION</u>	<u>REGISTERED WITH DOH?</u>	<u>REMOVAL/LEAK HISTORY</u>
------------------	----------------	------------	-----------------	---------------------------------	---------------------------------

Mobile fuel tank can hold 800 gallons unknown age. 2-300 gallons filled diesel.

13. Do you know if there are or were any oil/water separators on the property?

No OWS.

14. Do you know if there are or were any clarifiers, processors, or distillation/neutralization units on the property? If so, what substances are used/produced by them?

None.

15. Do you know if there is or was a dry cleaner, photo processing shop, fuel station, motor repair facility, commercial printing facility, junk yard, landfill, waste disposal or recycling facility on the property?

No – prior use was filed or vacant land

16. Do you know if there is or was a maintenance shop on the property? If so, what kind of activities take place there?

People repair at home – no repairs at Association

17. Do you know if there are or were any hydraulic lifts on the property?

No hydraulic lifts on the property.

18. Do you know if there are or were any waste or chemical pipelines, pits, ponds, or lagoons on the property?

No waste or chemical pipelines, pits, ponds, or lagoons on the property.

19. Do you know if there are or were any of the following materials used, generated, stored, or disposed at the property? If so, how much? How are/were these materials and the containers disposed?

- ☐ **Pesticides/herbicides (Are/were they EPA registered pesticides? Were pesticides mixed on the property? If so, do you know where?).**

Herbicides for California grass – money really tight so not spraying much herbicide.

- ☐ **Fertilizers - No**

- ☐ **PCBs- No**

- ☐ **Oils/lubricants (including waste oil) - No**

- ☐ **Radioactive materials- No**

- ☐ **Solvents (including cleansers, degreasers, paint thinners, coolants) - No**

- ☐ **Acids/bases (including lead-acid batteries) - No**

Batteries disposed at Wahiawa Dump

- ☐ **Ignitable or reactive materials- No**

Try to reduce materials on site, theft and trespassing rule posted at park.

- ☐ **Heavy metals (including lead-based paint) - No**

- ☐ **Cyanide wastes- No**

- ☐ **Asbestos (including brake pads and shoes, building materials) - No**

20. Do you know of any spills or leaks of the above materials? - No

- 21. Do you know if any other wastes are generated at the property?** – No, basic refuse
- 22. Do you have SDSs for the above materials present on the property? Where are SDSs kept?** – No SDSs kept on site
- 23. Are you aware of any contamination or waste disposal areas on the property? Possible concerns include drums or sacks of chemicals, fugitive dumping of fill, and stained soil.** - None
- 24. Are you aware of any contamination or waste disposal areas on nearby properties?** - No
- 25. Is there any runoff from adjacent properties onto your property?** – No, located in a high area.
- 26. Do you know of previous environmental reports related to the property?**

No record of previous reports. Devil weed study ongoing & representatives continue to monitor the areas previously marked with devil weed.

- 27. Do you know of any other person(s) who may have knowledge relative to the environmental condition of the property? Please provide contact information, if known.**

██████ is a park manager ████████████████████ has similar knowledge as treasurer and board member.

- 28. Do you have any additional comments or concerns relative to the environmental condition of the property?**

No – constant battle for water. Pushing water up hill is difficult and pump houses fail regularly. The organization is all volunteer-run so maintenance is challenging. Can't do bike wash to reduce invasive seed dispersal without a reliable water source. This year they had a record dry weather for winter. All the acreage trails are unique to O'ahu – Hawai'i Motorsports Association stresses "keep the rules or you will lose it". ████████ says it is a good place for family and everyone helps each other.

[REDACTED]

Subject: RE: [Non-DoD Source] Army Training Areas

1. For Kawaihoa and Kahuku training areas, what types of munitions are used in training? [Blanks](#)
2. Is UXO (unexploded ordnance) a possibility at both sites? [Yes, old stuff that was used previously have been found during training or surveys](#)
3. For the "landing zones", are there any known accidents or releases of fuel at these locations? [None that I am aware of and I have been at RC since 2007.](#)

Respectfully,

[REDACTED]

[REDACTED]

Subject: RE: [Non-DoD Source] Army Training Areas

[REDACTED],

Currently, only 5.56mm short range training ammunition (SRTA) is used around the Kahuku Combined Arms Collective Training Facility (CACTF). All other areas use blank ammunition and ground pyrotechnics.

Blanks are not UXO and do not become UXO's.

Respectfully,

[REDACTED]

----- Message-----

From: [REDACTED]

Sent: Thursday, March 23, 2017 4:16 PM

[REDACTED]

Subject: RE: [Non-DoD Source] Army Training Areas

Hi Ivan,

I hope you are doing well. Your help in facilitating our property access and information for the assessment reports was greatly appreciated. We have a few follow-up questions and we hope you can assist us again.

For Kahuku Training Area (map attached) - do you know what weapon system is utilized for the live training exercises? Also, do blanks have the potential to become a UXO if left in the field?

Thank you

[REDACTED]

[REDACTED]

PART 2:

PHASE II ENVIRONMENTAL SITE ASSESSMENT

Section 1: Summary

A Phase I Environmental Site Assessment (ESA) was prepared for two parcels of O'ahu real estate, TMKs 5-8-02-02 and 5-9-06-26, referenced as the "Kahuku Properties." The Phase I ESA revealed no evidence of recognized environmental conditions (RECs) associated with the Property.

The assessment revealed the following notable findings with respect to Parcel A:

- Historical use of the property for military training represents a notable finding for the presence of unexploded ordnance; however, specific locations of potential UXO were not identified.
- Herbicide usage to control an invasive weed is considered a notable finding; however, pesticides appear to be used properly by the OISC.
- Poor housekeeping practices noted during the site reconnaissance included the presence of unsecured small containers of fuel; however, no releases were indicated.

The assessment revealed the following notable finding with respect to Parcel B:

- Historical use of the property for military training represents a notable finding for the possible presence of unexploded ordnance; however, specific locations of potential UXO were not identified.

None of these notable findings point to a certainty of contamination, or RECs. **No additional investigation or sampling of the Kahuku Properties is recommended.** Therefore, a Phase II ESA will not be conducted.

PART 3:

CATEGORIZATION OF PROPERTY

Section 1: Summary

A Phase I Environmental Site Assessment (ESA) was prepared for two parcels of O'ahu real estate (TMKs 5-8-02-02 and 5-9-06-26), referenced as the "Kahuku Properties." The Phase I ESA revealed no evidence of recognized environmental conditions associated with the Properties, and a Phase II investigation was not recommended.

Environmental Condition of Property (ECoP) guidance³ provides for properties to be categorized into one of seven categories:

- Category 1: Areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).
- Category 2: Areas where only release or disposal of petroleum products has occurred.
- Category 3: Areas where release, disposal, and/or migration of hazardous substances has occurred, but at concentrations that do not require a removal or remedial response.
- Category 4: Areas where release, disposal, and/or migration of hazardous substances has occurred, and where all remedial response actions necessary to protect human health and the environment have been taken.
- Category 5: Areas where release, disposal, and/or migration of hazardous substances has occurred, and where all remedial response actions necessary to protect human health and the environment have not yet been taken.
- Category 6: Areas where release, disposal, and/or migration of hazardous substances has occurred, but where required actions have not yet been implemented.
- Category 7: Areas that are not evaluated or require additional evaluation.

Based on the results of the Phase I ESA, **the Kahuku Properties are categorized as Category 1**, i.e., areas where no release or disposal of hazardous substances or petroleum products has occurred (including no migration of these substances from adjacent areas).

³ US Army Public Health Command (undated), Environmental Condition of Property (ECoP) Investigations, Technical Information Paper No. [REDACTED]