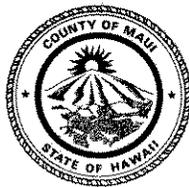


ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



RALPH NAGAMINE, L.S., P.E.
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TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

September 20, 2006

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
Department of Health
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813

RECEIVED
06 SEP 27 P 3:38
OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

Dear Ms. Salmonson:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Final Environmental Assessment / Negative Declaration Determination

The County of Maui, Department of Public Works and Environmental Management, has reviewed the comments received during the 30-day public comment period which ended on July 24, 2006. The agency has determined that this project will not have significant environmental effects and has issued a Negative Declaration, also referred to as a Finding of No Significant Impact (FONSI). Please publish this notice in the October 8, 2006 issue of the OEQC's *The Environmental Notice*.

We have enclosed a completed OEQC Publication Form, two (2) hard copies of the Final EA, and one (1) CD containing the Final EA and project summary. If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

FINAL

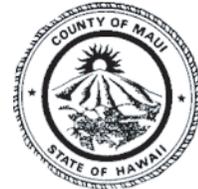
**ENVIRONMENTAL
ASSESSMENT**

**ABANDONED VEHICLE
SCRAP METAL AND
WHITE GOODS
FACILITY**



September 2006

Prepared For:



County of Maui
Dept. of Public Works and
Environmental Management

Prepared By:



**FINAL
ENVIRONMENTAL ASSESSMENT
FOR
ABANDONED VEHICLE, SCRAP METAL,
AND
WHITE GOODS FACILITY**

PU'UNĒNE, MAUI, HAWAII

SEPTEMBER 2006

PROPOSING AGENCY:

County of Maui
Department of Public Works and
Environmental Management
Wailuku, Maui, Hawaii

PREPARED BY:



SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

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- Appendix C** **Phase 1 – Environmental Site Assessment Report for Proposed Abandoned Vehicle Facility, Pu‘unēnē Airport Area, Pulehunui, Island of Maui, TMK (2) 3-8-008:001**
Prepared By: Myounghee Noh & Associates (April 2006)
- Appendix D** **Archaeological Inventory Survey Report for a 15.20-Acre Parcel Located at Pulehu Nui Ahupuaa, Wailuku, District, Maui Island, TMK: (2) 3-8-008:001**
Prepared By: Robert Hill, B.A.
 Tanya Lee-Greig, M.A. and
 Hallett H. Hammatt, Ph.D.
 Cultural Surveys Hawai‘i, In., Wailuku, Hawai‘i (April 2006)
- Appendix E** **Cultural Impact Evaluation Report for a 15.20-Acre Parcel Located at Pulehu Nui Ahupuaa, Wailuku District, Maui Island, TMK: (2) 3-8-008:001**
Prepared By: Robert R. Hill, B.A.
 Tanya L. Greig, M.A. and
 Hallett H. Hammatt, Ph.D.
 Cultural Surveys Hawai‘i, In., Wailuku, Hawai‘i (April 2006)

CHAPTER 1 INTRODUCTION

1.1 PURPOSE FOR ENVIRONMENTAL ASSESSMENT

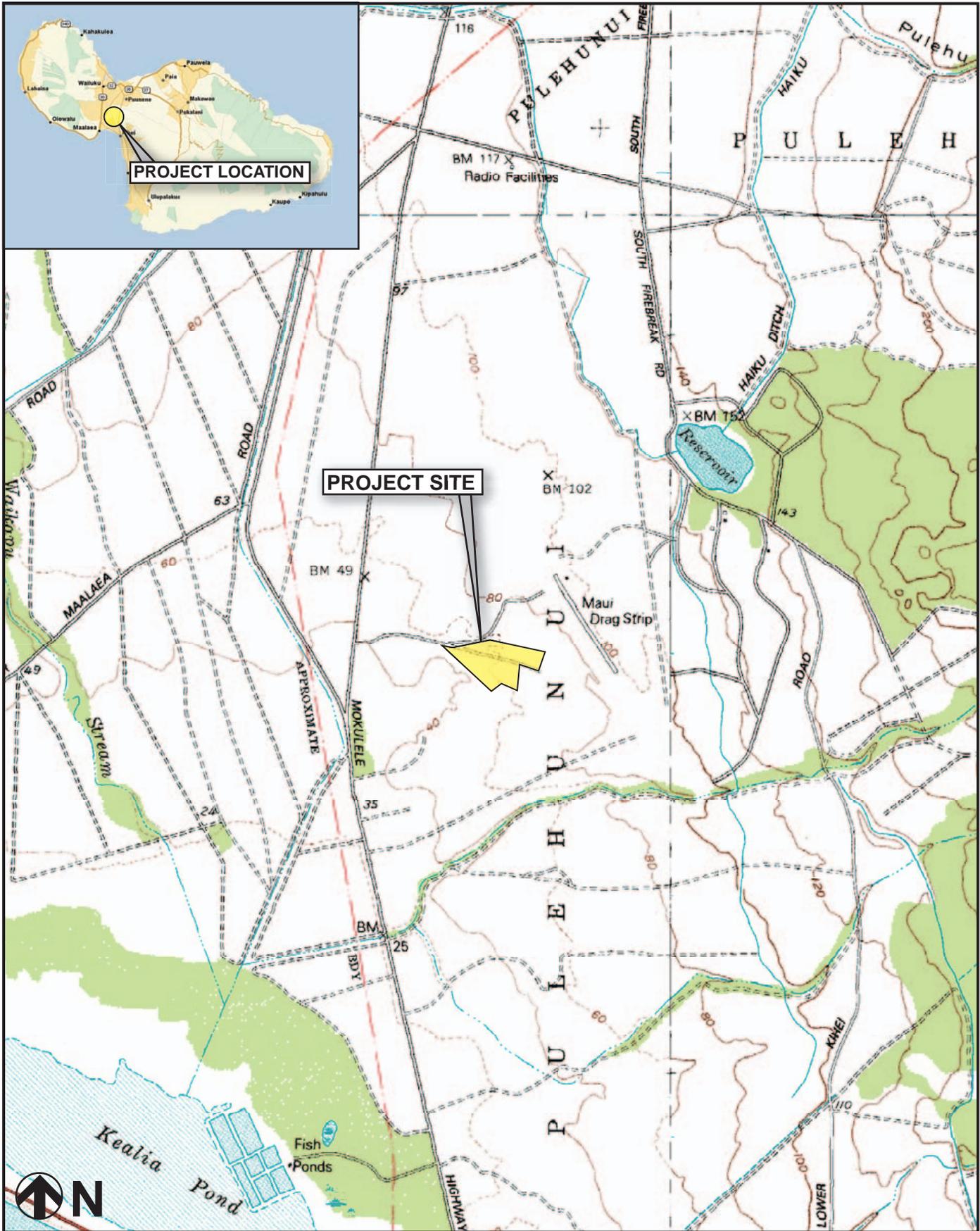
The County of Maui, Department of Public Works and Environmental Management (DPWEM) is proposing the Abandoned Vehicle, Scrap Metal, and White Goods Facility Project (Abandoned Vehicle Facility Project) in the Pu‘unēnē area of the Wailuku District of the Island of Maui. This project involves the construction of a new processing facility to receive, store, and auction abandoned vehicles, as well as conduct operations to breakdown scrap metal and white goods for shipping to market.

The County experienced a period when there was no permitted operator (County or private) processing such materials because an existing privately-operated facility was shut down due to improper zoning and permits. Another privately-operated facility was also shut down about the same time for other economic reasons. This resulted in the accumulation of abandoned vehicles along Maui’s roadways and no available facilities to properly dispose of white goods. Consequently, this project will provide the County with an established facility having all appropriate land use approvals and permits in place to process abandoned and derelict vehicles, scrap metal, and white goods. Having such a facility will prevent the County from encountering this situation again.

The new facility will be situated within lands associated with the former Pu‘unēnē Airport area located in central Maui along Mokulele Highway. The proposed site for this facility is within an approximately 14.8-acre portion of a larger un-subdivided parcel set aside for the County of Maui by the State of Hawai‘i via Executive Order. The Tax Map Key for this property is (2) 3-08-008: portion of 001. Figure 1.1 shows the project’s location and general vicinity on the Island of Maui. A summary of pertinent project related information is provided in Table 1.1.

The Abandoned Vehicle Facility Project would involve the use of County funds for the development of this new metals recycling and processing site. It will also involve the use of State-owned land that has been set aside for the County of Maui under Executive Order. As a result, this project is subject to State environmental documentation requirements.

A Draft Environmental Assessment (Draft EA), prepared in conformance with State regulatory requirements to address the probable impacts on the surrounding environment resulting from the proposed project, was published in the June 23, 2006 issue of the State Office of Environmental Quality Control’s *The Environmental Notice*. The 30-day public comment period for the review of that Draft EA ended on July 24, 2006. This Final Environmental Assessment (Final EA) has subsequently been prepared for this project to address the probable impacts on the surrounding environment resulting from the proposed facility development. A Negative Declaration, also referred to as a Finding of No Significant Impact (FONSI), has been determined for this project.



PROJECT LOCATION MAP

Figure 1.1

Abandoned Vehicle, Scrap Metal, and White Goods Facility
 County of Maui, Department of Public Works & Environmental Management

Source: Delorme 3-D Topo
 Quads



The County DPWEM is serving as the Proposing Agency for this project. This project subsequently involves an “Agency Action” being undertaken by this department under the State’s environmental regulations. As a result, the County DPWEM is also serving as the “Approving Agency” for this Environmental Assessment.

In addition, this document is being used to facilitate the processing of entitlements necessary for this project. A joint effort by the County DPWEM and Department of Planning will consolidate the review of: 1) the Draft Environmental Assessment (Draft EA); 2) a Community Plan Amendment application; 3) a State Land Use District boundary amendment (less than 15 acres); and 4) a Change in Zoning application for the subject project.

Table 1.1 Summary Information

Project Name:	Abandoned Vehicle, Scrap Metal, and White Goods Facility Project
Proposing Agency:	Department of Public Works and Environmental Management County of Maui 200 South High Street Wailuku, Hawai'i 96793 Contact: Tracy Takamine, P.E., Solid Waste Chief
Authorized Agent:	SSFM International, Inc. 501 Sumner Street, Suite 620 Honolulu, Hawai'i 96817 Contact: Mr. Ronald A. Sato, AICP
Approving Agency:	Department of Pubic Works and Environmental Management County of Maui
Project Description:	A new metal recycling facility is proposed on the property which will receive, store, auction, and process abandoned and derelict vehicles for the County of Maui. This new facility will also process scrap metal, and white goods for baling and shipping to market.
Project Location:	The project site is located in the Wailuku District of the Island of Maui. The approximately 14.8-acre site is currently located in an undeveloped area situated along the east side of Mokulele Highway within lands formerly associated with the old Pu'unēnē Airport.
Land Ownership:	State of Hawai'i. Set aside to County of Maui for public use under Executive Order 4024.
Tax Map Key:	(2) 3-08-008: portion of 001
State Land Use:	Agricultural District
County Zoning:	Agricultural District
Community Plan:	Kihei-Mākena Community Plan, PD-10, Project District, 10-acre minimum lot
SMA Designation:	The project site is not situated within the SMA.

1.2 BACKGROUND ON EXISTING LAND USE DESIGNATIONS

Information on the existing State and County land use designations associated with the project site and surrounding areas are provided along with applicable figures. Discussions of the project's consistency with these land use designations and applicable regulations are provided later under the plans and policies chapter of this document.

State Land Use District

Under Chapter 205, HRS, all lands in the State of Hawai'i are classified into four major land use districts (State Land Use Districts) which are the Urban, Rural, Agricultural, and Conservation districts (State of Hawai'i, 2000). The boundaries of these districts are shown on maps referred to as State Land Use District Boundary Maps. The project site is classified as "Agricultural District" on the State's Land Use District Boundary Map. Figure 1.2 shows the project area in relation to the State's land use designations.

County of Maui General Plan

The *General Plan of the County of Maui 1990 Update* serves as a policy document for the long-range comprehensive development of the Islands of Maui, Moloka'i, and Lāna'i (County, 1991). Revisions of the *General Plan* are recommended to be developed at least every ten years to guide the development of the County. The County is presently undergoing the process to update this *General Plan*.

The broad plans and policies set forth by the *General Plan* are further defined within the various Community Plans. There are a total of nine Community Plan regions established in the County of Maui. This project is located in the Kihei-Mākena Community Plan region which designates the land use for PD-10, Project District with 10-acre minimum lots. Figure 1.3 shows the project site in relation to Kihei-Mākena Community Plan Land Use Map.

County of Maui Zoning Districts

The County's Zoning District Map for the project area was reviewed to identify current zoning district classifications for it and surrounding areas. Based upon this zoning map, the subject property is zoned "Agricultural District" which was confirmed in a comment letter from the County Department of Planning included in Appendix B.

Special Management Area

Under Chapter 205A (Coastal Zone Management Act) of the Hawai'i Revised Statutes, the County is given authorization to regulate land uses located within the established Special Management Area (SMA) for the Island of Maui. Review of Maui's SMA map for the project site and immediate surrounding area determined that the entire site is situated outside of the County's Special Management Area.



LEGEND

- AGRICULTURE
- URBAN
- CONSERVATION
- RURAL

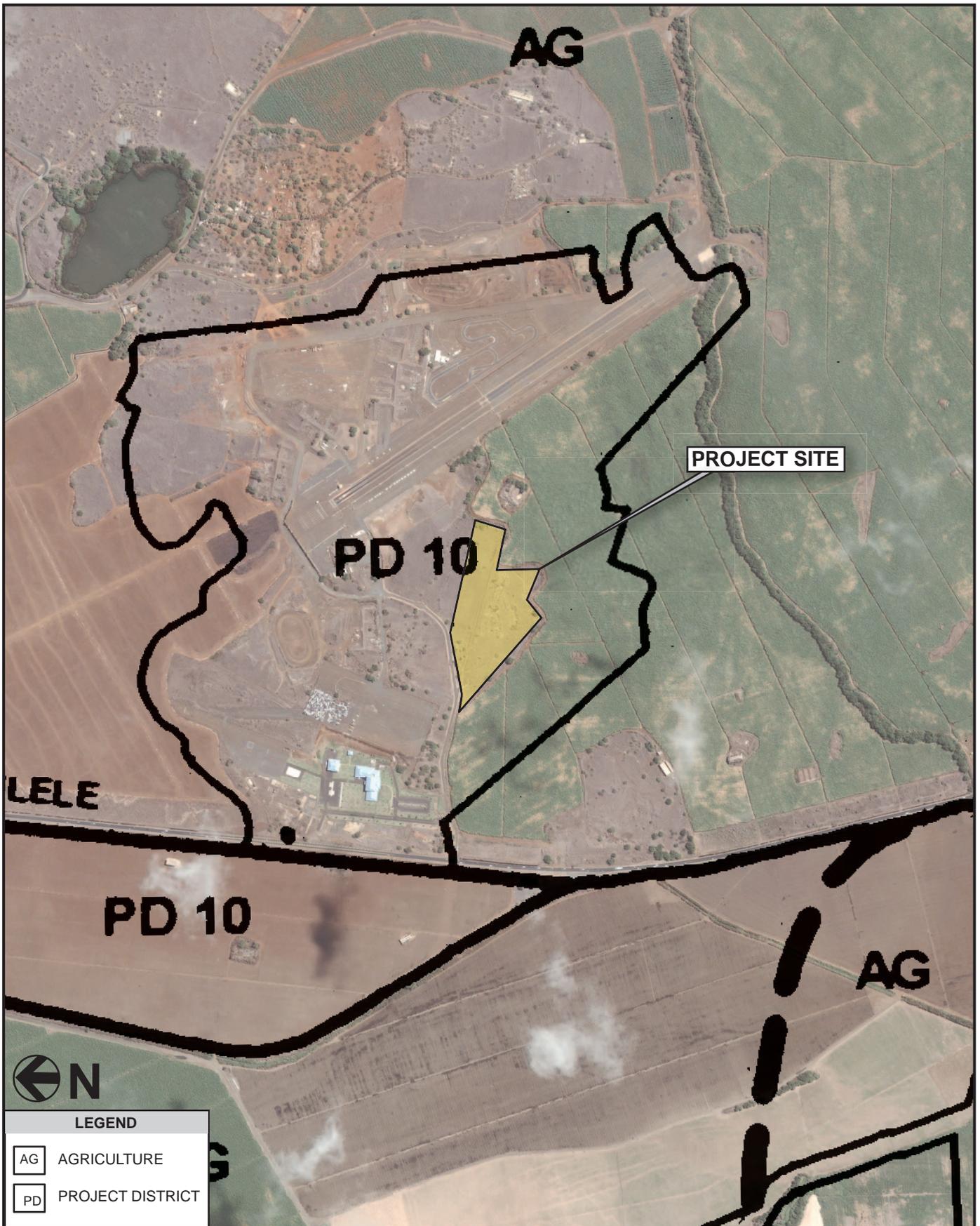
STATE LAND USE DISTRICT BOUNDARY MAP

FIGURE 1.2

Abandoned Vehicle, Scrap Metal, and White Goods Facility
 County of Maui, Department of Public Works & Environmental Management

Source: State Office of Planning
 (GIS Data)





**KIHEI-MAKENA COMMUNITY PLAN
LAND USE MAP**

Figure 1.3

Abandoned Vehicle, Scrap Metal, and White Goods Facility
County of Maui, Department of Public Works & Environmental Management

Source: County of Maui
Kihei-Makena Community Plan



CHAPTER 2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND VICINITY

This Abandoned Vehicle Facility project site is centrally located on the Island of Maui in the County's Pūlehu Nui Ahupua'a of the Wailuku district. This area, also referred to as Pu'unēnē, is centrally located between the island's major population centers of Central, South, and West Maui. The proposed site for the facility is situated within a large un-subdivided parcel identified as Tax Map Key (2) 3-8-008: 001 consisting of approximately 1,616 total acres.

The proposed project site is situated within the area associated with the former Pu'unēnē Airport along Mokulele Highway. The airfield is situated about two miles away from Kīhei and six miles away from Kahului. Surrounding areas generally consist of agricultural land used for sugar cane cultivation. Figure 2.1 shows the general location of the project site and includes an aerial photo identifying the surrounding land uses in the project vicinity.

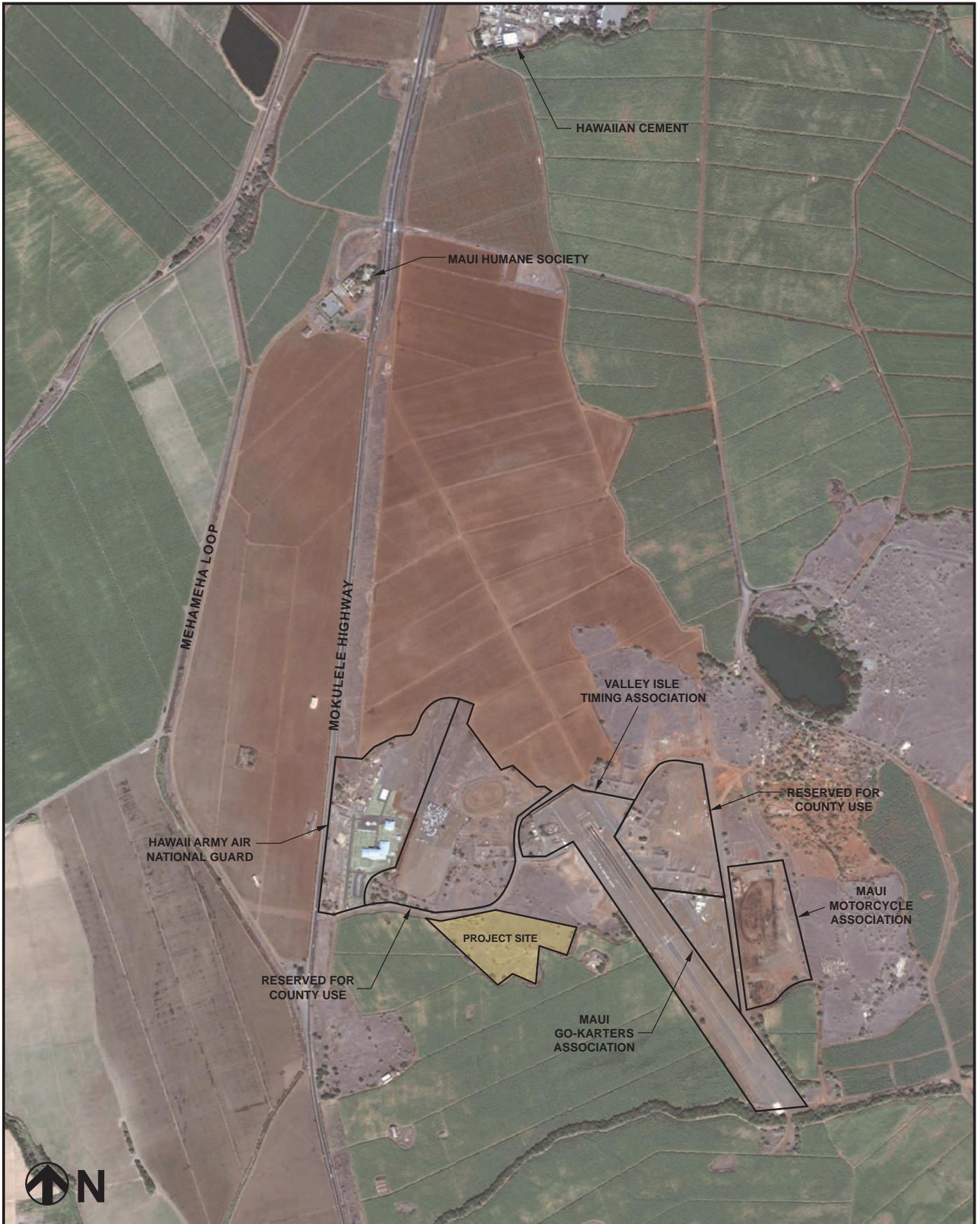
Mokulele Highway is a major State highway facility routed through Central Maui providing vehicular access to this project area. This highway connects the island's population centers of Kīhei and Kahului. Honoapi'ilani Highway and Kūihelani Highway are both State highways which also provide vehicular access through Central Maui. These highways connect West Maui with Wailuku and Kahului, respectively.

Existing Surrounding Land Uses

The project site is situated within an area for which various types of governmental and recreational land uses are either existing or planned in the future. Figure 2.2 includes an exhibit showing the various types of land uses designated by the County for this Pu'unēnē Airport area.

Land uses surrounding this area presently consist predominantly of large scale agricultural use (sugar cane cultivation). These surrounding areas are either owned by the State of Hawai'i, or large landowners such as Alexander and Baldwin, Inc. The State Department of Hawaiian Homelands owns undeveloped parcels located northwest of this area across Mokulele Highway and south of the State-owned parcel (TMK 3-08-008: 001).

The project site is adjacently bordered by agricultural uses from the west, to the south, and to the eastern end of the property. The northern border is bounded by an old paved access road leading into this airport area from the highway. Immediately across (north) the site is an undeveloped area on which a future correctional facility is planned. To the northwest is the Hawai'i Army National Guard facility. Further information on these and other existing uses in this airport area follows.



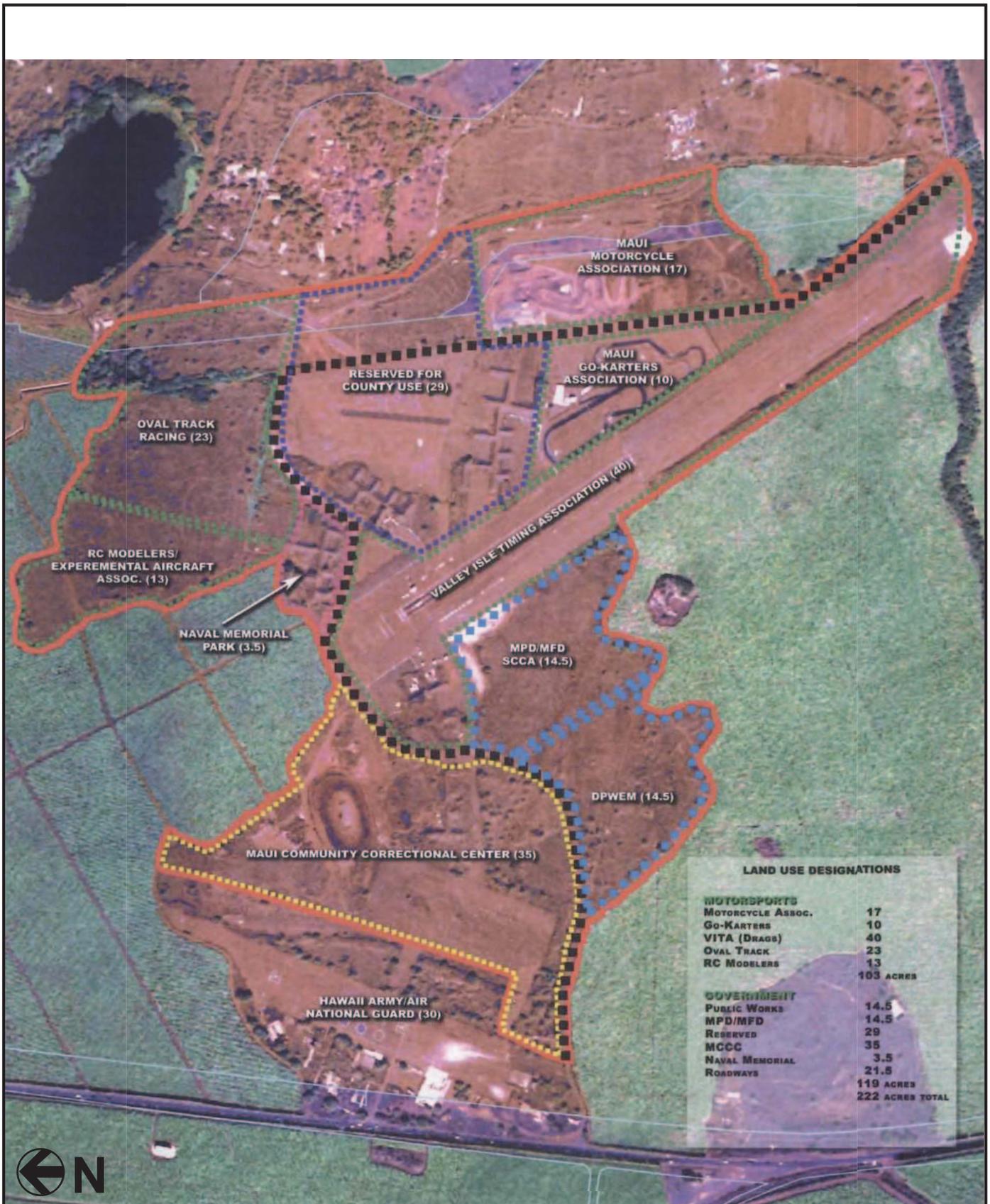
PROJECT VICINITY MAP

Figure 2.1

Abandoned Vehicle, Scrap Metal, and White Goods Facility
 County of Maui, Department of Public Works & Environmental Management

Source: (Aerial) Digital Globe





PUUNENE AIRPORT AREA PLAN 2005

FIGURE 2.2

Abandoned Vehicle, Scrap Metal, and White Goods Facility
 County of Maui, Department of Public Works & Environmental Management

Source: County of Maui



- Hawai'i Army Air National Guard. Located along Mokulele Highway and adjacent to the access road entrance into the airport area, this 30-acre, State-owned property includes a 29,912 square foot armory building with a basketball court and cooking facilities, a flammable-material storage area, and helipad.
- Maui Raceway Park. This County-owned drag strip is controlled by the Valley Isle Timing Association, a non-profit organization in association with the National Hot Rod Association (NHRA). This facility provides a NHRA sanctioned environment for safe drag racing.
- Nelson Boteiho Jr. Memorial R/C Flying Field. This is a County-owned and operated field used for remote-controlled model aircraft flights. The existing site conditions consist of a 13-acre area of flat, paved surface used for model airplane takeoffs and landings.
- Maui Go Karters Association. This is a County-owned and operated Go Kart track consisting of approximately 10-acres. This track includes a half-mile sprint course, two-long straight-aways and eight turns, with a fully paved infield and runoff areas.
- Maui Motorcycle Association. This is a County-owned and operated motocross track consisting of approximately 17-acres. Primarily used for motocross racing, this facility includes two dirt tracks, one for adults and one specifically for children. Both tracks feature audience stands, commentator towers, and portable restrooms.



Photo of Signs Identifying Existing Recreational Users

Other future land uses designated in the County's Pu'unēnē Airport Area Plan (Figure 2.2) consist of various government related uses summarized below. However, these other uses are not expected to be completed or operational by the time this project is completed and operational in 2009. Consultation with the County indicated there are no plans for other major changes to County property within the Pu'unēnē Airport area.

- The State Public Safety Division indicated there are no development plans established for this future correctional center at this time, and none are anticipated in the near future.
- The site for the Maui Police and Fire Departments is expected to be developed well after the 2009 timeframe for this Abandoned Vehicle Facility project.

The following neighboring users are not within the immediate vicinity of the Abandoned Vehicle Facility project site; however, these users are located in the surrounding general area of the project and are accessed by Mokulele Highway.

- Maui Humane Society. The Maui Humane Society is located along Mokulele Highway, halfway between the Pu‘unēnē Sugar Mill and Kīhei, across from Hawaiian Cement. This facility provides animal services such as; pet licensing and identification, dog training, pet adoption, euthanasia, and kennels for stray animals.
- Hawaiian Cement. The Hawaiian Cement Pu‘unēnē Quarry is located in Pu‘unēnē along Mokulele Highway generally across (northeast) from the Maui Humane Society.

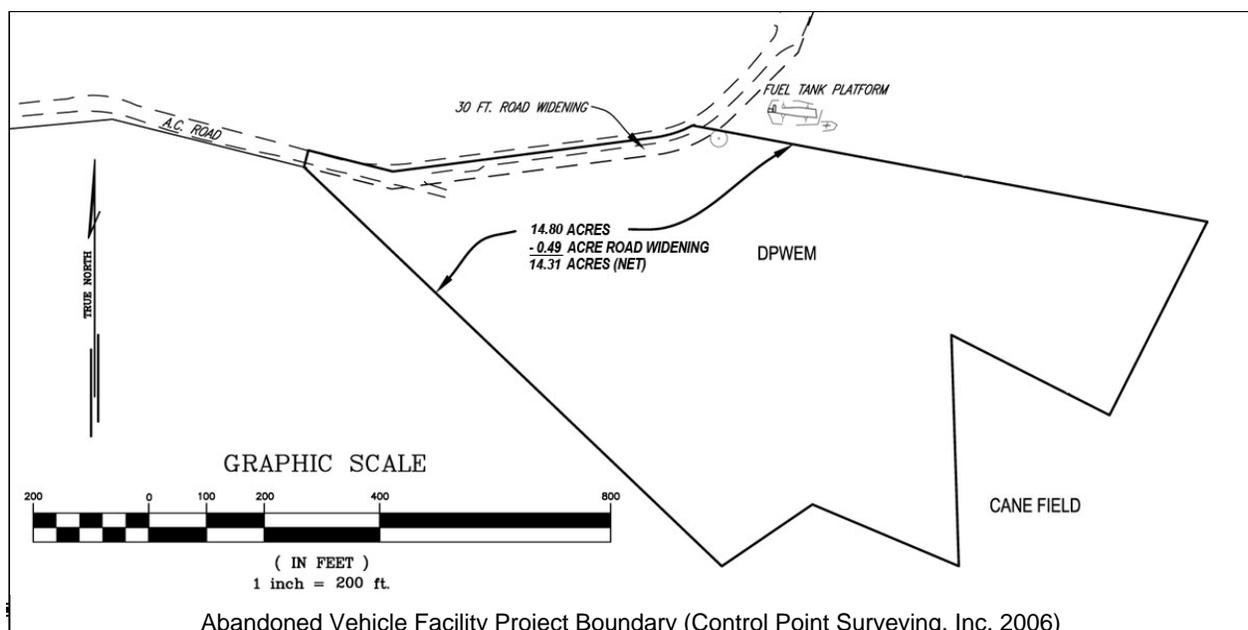
2.2 PROJECT SITE DESCRIPTION

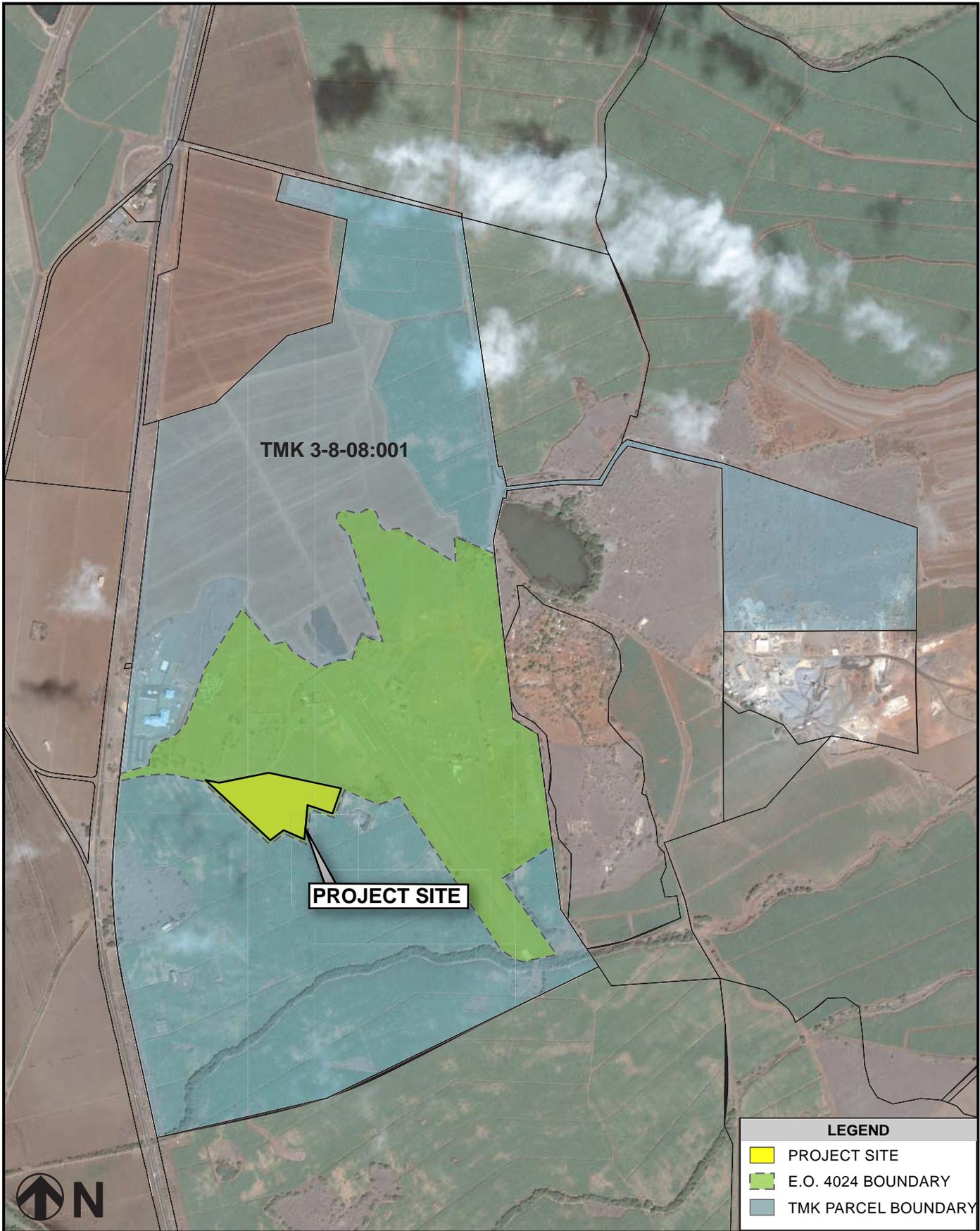
Property Ownership Information

The Abandoned Vehicle Facility project will be located on an approximately 14.8-acre parcel that is presently part of an un-subdivided lot identified as TMK (2) 3-08-008: 001. This parcel 001 is a very large property of about 1,616 acres that is owned by the State of Hawai‘i. Figure 2.3 shows this TMK parcel, and identifies the project site.

In 2003, about 222.63 acres of parcel 001 was set aside to be under the control and management of the County of Maui for public and recreational use under the Governor’s Executive Order 4024. As a result, the County of Maui presently has authority over the use of this portion due to the conveyance of its jurisdiction through this Executive Order.

Of the 222.63 acres, the project site will encompass about 14.8 acres. The boundary for this project site has been established and is shown below. The boundary for this project site includes a portion of the existing access road starting from the roadway’s centerline. However, it is expected that this roadway will eventually be improved, and accommodation for a 60-foot right-of-way is being planned for this site. This roadway improvement may result in an easement established for this access road. Therefore, the project site will “lose” about 0.49 acres for this roadway easement resulting in a total net project area of about 14.31 acres as shown below.





TAX MAP KEY BOUNDARY MAP

Figure 2.3

*Abandoned Vehicle, Scrap Metal, and White Goods Site Facility
County of Maui, Department of Public Works & Environmental Management*

*Source: (Aerial) Digital Globe,
ArcGIS*



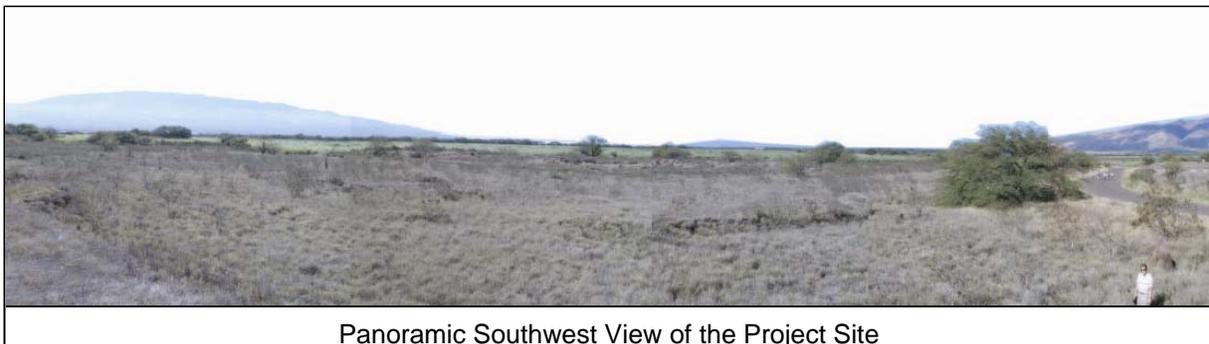
Existing Site Conditions

The Abandoned Vehicle Facility project site is located about 1,000 feet east (inland) from the intersection of the access road with Mokulele Highway. This paved access road provides vehicular access to the site from this highway (see photo ►). The topography of this project site is generally flat, averaging less than a 2 percent slope. The site is situated at an average elevation of about 80 feet above mean sea level (amsl).



Photo of Access Road Leading to Project Site

The project site is currently undeveloped and unused (see photo ▼). The landscape of the areas southwest of the access roadway has been heavily modified by historic sugar cultivation. The area northeast of the access roadway had been graded and cleared for WWII military operations. Appendix A includes some photographs of the project site.



Panoramic Southwest View of the Project Site

Vegetation present generally consists of moderately dense kiawe (*Prosopis pallida*) and koa haole (*Leucaena leucocephala*) with knee to waist high grass along the project area boundaries. Other discarded materials were observed within the project site which included an old rusted water tank, old tires, furniture, loose automobile parts, and a derelict car. The site also included bulldozed piles of rocks and large boulders.

Derelict and Abandoned Vehicle Abatement Program Background

Under Title 20, Chapter 20.20 of the County Code, a derelict and abandoned vehicle abatement program is established and administered by the Department of Finance. The purpose of this program is to proactively reduce, through education, assistance and enforcement, the number of abandoned vehicles left on public and private property throughout the County. Under this Code, the definitions of what constitutes an “abandoned vehicle” and “derelict vehicle” are summarized as follows.

1. Abandoned Vehicle. A vehicle that is left unattended for a continuous period of more than 24 hours and is unlawfully parked on public or private property.
2. Derelict Vehicle. A vehicle from which major parts have been removed or material damage to the vehicle has rendered the vehicle inoperable and one of the following conditions exists:
 - a. The vehicle is registered for the current registration period and the registered and legal owners no longer reside at the addresses on record;
 - b. The vehicle has been registered for the current or previous registration period and the registered and legal owners disclaim ownership;
 - c. The vehicle identification number and license plates have been removed so as to nullify efforts to locate or identify the current registered and legal owners;
 - d. The vehicle has not been registered for the current or previous registration periods;
 - e. The Department of Finance has no records indicating that the vehicle has ever been registered in the County; or
 - f. The vehicle is 10 years old or older.

Any abandoned or derelict vehicle on public or private property without authorization of the owner or occupant of the property may be towed away at the expense of the owner of the vehicle. Such vehicle would then be processed under the following procedures summarized below:

1. The Maui Police Department (MPD), upon observing an abandoned vehicle or upon receipt of a complaint, inspects the vehicle and determines if it is derelict or abandoned.
2. The police will tag the vehicle if it is deemed to be a derelict, then a tow order can be issued for that vehicle.
3. If it appears to be abandoned, an orange colored notice is placed on its windshield.
 - It notes that the vehicle is parked on the property without authorization and will be towed to a County yard if it is not removed from the location within 24 hours.
 - The owner must contact the County within that time period, or owner will have to pay the costs of towing, storage, and other fees.
 - Most of these vehicles go unclaimed and are towed to a storage site at the Central Maui Baseyard in Pu‘unēnē, and they are stored for about a month and a half.
4. Upon taking custody of the vehicle, a written notice is sent to the legal and registered owner of the vehicle containing a brief description of the vehicle, location of custody, and intended disposition of the vehicle if not repossessed within ten days of the notice.
5. If unclaimed during that period of time it is stored at the County yard, the vehicle will then be advertised for auction.
6. Those cars that are not sold at auction, which is the majority, are sent for processing at an appropriate facility.
7. Processed vehicles are then sent to Hawai‘i Metal Recycling Company on O‘ahu for final processing and shipping to metals recycling markets on the U.S. mainland and in Asia.

Scrap Metal and White Goods Background

Other items processed for recycling, that will be associated with this project, are ferrous metal (scrap metal) and “white goods.” Such ferrous metals include structural steel from general contractors, builders, and metals from demolition activities occurring on the island. White goods consist of large appliances, such as refrigerators and stoves, which are collected on the island for scrap metal processing.

Currently, County refuse crews pick up discarded appliances from single-family residences who schedule pick up by calling the Makawao or Central Maui Baseyards. Then refuse collectors will haul such white goods (ex. refrigerators) to a private white goods processor. Many residents also have the option to have such white goods hauled off when new appliances are delivered by providers for an additional cost.

2.3 PROJECT NEED AND OBJECTIVES

The project is needed to provide the County with a permanent established facility in place to process abandoned and derelict vehicles, scrap metal, and white goods. The County experienced an extended period when there were not enough facilities in operation for processing such materials resulting in the accumulation of abandoned vehicles along Maui’s roadways. White goods were not being processed in a timely manner as well resulting in its accumulation at various baseyards and along public roads. Background information on the need for this project is provided.

Background on Existing Processing Facilities

According to the State Department of Health (DOH), a solid waste salvage permit was held by at least one entity on Maui since 1996. Maui Scrap Metal held a valid permit since March 31, 1996 until March 31, 2001. Maui Foreign Auto Wrecking/ Maui Auto Wrecking had a valid permit between November 15, 2000 and November 15, 2005. Kitagawa’s Towing had a valid permit since April 25, 2005 which will expire on April 24, 2010. SOS Metals Island Recycling had a valid permit since November 21, 2005 which will expire on September 30, 2007.

For years, most junk cars and white goods were taken by Maui Scrap Metal Company on Waiko Road in Waikapu for dismantling and eventual shipment off-island. However, this company had operational issues which triggered regulatory problems with the Department of Health causing their operations to cease in 2004 because their solid waste salvage permit could not be renewed.

Between March 1999 and July 2000, the State DOH issued two Notices of Violation and Order to Maui Scrap Metal for permit non-compliance issues. When their solid waste salvage permit expired on March 31, 2001, Maui Scrap Metal did not submit a complete renewal application for their operation and has been operating without a permit since April 2001. In April 2004, the State DOH issued a third Notice of Violation and Order to Maui Scrap Metal for operating an unpermitted solid waste management facility. State DOH’s April 2004 order required Maui Scrap Metal to cease and desist from accepting additional waste and to close the site. Since then, Maui Scrap Metal has

indicated to State DOH, they were unavailable to obtain the necessary approvals to complete an application and therefore will not apply for a solid waste salvage permit.

A Maui Fire Department inspection found violations and fire hazards at this site. This scrap yard was over piled and poorly maintained with no adequate water supply or access to fire-fighting vehicles. Oils, batteries, cardboard and other flammable materials were also not being stored properly.

In March 2005, Maui Auto Wrecking, the only permitted vehicle-recycling facility, closed after an industrial accident hurt two men one of whom was the owner. In addition, this company faced the termination of its lease at the Central Maui Baseyard for violating terms of its lease.

The County then tried to find a replacement contractor, but faced difficulties because the required M-2, Heavy Industrial District zoned land was scarce. Without a qualified contractor to process abandoned and derelict vehicles along with white goods and scrap metal, residents and businesses could not recycle them. Vehicle storage areas quickly filled up, and businesses tried to store white goods to the extent possible. As a result, the number of abandoned and derelict vehicles left along roadways and properties increased. To alleviate this situation, the Governor signed an emergency proclamation on July 29, 2005 to temporarily allow the County to tow abandoned cars to a site at the old Pu'unēnē Airport for which the zoning requirement for the storage permit was temporarily waived.

Since the closure of the two prior companies operating in Maui in 2005, several other companies have been taking steps to move into operation to serve as Maui's next full-service scrap yard. However, land use regulations and State Department of Health permit requirements are taking time for them to be approved. Since August 2005, Kitagawa Towing in the Kahului industrial area has been able to obtain the necessary permits, and is now operating as a County approved facility processing vehicles, scrap metal and white goods.

A second company (SOS Metals Recycling) is proposing to develop a metal recycling facility on three acres of privately-owned property within the Central Maui Baseyard located in Pu'unēnē. The State DOH has issued a salvage permit to SOS Metals Recycling on November 21, 2005 with an expiration date of September 30, 2007. They obtained a County Special Use Permit (SUP) in May 2005.

Need for Permanent Processing Facility Site

The proposed project meets the need to provide a long-term solution by establishing a permanent scrap metal processing facility to recycle abandoned and derelict vehicles, scrap metal and white goods. This site needs to be centrally located, of sufficient acreage to accommodate necessary operations, and properly zoned to conduct the various activities.

Proper zoning for this type of land use and type of activities requires an M-2, Heavy Industrial District zoning. Unfortunately, there is very limited heavy industrial zoned land available on Maui. Such zoned land is available adjacent to Kahului Harbor. However, that area is an environmentally

sensitive shoreline area with no available space suitable for a business like a large-scale metal recycling facility. Other existing properties have Light Industrial District zoning such as in the Central Maui Baseyard in Pu‘unēnē. This zoning allows for the removal of vehicle fluids, batteries and tires, but it does not allow for the crushing and baling of metals.

Project Objectives

The objective for this project at the site in Pu‘unēnē is to establish a permanent site for the County to serve as a metal recycling facility for the collection and processing of abandoned and derelict vehicles, scrap metal, and white goods. Having a properly zoned site will allow the County to ensure that they won’t encounter a similar situation as in 2005 when there was no legally available facility to properly process such materials.

An application for a Change in Zoning (CIZ) to M-2, Heavy Industrial District zoning designation, along with other required entitlements (State Land Use District and Community Plan) will be completed for this project. With a properly entitled facility, the County would be further protected from encountering prolonged periods of no available facility since another operator can be contracted in the event one is terminated for economic or other reasons.

2.4 DESCRIPTION OF PROJECT

The project will include construction of a new metals recycling facility to process abandoned and derelict vehicles, scrap metal, and white goods. This project will also include the construction of accessory structures and infrastructure to accommodate the needs of such a facility. Figure 2.4 provides a preliminary site plan showing the locations of the different facility component areas. This facility will have the following operations:

1. Receive, store, and auction abandoned vehicles after proper notification;
2. Process the unsold abandoned vehicles for baling and shipping to market;
3. Receive, store, process, bale, and ship to market scrap metal from derelict cars, either brought in by customers or towed in by the County, white goods, and miscellaneous pieces of scrap brought by customers;
4. Receive, store, process, bale, and ship white goods taken by the County Appliance Pick-up program;
5. Receive, by appointment and on a fee-for-service basis, oversized vehicles such as buses, and heavy equipment for processing, and miscellaneous scrap such as I beams, for storing until sufficient quantity are obtained for an experienced subcontractor with excavator and shears and welding equipment to be procured to cut the steel and ship it to market.

The project will likely include the improvements identified below. However, specific details associated with most of these improvements will be developed during the project’s design phase.

- Perimeter fencing and secured gate;
- Stormwater retention pond and swales along roadways;



PRELIMINARY PROJECT SITE PLAN

FIGURE 2.4

Abandoned Vehicle, Scrap Metal, and White Goods Facility
 County of Maui, Department of Public Works & Environmental Management

Source: (Aerial) Digital Globe



- One paved road to the processing area;
- One office trailer at the entrance for customer check-in and auction functions;
- A steel building with double doors on opposite sides so that cars can be placed from one side and extracted from the other;
- A slab for the baler and its loading area;
- Paved area around processing building, slab, and scale,
- Septic system and leach field for wastewater facilities;
- Crusher waste covered and paved storage areas for unprocessed materials;
- Dumpster for rubbish found inside vehicles and removed prior to processing; and
- Nearby fire hydrant and other equipment for fire control.

Facility Operation and Equipment

There are State DOH permit requirements that will control the type of structures provided at this facility based upon the specific operational procedures and environmental controls proposed by the applicant. Such salvage permit requirements for this project may include, but are not limited to the following:

1. A concrete slab has to be provided for the baler, which is continuous with the container loading dock so no loose metal pieces fall to the ground. The baler would be situated beside the container to allow for the container's loading directly from the baler to minimize handling.
2. A roof and slab are not required for vehicle processing and the storage of processed materials. However, the State DOH supports and encourages vehicle processing to be performed in an enclosed building as a method of reducing contaminant releases to the environment. Tires and batteries have to be stored under cover, and automotive fluids are required to have secondary containment.

Facility operations are planned to be contracted to an operator with experience in processing and marketing scrap metal and related materials. Other components of the operation that may be included with the primary operator or subcontracted to other service providers are: 1) abandoned vehicle auction, 2) oversized vehicle and heavy equipment shearing and torching, 3) refrigerant removal from appliances, and 4) vehicle processing (removal of fluids, tires, batteries).

There are two structures planned for this project. One structure will be a concrete slab for the baler and container. The other will be a steel building with doors on opposite sides so that a vehicle fork-lifted in from the storage area for processing, can then be fork-lifted out the other side to the baler.

The County plans to allow the selected operator to provide the processing equipment used at this facility. The contractor will be responsible to maintain their equipment. Such major equipment could consist of a full capacity baler for cars, white goods, and loose scrap with a crane able to lift 4,000 lbs. Other equipment would consist of forklifts for operations. Another option that may be allowed is for the operator to equip the facility with a car crusher instead of a baler to create a

flattened car like a “pancake”. Such a car crusher can be loaded with white goods stacked between the cars. However, the actual method of processing these materials and detailed operational activities will be determined by the selected operator after review and selection by the County.

This facility is expected to receive the following types of materials for storage and processing:

1. Abandoned vehicles for storage and auction;
2. Derelict vehicles;
3. Appliances without refrigerants and with refrigerants;
4. Ferrous miscellaneous scrap;
5. Oversized vehicles and heavy equipment by appointment.

Outgoing materials would consist of the following:

1. Scrap “logs” (bales);
2. Mercury switches;
3. Tires and wheels;
4. Batteries;
5. Refrigerants such as R-12 and R-22;
6. Used motor oil;
7. Automotive fluids such as brake fluid, transmission fluid; and
8. Catalytic converters.

The customers expected to utilize this facility would consist of: 1) residents, 2) businesses, 3) County contractors such as: towing operators, and 4) County and State agencies. Customer fees would be determined by the types of materials received at this facility.

The expenses associated with operating this facility will need to be determined at a later date based on the evaluation of bids received by the County to operate this facility. However, the County is currently paying a contracted operator the following rates:

- \$305 per processed vehicle towed by that contractor to their yard.
- \$345 per processed vehicle towed from the auction storage space to the contractor’s yard.
- \$60 per processed white good.

Hours of operation for the facility will be Monday through Friday, generally between 8:00 a.m. through 4:30 p.m.

Facility Design Criteria

The shipping of materials is planned to occur on a regular basis instead of accumulating them over a long extended time period due to State DOH requirements. As a result, the baled materials will be loaded directly into the container from the baler. Thus, this facility’s capacity would be controlled by the amount of unprocessed materials. This facility is planned to accommodate demands over the next 20 years.

It is estimated that 400 cars can be arranged on an acre which translates into about 100 square feet per car. However, in considering having fire lanes or access lanes within the site, 300 vehicles per acre was used to calculate acreage requirements for this facility's operation. No stacking would be allowed under the State DOH permit. The minimum estimated areas needed for the facility's operations would be:

1. Abandoned cars for auction	1 acres or 300 cars
2. Auction overflow, leaking cars	1 acre, 300 cars
3. Derelict cars, not leaking	1 acre, 300 cars
4. Oversized vehicles	1.0 acre
5. Heavy equipment	1.0 acre
6. White goods	1.0 acre
7. Miscellaneous scrap	1.0 acre

Based upon these estimates, about only 7.0 acres out of the 14.8 acre site established for this project site would be necessary to accommodate the estimated 900 vehicles plus white goods (appliances) and miscellaneous scrap. The proposed site designated for this project thus has sufficient space to accommodate the planned operations. As shown on the preliminary Site Plan in Figure 2.4, additional acreages have been allocated to the various activities to provide flexibility in operation. The County selected operator for this facility will eventually establish the actual area requirements within this site for their operations.

Leaking vehicles must be placed on an impervious surface, so that the auction overflow area established for this site will be asphalt paved. Oversized vehicles and heavy equipment will be prepared before they are stored on the site for processing.

A baler used at this facility could log up to an estimated 15 vehicles per hour. However, estimates for this facility were reduced to 12 cars per day to account for processing time, loading cycles, maintenance, and safety considerations. Therefore, in a 20-day month consisting of 5-day work weeks, the "throughput" for this facility will be about 240 cars a month.

This volume is more than the 170 to 200 cars per month received at another facility based upon available information from the County. Consequently, this project would have sufficient capacity to meet the present demand along with handling the processing of white goods. The projected number of white goods processed per month is estimated to be in the range of about 800 per month. The quantity of other scrap metal processed at this facility is undetermined at this time but should be accommodated within this site.

Accessory Improvements

Vehicular access to this project site will be from the existing access road connecting to Mokulele Highway. The entrance will be gated with a roll-away gate, and the facility will have a main internal driveway running through the site leading to the processing building and slab and

scale. An office trailer would be located near the gate for customer check-in. Behind the auction lot, a crusher waste road could be routed to the processing building.

Paved areas having a glassphalt base would consist of the entrance roadway, processing area and auction overflow area for leaking unprocessed vehicles. Other areas would consist of a crusher waste surface.

Storage areas will be graded to drain into swales provided along the facility's primary driveway. Retention ponds will be sized appropriately and implemented within the site as part of drainage improvements. A contained drain will be provided to handle flows from the paved area established for leaking cars. Necessary oil-water separators will also be included in the drainage system design for this facility. The site's drainage infrastructure will be designed to address State Department of Health and County of Maui requirements.

Potable water lines will be provided to service the facility and connected to existing water mains within Mokulele Highway. Electrical power and telecommunication utilities will be brought in to service the facility, and the design of such improvements coordinated with the appropriate utility company.

Development Schedule and Cost Estimate

The estimated construction budget for this facility is approximately \$2.25 million. This includes design fees, installation of on-site and off-site water lines, grubbing and grading, construction of a loading dock, concrete slab, a 2,500 square foot pre-fabricated shop building, a 400 square foot security/auction building, pollutant control devices, a septic system, and security fencing around the site.

The environmental review process and entitlement process for this project is estimated to be finished in early 2007. The project's design phase would then be initiated and completed by the end of 2007. Construction of site improvements for this facility will then occur and a service contractor will then be selected by the County. Therefore, the estimated completion date for which this project will be fully operational is the year 2009.

Listing of Required Permits

A listing of required discretionary land use approvals and ministerial permits for this project is provided.

State of Hawaii Permits

1. National Pollutant Discharge Elimination System (NPDES) Permit.
2. Solid Waste Management Facility Permit

County of Maui Approvals and Permits

1. Community Plan Amendment
2. State Land Use District Boundary Amendment (15 acres or less)
3. Change in Zoning (CIZ).

4. Plan Approval from Planning Department
5. Grubbing/Grading Permit
6. Building Permit

2.5 ALTERNATIVES CONSIDERED

This section discusses alternatives associated with the Abandoned Vehicle, Scrap Metal, and White Goods Facility Project that were identified and considered.

The only other alternative considered was not implementing development of this project, otherwise referred to as the No Action Alternative. The No Action Alternative would entail not proceeding with development of the proposed facility on the 14.8-acre project site. Under this scenario, the existing facilities operated by private operators on other private property would continue being utilized along with their operational and staff constraints.

The County would thus be subject to the same conditions as existed prior to 2005 which left the operation of metal recycling facilities entirely to private operators. This would not adequately address the County's need for this project and desired objectives. Those facilities could be shut down in the future due to permit violations, special incidents, or economic factors resulting in the County and Island of Maui not having a facility to process these goods over an extended period of time. Without properly zoned and designated sites for these facilities, the County could again be faced with a prolonged period of no available facilities. Therefore, this alternative was eliminated from further consideration.

CHAPTER 3 PHYSICAL AND BIOLOGICAL ENVIRONMENT

This chapter discusses the existing physical and biological environment in the project area, and the probable impacts resulting from the proposed Abandoned Vehicle Facility Project. Mitigative measures, if necessary, are also discussed.

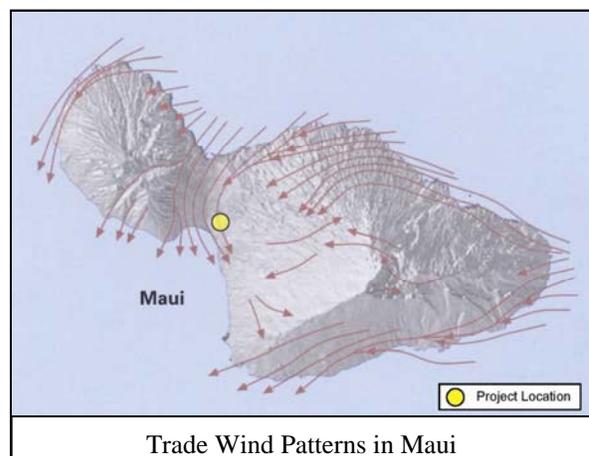
3.1 CLIMATE, TOPOGRAPHY, AND SOILS

Climate on the island of Maui, as well as within the State of Hawai‘i, can be characterized as having low day-to-day and month-to-month variability. Differences in the climate of various areas are generally attributable to the island’s geologic formation and topography creating miniature ecosystems ranging from tropical rain forests to drier plains along with corresponding differences in temperature, humidity, wind, and rainfall over short distances (Dept. of Geography, 1998).

Temperatures in the Pu‘unēnē area are very moderate with average daily minimum and maximum temperatures ranging from 66 degrees to 82 degrees Fahrenheit (F). Average monthly temperatures recorded at Kahului International Airport in the year 2000, located approximately 3 miles north of Pu‘unēnē, averaged about 75 degrees and varied between an average of 70 and 79 degrees (NOAA, 2000).

While most precipitation in Hawai‘i occurs during the winter months, annual rainfall in the Pu‘unēnē area is typically non-substantial with an average of 20 inches per year. The annual rainfall recorded at Pu‘unēnē Station No. 396 in 2000 was about 9.76 inches which was 10 inches less than their annual average (NOAA, 2000).

The entire state of Hawai‘i lies well within the belt of northeasterly trade winds generated by the semi-permanent Pacific high pressure cell to the north and east of the islands. Areas along the eastern coasts of the islands are particularly affected by the trade winds and are usually well-ventilated nearly year round. Since Pu‘unēnē is situated in the central part of Maui, the project site is located in an area which is accustomed to prevailing trade winds. This occurrence is due to the high slopes of Haleakalā which significantly modify the trade wind influence causing air to flow around, instead of over, the mountain. Consequently, trade wind patterns regularly flow through the isthmus between the West Maui Mountains and Haleakalā.



3.1.1 Topography

The topography associated with the project site is generally flat, sloping slightly upward in a south to north direction. There are no other significant topographic features present on the property such as steep slopes (i.e., of greater than 20%).

Elevations associated with this project site average around 80 feet above mean sea level (msl) with minimal variation throughout the entire area. Average slopes over most of the property are about one to three percent.

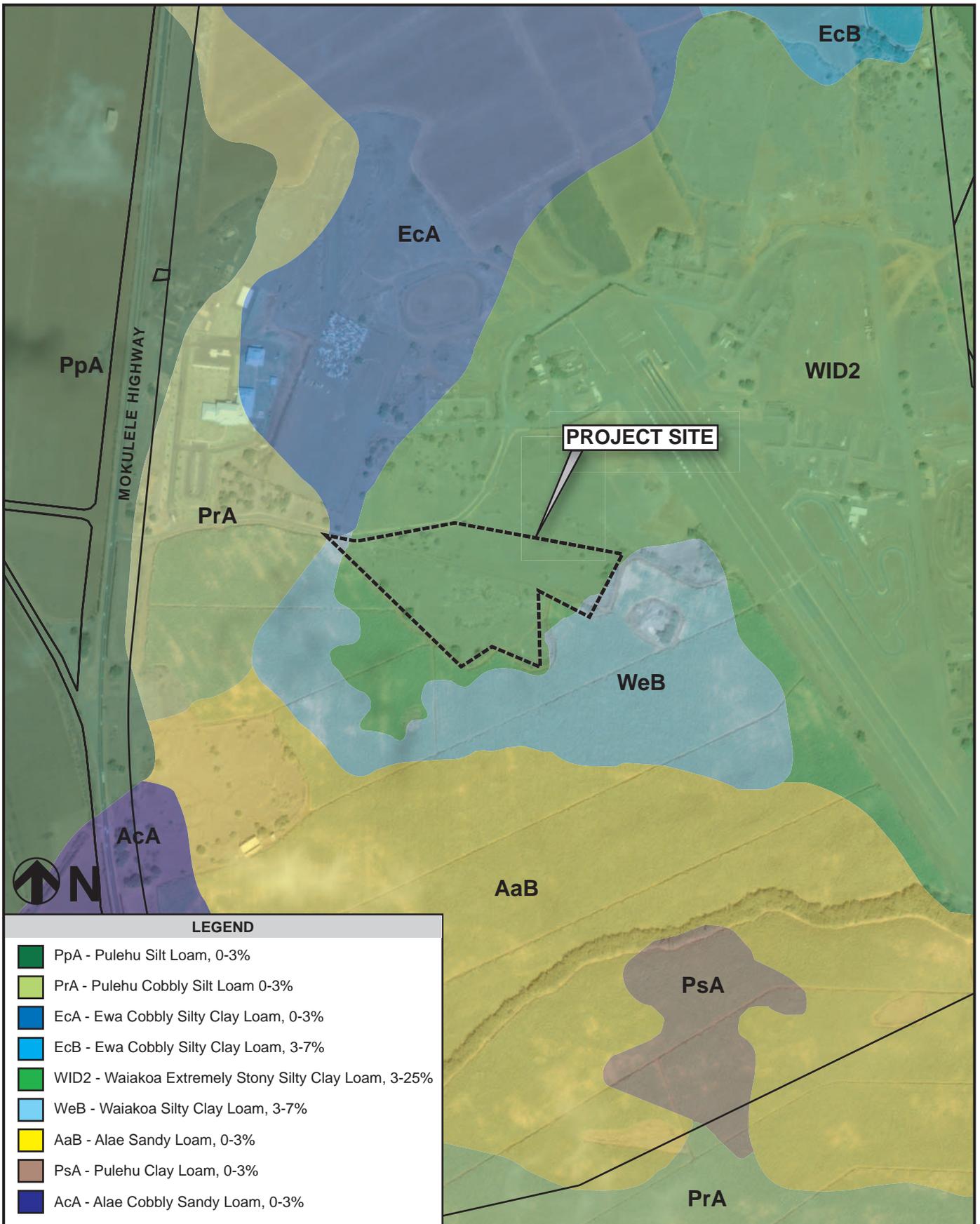
3.1.2 Soils

SCS Soil Survey

The U.S. Department of Agriculture, Soil Conservation Service's *Soil Survey of Islands of Kaua'i, O'ahu, Maui, Moloka'i, and Lāna'i, State of Hawai'i* includes general soil maps developed for these islands based upon soil surveys (SCS, 1973). These soil maps show soil characteristics by area which are classified by soil series and associations. As indicated by the soil survey maps, the Abandoned Vehicle Facility project will be situated on lands within the Waiakoa-Keāhua-Molokai general soils association. The Waiakoa-Keāhua-Molokai soil association consists of well-drained and moderately fine textured soils on the low uplands of Central Maui. These soils are nearly level to moderately steep and make up about 15 percent of the island. (SCS, 1973).

There are two specific soil types of this Waiakoa-Keāhua-Molokai soil association present within the project site. Both soil types are within the Waiakoa Series. The surface layer of Waiakoa Series soils is dark reddish-brown silty clay loam about 2 inches thick. This series subsoil is about 23 inches thick, dark reddish-brown and very dark grayish-brown silty clay loam with prismatic structure. The following are more detailed descriptions of these soils types, and Figure 3.1 graphically shows these soil types found (SCS, 1973).

1. Waiakoa extremely stony silty clay loam (WID2). Clay found on 3 to 25 percent slopes typically identified by erosion and 3 to 15 percent of surface stones coverage. About 50 percent of the surface layer in most areas has been eroded, therefore, runoff is medium and the erosion hazard is severe. Typically used for pasture and wildlife habitat.
2. Waiakoa silty clay loam (WeB). Clay found on 3 to 7 percent slopes with a profile similar to WID2, except that it is not stony, nearly level, and not eroded. Typically used for sugarcane, small pastures and home sites.



LEGEND

- PpA - Pulehu Silt Loam, 0-3%
- PrA - Pulehu Cobbly Silt Loam 0-3%
- EcA - Ewa Cobbly Silty Clay Loam, 0-3%
- EcB - Ewa Cobbly Silty Clay Loam, 3-7%
- WID2 - Waiakoa Extremely Stony Silty Clay Loam, 3-25%
- WeB - Waiakoa Silty Clay Loam, 3-7%
- AaB - Alae Sandy Loam, 0-3%
- PsA - Pulehu Clay Loam, 0-3%
- AcA - Alae Cobbly Sandy Loam, 0-3%

SOIL SURVEY MAP

FIGURE 3.1

*Abandoned Vehicle, Scrap Metal, and White Goods Facility
County of Maui, Department of Public Works & Environmental Management*

*Source: (Aerial) Digital Globe,
NRCS Natural Resources
Conservation Service*



Land Study Bureau

The Land Study Bureau's *Detailed Land Classifications – Island of Maui*, has compiled and interpreted information about the quality, location, and extent of lands adapted for various purposes (LSB, 1967). The classification developed under this report establishes ratings for overall agricultural usage and for selected individual uses. Productivity ratings established under this study characterize the soil's agricultural suitability for both individual crops and overall suitability (master suitability rating). Suitability ratings vary from: A, very good; B, good; C, fair; D, poor; E, very poorly suited; and N, not classified.

The Abandoned Vehicle Facility project site consists of soil given an overall master productivity rating of "E" indicating it is very poorly suited for overall agricultural usage. Figure 3.2 shows this master productivity rating for the project site along with surrounding areas.

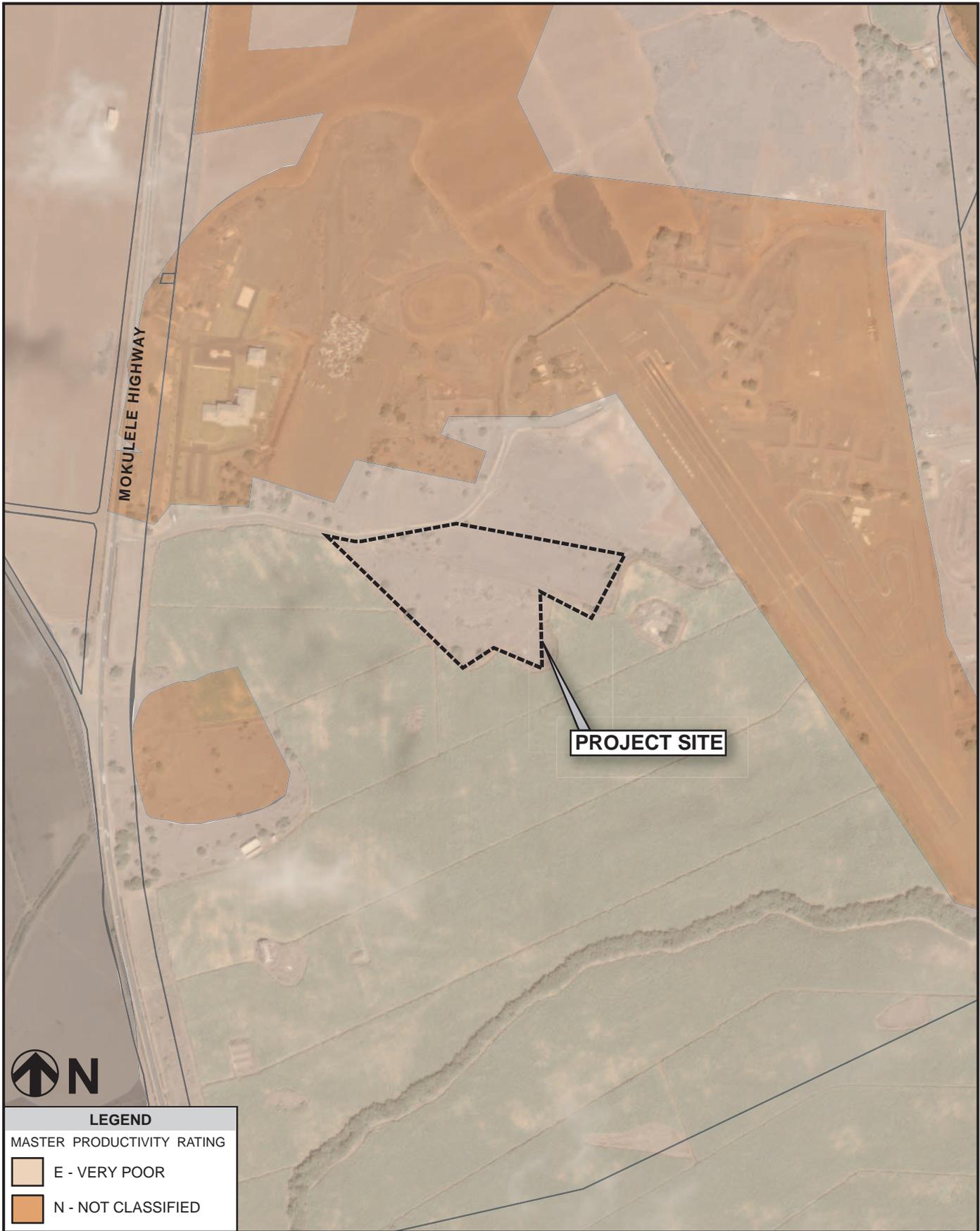
Agricultural Lands of Importance to the State of Hawai'i

The State Department of Agriculture's *Agricultural Lands of Importance to the State of Hawai'i* (ALISH), established a classification system for identification of agriculturally important lands to the State of Hawai'i. Three classes of lands were established for the State of Hawai'i, primarily, but not exclusively, on the basis of soil characteristics. The three classes of ALISH lands are: prime, unique, and other. Lands not included under this system are "unclassified".

The project site falls within lands designated as both Prime and Unclassified agricultural lands. Information associated with the ALISH map boundaries was obtained from the State Geographic Information System (GIS) layers. Figure 3.3 shows the location of the project site in relation to the ALISH class boundaries. As shown, only small areas associated with the southern ends of the property fall under the Prime agricultural land classification. The majority of the project site is Unclassified.

Prime agricultural lands are considered best suited to produce high yields of crops when treated and managed according to modern cultivation practices. Lands used for public purposes, including parks and historic sites, are unclassified lands and not considered for classification as agricultural lands of importance to the State of Hawai'i.

The entire project site is currently undeveloped and not utilized for any agricultural uses. This project area is associated with the former Pu'unēnē Airport area. Therefore, the project is primarily situated on lands already set aside for public uses and will have no significant adverse impacts on ALISH lands.



LEGEND

MASTER PRODUCTIVITY RATING

 E - VERY POOR

 N - NOT CLASSIFIED

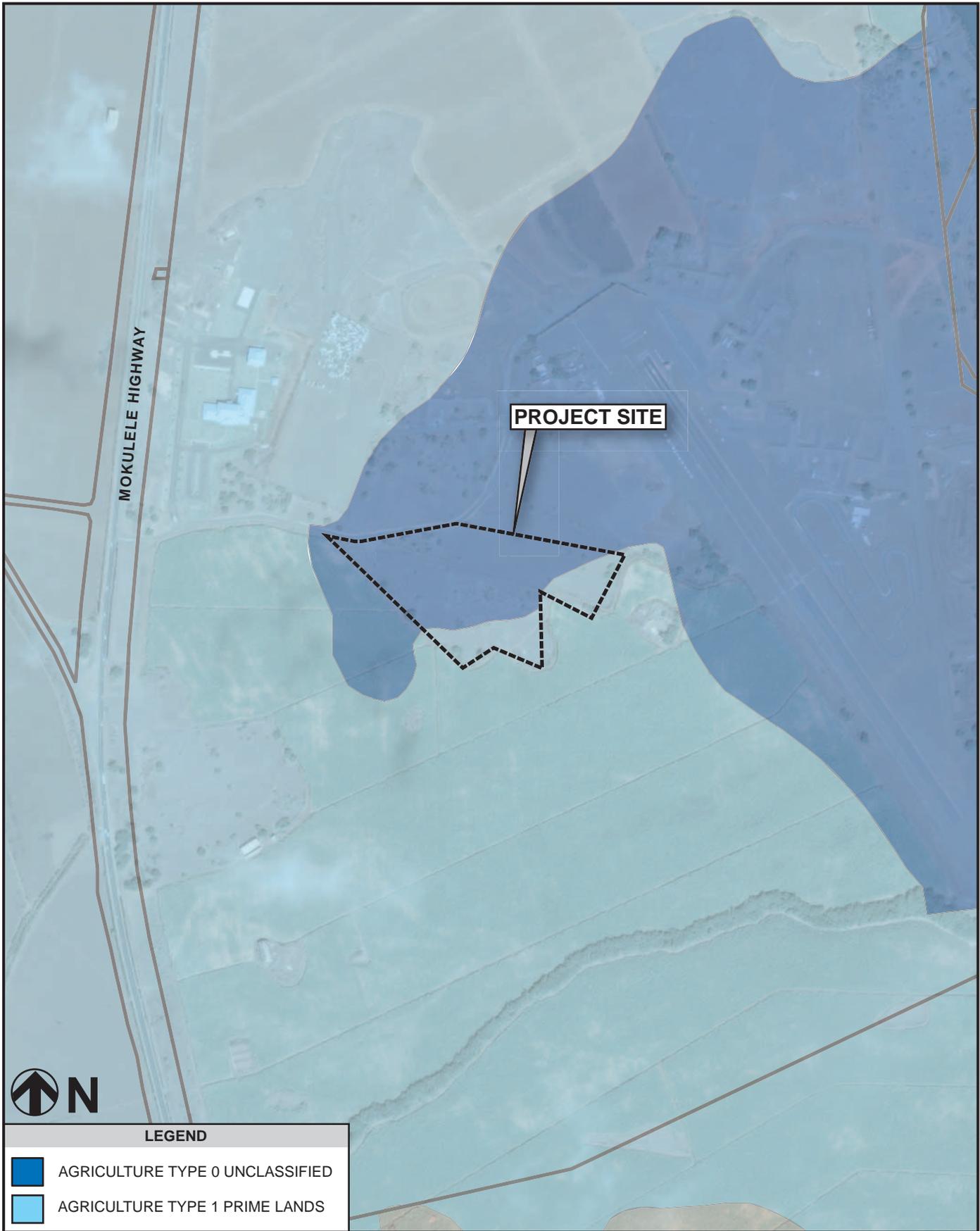
LAND STUDY BUREAU CLASSIFICATION

FIGURE 3.2

Abandoned Vehicle, Scrap Metal, and White Goods Facility
 County of Maui, Department of Public Works & Environmental Management

*Source: (Aerial) Digital Globe,
 State Office of Planning (GIS Data)*





LEGEND

- AGRICULTURE TYPE 0 UNCLASSIFIED
- AGRICULTURE TYPE 1 PRIME LANDS

**AGRICULTURE LAND OF IMPORTANCE
TO THE STATE OF HAWAII**

FIGURE 3.3

*Abandoned Vehicle, Scrap Metal, and White Goods Facility
County of Maui, Department of Public Works & Environmental Management*

*Source: (Aerial) Digital Globe,
State Office of Planning(GIS Data)*



3.1.3 Probable Impacts from Construction Activity

Short-term impacts would be associated with construction activities conducted for the Abandoned Vehicle Facility project. Consequently, this section discusses the probable short-term construction related impacts resulting from the project.

Soil Erosion

Construction activities would involve excavation and grading work along with construction of the new buildings and necessary infrastructure. These construction activities are not expected to have a significant impact on the existing topography or physical character of the property. The design of the proposed facility would try to achieve a balanced cut and fill condition to minimize disturbances to the property's topography and soils as practical. As previously discussed, the site is already fairly level with slight slopes and no major topographic features requiring extensive cut or fill. A Grading Plan will be prepared during the project's design phase which would be submitted to pertinent agencies for their ministerial review and approval.

Construction of the site would inevitably involve land-disturbing activities that may result in some soil erosion. Various mitigative measures will be incorporated into the project's design to minimize potential short-term erosion impacts during construction activities. Such erosion control measures considered may include: use of temporary sprinklers in non-active construction areas; stationing water trucks on the site during construction to provide sprinkling in active areas; use of temporary silt fencing, sand bags, or screens; thorough watering of graded areas after construction activity has ceased for the day; or sodding or planting of affected areas immediately after site work has been completed. Thus, the potential for soil erosion would be minimized by these measures.

However, the actual erosion control measures implemented would be developed during the final design of this project, and would comply with the County's erosion and sedimentation control regulations and NPDES permit requirements. Grading activities will also be performed in accordance with applicable provisions of permits obtained from the State DOH.

Other Construction Related Disturbances

Dust, noise, and traffic disturbances associated with construction activities are not expected to significantly impact the surrounding environment. Fugitive dust is expected to be minimal because construction would involve relatively minimal grading and excavation activities. Dust control measures, such as implementation of a watering program, will minimize soil loss from fugitive dust emissions. Other measures may include paving or surfacing with rocks, and planting on bare areas.

Short-term impacts on air quality in the immediate project area may result from construction activities. Two potential types of pollutants are fugitive dust emissions from vehicular movement and soil excavation, and exhaust emissions from on-site construction equipment. Fugitive dust emissions associated with grading and dirt-moving activities are difficult to estimate accurately. The EPA

provides an estimate of 1.2 tons of uncontrolled fugitive dust emissions per acre per month under conditions of “medium” construction activity, moderate soil silt content (30%), and a precipitation/evaporation (P/E) index of 50.

An effective dust control plan for the project’s construction would be implemented to minimize any air quality impacts. Emissions can be controlled by watering active work areas, using wind screens, keeping adjacent paved roads clean, and covering open-bodied trucks. Other dust control measures could include limiting the disturbed area at any given time and/or mulching or chemically stabilizing inactive areas that have been worked.

Open-bodied trucks would be covered at all times in motion if they are transporting materials that could blow away. Tire washing may also limit haul trucks tracking dirt onto paved streets from unpaved areas within the property. Paving of the roadway and/or the establishment of landscaping early in the construction schedule can also lower potential fugitive dust emissions.

Construction access would be from Mokulele Highway to the site. Slow-moving construction vehicles traveling on roadways and commuting construction workers could also obstruct the normal flow of traffic, indirectly increasing overall vehicular emissions. This impact can be mitigated by moving heavy construction equipment during periods of low traffic volume and arranging schedules of commuting construction workers to avoid peak traffic hours for the highway.

Construction-related noise may have an impact upon the surrounding users since construction activities will occur during the daytime. However, this would be a temporary impact, as construction will only last until the completion of the project which is of short duration. Further, there are no existing noise sensitive land uses (ex. schools, residences, and hospitals) in the immediate vicinity or adjacent to the project site that may be affected by noise resulting from facility operations. As a result, construction noise should not create a significant impact on noise sensitive uses.

3.2 AIR QUALITY

National ambient air quality standards (AAQS) have been established by the U.S. Environmental Protection Agency (EPA) for six criteria pollutants: carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, ozone, and concentrations of particulate matter less than 10 microns (PM₁₀) and 2.5 microns (PM_{2.5}). Since 2003, the State began participating in the National PM_{2.5} speciation monitoring program. Additionally, a State standard has been established for hydrogen sulfide. Hawaii air quality standards are more stringent than national standards, except for those pertaining to sulfur dioxide and particulate matter. A summary of both State and National AAQS is presented on the following page.

Summary of National and State Ambient Air Quality Standards

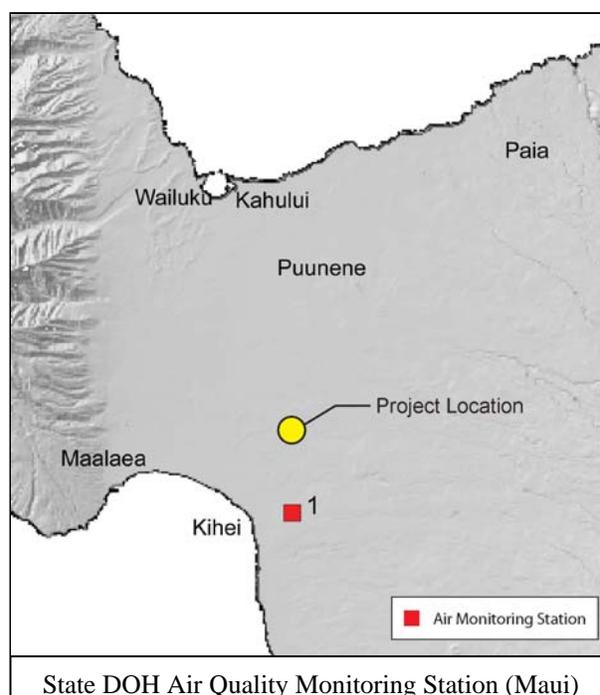
Pollutant	Sampling Period	NAAQS Primary	NAAQS Secondary	State Standards
Carbon Monoxide	1-Hour	40	40	10
	8-Hour	10	10	5
Nitrogen Dioxide	Annual	100	100	70
Sulfur Dioxide	3-Hour	n/a	1,300	1,300
	24-Hour	365	n/a	365
	Annual	80	n/a	80
Lead	Quarter	1.5	1.5	1.5
Ozone	1-Hour	235	235	n/a
	8-Hour	157	157	157
PM ₁₀	Annual	50	50	50
	24-Hour	150	150	150
PM _{2.5}	Annual	50	50	n/a
	24-Hour	150	150	n/a
Hydrogen Sulfide	1-Hour	n/a	n/a	35

Note: All concentrations in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) except for carbon monoxide which is in milligrams per cubic meter (mg/m^3)

Present Air Quality Concentrations

Air quality in Hawai‘i is generally characterized to be relatively clean and low in pollution. Northeast trade winds that are predominant throughout the year typically carry emissions and other air pollutants from inland areas out toward the ocean. Consequently, the limited air quality data available for Maui from the State DOH indicate that pollutant concentrations are well within State and Federal air quality standards. Air quality in the State of Hawai‘i continues to be among the best in the nation with pollutant levels well below ambient air quality standards.

The State DOH has one monitoring station on the Island of Maui which has sampled for particulate matter less than 10 microns (PM_{10}) and 2.5 microns ($\text{PM}_{2.5}$) since February 1999. This station (see exhibit ►) is located along Maui’s southern coastline in upper Kihei at Hale Pi‘ilani Park which is a residential and agricultural area. This station has been established primarily for monitoring particulates from sugarcane burning activities. The altitude of this station is about 46.5 meters (153 feet) above mean sea level. Based upon the State DOH’s 2004 air quality data for the Island of Maui, there were no occurrences of PM_{10} or $\text{PM}_{2.5}$ greater than National or State standards.



There are currently no reported measurements of lead, ozone, nitrogen dioxide or carbon monoxide in the project vicinity. These are primarily motor vehicle related air pollutants. Lead, ozone and nitrogen dioxide typically are regional problems. Concentrations of these contaminants generally have not been found to exceed AAQS elsewhere in the State. However, carbon monoxide air pollution, on the other hand, typically is a micro-scale problem caused by motor vehicular traffic congestion.

Short-Term Construction Effects

Short-term minor impacts on air quality from construction activities would predominantly be associated with fugitive dust emissions and exhaust emissions from on-site construction equipment. Fugitive dust emissions would generally arise from dirt moving activities associated with site clearing, grading, and ground preparation. Short-term impacts from fugitive dust will likely occur during the project construction phase, while exhaust emissions from stationary and mobile construction equipment, traffic disruption, and workers' vehicles may occur to a lesser extent.

State air pollution controls prescribed under the Department of Health's rules (Chapter 11-59, HAR "Ambient Air Quality Standards" and Chapter 11-60.1, HAR "Air Pollution Control") prohibit visible emissions of fugitive dust from construction activities at the property line. Therefore, a dust control plan would be prepared and implemented to have the contractor comply with these regulations. Adequate fugitive dust control can usually be accomplished by establishing a frequent watering program or implementing other measures to address grubbing and grading activities. Some measures that could be considered during the project's design for implementation by the contractor may include:

1. Limiting the areas that are disturbed at any given time;
2. Applying chemical soil stabilizers, mulching, or using wind screens;
3. Establishing a road cleaning or tire washing program to reduce fugitive dust emissions from trucks using paved roadways in or around the project site; and
4. Establishing landscaping early in the construction schedule to control dust.

Temporary on-site mobile and stationary construction equipment would also emit air pollutants from engine exhausts. Minor nitrogen dioxide emissions from construction equipment should not violate stricter State standards since such emissions would be short-term and the standards are set on an annual basis. Engine exhaust emissions from construction vehicles will be minimized via the proper operation and maintenance of all equipment to further limit potential air quality impacts. Short-term carbon monoxide emissions from construction equipment would similarly be low and should be relatively insignificant.

Thus, the potential impact from these vehicles should be mitigated by implementing these measures which would be further determined as part of the project's design. Measures developed would also be designed to make construction activities comply with the State DOH Administrative Rules Title 11, Chapter 60 (Air Pollution Control).

Long-Term Effects

Long-term impacts on air quality will occur either directly or indirectly through material processing activities resulting from the project. However, such metal recycling activities conducted at this site are not expected to result in any exceedances of the State or National air quality standards for the various pollutants identified.

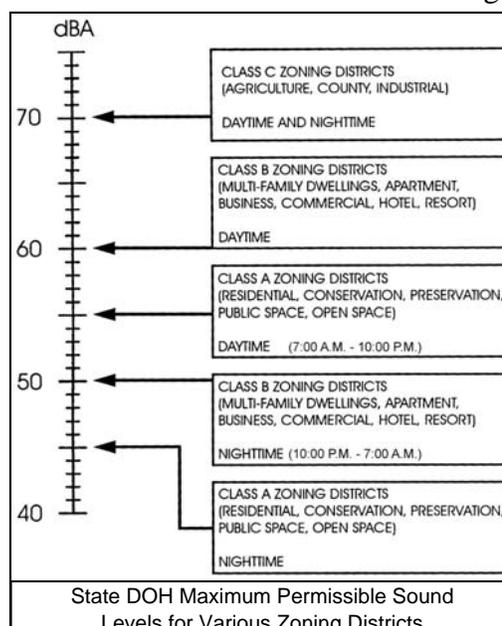
There are also no sensitive land uses located in the immediate vicinity of the project site such as schools or residences that may be adversely affected by the metal recycling activities. Existing surrounding land uses are mainly large scale agricultural (sugar cane) activities or public uses (Army National Guard facility). Other uses in the Pu‘unēnē Airport area are recreation oriented such as the raceway park and motor cross track which generate their own form of air pollutants (vehicle exhausts, dust, etc.). Finally, the new facility is planned to be operational during weekdays, and closed on weekends. Thus, activities from this project would not adversely affect other recreational activities occurring at the airport area since they mainly occur during weekends.

The project will result in increased vehicle traffic on Mokulele Highway and the access road to the site. Motor vehicles with gasoline-powered engines are sources of carbon monoxide and also emit nitrogen oxides and other pollutants. However, the increased traffic generated to this site would be relatively light. Thus, it would not cause congested conditions at the access road intersection with the highway that may result in carbon monoxide concentrations exceeding State standards.

Federal air pollution control regulations require new motor vehicles to be equipped with emission control devices that reduce emissions significantly compared to a several years ago. Amendments to the Clean Air Act required further emission reductions which have been phased in since 1994. The added restrictions on emissions from new motor vehicles will lower average emissions each year as more and more older vehicles leave the State’s roadways.

3.3 NOISE

The State Department of Health defines three classes of zoning districts and specifies corresponding maximum permissible sound levels due to stationary noise sources such as air-conditioning units, exhaust systems, generators, compressors, pumps, etc., and equipment related to agricultural, construction, and industrial activities. These levels are enforced for any location at or beyond the property line and shall not be exceeded for more than 10 percent of the time during any 20-minute period. The noise limits which apply are a function of the zoning and time of day (see exhibit ►).



Short-Term Noise Impacts from Construction Activities

Noise from construction activities is regulated under Title 11, Chapter 46 (Community Noise Control) of the State DOH's Administrative Rules. The project thus falls under the Class C zoning districts category which applies to properties zoned for agriculture and industrial types of County land uses. As a result, the maximum permissible noise level for this site under Class C is 70 dBA at the property line during daytime and nighttime. Construction activities are not planned to be scheduled at night, so the nighttime noise level restriction should not be applicable.

Construction activities will temporarily increase ambient noise levels within the vicinity of the work area. The project would involve some excavation, grading, construction activities for the new buildings, and supporting infrastructure that will generate some audible noise. Actual noise levels produced would depend on the methods employed throughout construction. Earthmoving equipment such as bulldozers and diesel-powered trucks would probably be the loudest equipment used during construction. Typical ranges of construction equipment noise vary between 70 and 95 dBA.

Measures to control construction noise include the use of mufflers on power equipment and vehicles. Construction activities are expected to be limited to regular workday hours (7:00 a.m. to 3:30 p.m., Monday through Friday). All construction-related vehicles traveling on the roadways must also meet the vehicle noise level requirements set by the State DOH. If required, additional measures can be implemented such as erecting noise barriers along the project site to reduce the effects on surrounding areas.

Thus, construction activities are not expected to result in a significant impact. If necessary, a permit would be obtained from the State DOH to allow these activities. This permit includes restrictions to help mitigate the potential noise impacts resulting from short-term construction activities, and would be followed by the contractor. Specific permit restrictions included as conditions under this permit for construction activities are:

1. No permit shall allow construction activities creating excessive noise before 7:00 a.m. and after 6:00 p.m. of the same day.
2. No permit shall allow construction activities that create excessive noise before 9:00 a.m. and after 6:00 p.m. on Saturdays.
3. No permit shall allow construction activities which exceed the allowable noise levels on Sundays and holidays.

Long-Term Noise Impacts from Operational Activities

Metal recycling activities conducted at the project site will inevitably generate additional noise levels associated with equipment, processing activities, and vehicular traffic into the site. Noise from such equipment would be addressed during the design phase of the project, and appropriate measures developed as appropriate. Noise at the property line from on-site equipment must comply with the 70 dBA or less requirements under the State DOH noise regulations for their Class C Zoning District (Agriculture, County, Industrial).

The project site is situated within the Pu‘unēnē Airport area which is planned for various government uses. Surrounding properties predominantly consist of agricultural land used for sugar cane production. Other adjacent areas consist of undeveloped areas and the Army National Guard facility. Existing recreational operators in this area are also not noise sensitive due to the nature of their activities (ex. raceway park, motor cross, etc.), and their functions typically occur on weekends.

As a result, there are no noise sensitive properties situated in the immediate vicinity such as residences or schools. Therefore, this project is not expected to have a significant noise impact. The design of the facility would incorporate appropriate measures to minimize noise from on-site equipment. If required, mitigation in the form of barriers, enclosures, silencers, etc. can be incorporated into the design.

3.4 VISUAL RESOURCES

This section addresses the Abandoned Vehicle Facility’s impact on visual resources in Pu‘unēnē of the Island of Maui. In order to examine the possible impacts, existing important visual resources in the Pu‘unēnē area were identified. These visual resources consists of scenic resources such as major land forms, open spaces, viewing points, scenic drives, and other physical features that create the visual quality of the area. The framework also consists of County policies, guidelines, and regulations established to protect scenic resources that are of value and importance.

Visual Resources of the Kīhei-Mākena Area

The *General Plan* of the County of Maui addresses the environment through various policies with the objective of preserving the County’s unique and fragile environmental resources. The policy pertaining to visual resources exists to preserve Maui’s scenic vistas and natural features. The Kīhei-Mākena landscape gently slopes inland and upward towards Haleakalā and Central Maui. Thus, visual resources in this area are generally dominated by views associated with the coastline and of Haleakalā and the West Maui Mountains.

The County’s *Kihei-Mākena Community Plan* identifies the shoreline as one of the region’s major assets. Important to residents and visitors, the shoreline hugging the south coast of Maui provides special ocean views, sandy beaches, and shoreline parks which provide for ocean access and recreational activities. This *Community Plan* also identifies mauka views from Kīhei-Mākena to Upcountry and Central Maui as major assets to the region. The scenic views of Haleakalā and the West Maui Mountain range are an integral part of the open space and expansive nature of this region.

The *Maui Coastal Scenic Resources Study* (Bebe et al., 1990) focuses on preserving Maui’s coastal visual resources. This document identifies urban scenic and open space coastal resources, identifies, evaluates, and summarizes relevant regulatory data and provides an inventory of the scenic and open space resources within the targeted regions. The targeted regions are Wailuku to Pā‘ia, Mā‘alaea to Mākena, and Lahaina to Kapalua.

The *Maui Coastal Scenic Resources Study* describes the Mā‘alaea to Mākena region as an area of sweeping and spectacular views of the ocean, Haleakalā, and the West Maui Mountains. Contrasting natural elements in this region create excellent scenic resources such as the flat plain between Haleakalā and the West Maui Mountains, and differences between Keālia wetlands and dry barren lands of Kīhei. This study identifies natural visual resources in the Mā‘alaea to Mākena region along with significant viewing points. Similar to the *Community Plan*, these resources and viewing points are concentrated along the shoreline area. The notable vistas identified as important scenic resources to the area’s natural beauty include the following:

- From Mā‘alaea; mauka views of the West Maui Mountains with fields of sugar in the foreground and noteworthy makai views of Mā‘alaea Bay, Kaho‘olawe, Molokini, and Lāna‘i; and views of Pu‘u Ōla‘i to the south;
- From Kīhei; mauka views of Haleakalā; and makai views of the coastline;
- From Mākena; mauka views of ‘Ulupalakua, and views of Oneloa (Big) Beach, and Pu‘u Ōla‘i;
- Views of Keālia Wetlands are also distinctive as a protected open space resource.

Visual Resources Associated With Project Site

The project site is located over one mile inland from the Kīhei shoreline and elevation of the project site and surrounding areas is about 80 feet above mean sea level. The project site is currently undeveloped, slopes gently upwards in a south to north direction and is covered with kiawe and other various alien grasses. Views of the site from Mokulele Highway are limited only to some kiawe trees and waist high grasses. There are also no significant or important visual resources or landforms present within the property.

Inland (mauka) views (“eye” level) of the property from coastal roadways would be obstructed by existing developments, trees, and other structures between these areas. From the shoreline inland (southwest) about one mile, the slope is rather flat at about 2 percent rising from the shoreline to about 100 feet msl. Views of inland (mauka) areas are thus obstructed to a large extent by existing structures. Thus, the project site should generally be difficult to view from the shoreline area, if at all, due to the area’s rather flat slope and obstructions from existing structures.

With view planes toward the shoreline, the project site may be partially visible from surrounding areas located to the northwest at higher elevations. Some homes from residential subdivisions located at higher elevations further west and northwest of the site may also have partial views of the site. However, the existing Hawai‘i Army National Guard Facility in the area generally limits and obstructs any views of the project site. The only public views from these subdivision areas would be from roadways. Public views of the project site from these subdivision roadways are generally obstructed and limited due to existing structures and vegetation.

Effects On Visual Resources

Existing views from the shoreline area toward the project site are typically blocked due to existing urban development and structures. From northern inland areas along Mokulele Highway, views of the project site would remain unchanged. The view plane from higher inland areas toward the coastline would also remain essentially unchanged. The view planes toward both the shoreline (makai) and mountain (mauka) perspectives should not have an adverse impact on existing public viewing locations (roadways, scenic points) or visual resources (landforms, important open space).

Development of the project is not anticipated to have significant impacts on notable view planes towards the project site nor adversely affect important public viewing points or visual resources. The buildings and accessory facilities associated with this project are planned to be single-story structures.

Views from the shoreline area and scenic coastal roads should be minimally impacted by the project. The majority of important visual resources and viewing points identified under the County's *General Plan* and *Kīhei-Makena Community Plan* are situated along the coastline and involve views of Haleakalā and the West Maui Mountains. The *Maui Scenic Resources Study* further identifies scenic resources along the Mā'alaea to Mākena region such as Keālia Wetlands, Pu'u Ōla'i, and views of Kaho'olawe, Lāna'i, and Molokini. As a result, the project would not have an effect on these views or resources.

Residences located at higher elevations which have coastline views are not expected to have their view planes significantly impacted by the project. Even with the use of single story structures, existing views should not be obstructed by buildings and structures constructed.

Mauka views from the shoreline and lower elevations are not expected to be affected since the project site should not be visible due to the generally flat slope and topography. Views of Haleakalā and the West Maui Mountains should similarly not be affected by the project.

In the immediate vicinity of the project site, views of the facilities should not create a significant visual impact. As a result, open space areas from this roadway to the facilities could be landscaped or left undeveloped. The entrance to the facility could also be landscaped with natural foliage to mitigate views, similar to the photo shown on the following page of the Hawai'i Metal Recycling (HMR) Facility on O'ahu. This entrance to HMR utilizes palm trees and landscaping to ease negative visual effects the facility may have on the surrounding area. Further, design plans for the Abandoned Vehicle Facility could consider incorporation of existing trees and native plants in the facility's landscaping to further screen the project from negative visual impacts.



Light Pollution Effects

The project would include minimal outdoor lighting for the facility so not to affect other uses such as the astronomical observatories on Haleakalā. The project is planned to be operational on weekdays during normal business and daylight hours. As a result, there should be not operations occurring at night. If necessary, outdoor lighting fixtures that shield the lighting source (lamp) to limit the direction of light rays in a downward direction would be considered to minimize visual light pollution effects on the observatories.

3.5 NATURAL HAZARDS

This section addresses those natural and urban-related hazards applicable to the project site. Of the potential natural hazards, only earthquake, hurricane, tsunami and flooding hazards are applicable. These natural hazards are addressed below.

Earthquake Hazards

Although difficult to predict, an earthquake of sufficient magnitude causing structural or other property damage may occur in the future. However, except for the Island of Hawai'i, the other Hawaiian Islands are not situated in a high seismic area subject to numerous earthquakes (Macdonald et al. 1983). Most of the earthquakes that have occurred in the past have been volcanic earthquakes causing little or no damage.

Earthquakes in the Hawaiian Islands are primarily associated with volcanic eruptions resulting from the inflation or shrinkage of subsurface magma reservoirs which shift segments of the volcano (Macdonald et al. 1983). Available historical data indicates that the number of major earthquakes occurring on Maui have generally been fewer and of lower magnitude than those on other islands such as Hawai'i (Furumoto, et al. 1973). Maui is periodically subject to episodes of seismic activity of varying intensity. However, earthquakes cannot be avoided or predicted with any degree of certainty, and an earthquake of sufficient magnitude could cause damage to the new facility.

The locations of larger damaging earthquakes of magnitude 6 or greater since 1838 on the Island of Maui have generally occurred off the northern coast of the island primarily between Moloka‘i and Maui. The most recent large earthquake along this northern flank occurred approximately 28 miles northeast of Maui in April 1986 with a magnitude of 5.1. The largest earthquake within close proximity to the Island of Maui occurred north of Pa‘uwela Point in 1938 and had a magnitude of 6.75.

Since, there is a possibility of future earthquakes occurring on the Island of Maui, the proposed project site and facilities may be subject to damage from an earthquake of sufficient magnitude occurring in the area. The proposed facility and other accessory structures would be structurally designed and constructed in accordance with the County building code. Therefore, the susceptibility of being damaged from an earthquake would be no different from other structures or buildings present in the surrounding Pu‘unēnē area.

Hurricane Hazards

The three major elements of a hurricane making it hazardous are: 1) strong winds and gusts, 2) large waves and storm surge, and 3) heavy rainfall (FEMA 1993). Of these three, only strong winds and heavy rainfall could affect the project. Effects from heavy rainfall are covered under the section addressing flooding. The project site is not located along the shoreline, which makes impacts from large waves and storm surge highly improbable.

A hazard mitigation report prepared by the Federal Emergency Management Agency after Hurricane Iniki in 1992 determined that nine hurricanes approached within 300 nautical miles (about one day’s travel time) of the Hawaiian Islands’ coastlines between 1970 and 1992. Most hurricanes affecting the islands have focused on Kauai. Based upon a tracking of hurricanes since 1950, there appears to be no geographical or meteorological reason for hurricanes to miss the other islands and head for Kauai (FEMA 1993).

Although hurricanes are unpredictable, the Island of Maui has historically received less threat and damage from hurricanes as compared to Kauai. However, as with other existing and future developments in Pu‘unēnē, as well as the rest of the island, structures built on the project site could potentially receive some damage from the high winds of a hurricane passing close to the island.

A hurricane of significant strength or high winds passing close to the island could damage the proposed facility. Utilities and infrastructure improvements may not be affected since they could be located underground. To minimize potential damages, the processing facilities would be constructed with suitable materials and constructed in accordance with appropriate County building code requirements and standards. Thus, the risk of potential damage from high winds should be less than or similar to other existing developments in the Pu‘unēnē area.

Flooding and Tsunami Inundation

The project site property falls within Zone C as designated on the Flood Insurance Rate Map (FIRM), Community Panel Number 150003 0255 B (1981) prepared by the Federal Emergency Management Agency (FEMA, 1987). The Zone C designation for the project site depicts areas of minimal flooding. Based upon this FIRM, this project site along with the immediate surrounding area is not located within any designated floodway.

Facilities and structures associated with this project are expected to be designed and constructed in compliance with Building Code requirements and standards. This will also include designing and implementing necessary site drainage improvements according to the County's drainage standards. Plans will be submitted for ministerial review by agencies with the building permit application.

The Hawaiian Islands have a history of destructive tsunamis. Since 1819, 22 severe tsunamis have occurred, with wave heights at varying locations in Hawai'i ranging from 4 to 60 feet. Four tsunamis have occurred in recent history in 1946, 1957, 1960, and 1964. Generally, the western shores of Maui nearest the project site have been sheltered from tsunamis by the island of Lāna'i. Among the four recent tsunamis to reach the islands, wave run-up heights reached a maximum of 9 feet for the shoreline spanning between Mā'alaea and Kīhei (Loomis, 1990).

The proposed facilities would not be subject to flooding hazards since they are located outside of designated floodways. Appropriate drainage improvements would be provided to serve the property and address surface runoff from increased impervious surfaces created in compliance with the County's drainage standards.

3.6 HAZARDOUS MATERIALS ASSESSMENT

3.6.1 Phase I Environmental Site Assessment

A Phase I Environmental Site Assessment was conducted for the project by Myounghee Noh & Associates, L.L.C. (MNA) and is included in Appendix C of this document. The purpose of this Phase I Environmental Site Assessment was to identify and evaluate any *recognized environmental conditions* (REC) within the proposed project area, with respect to the range of contaminants designated by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and petroleum products. The scope of this work included the following tasks:

1. Perform a site reconnaissance to identify any likelihood of contamination, interview available personnel, if any, and conduct a brief assessment of any adjoining properties.
2. Review published information on surface or subsurface conditions at the site and surrounding area consisting of topographical, aerial, and tax maps to identify previous and current uses of the project site, adjoining properties, and surrounding areas.
3. Review government records with respect to environmental conditions, citations, complaints, and permits at the project site, adjoining properties, or surrounding areas.

Site Reconnaissance

On March 6 and March 29, 2006, MNA conducted site reconnaissance focusing on identifying historical, current, and potential CERCLA impacts which affect the proposed project site and surrounding areas. This includes identifying the presence, or likely presence, of any hazardous substances or petroleum products on the site under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the site or into the ground, ground water, or surface water of the site (ASTM, 2000).

The site reconnaissance conducted in March 2006 resulted in the determination that no potential off-site or on-site contamination sources existed within the project area. Furthermore, the survey found no evidence of hazardous materials or regulated wastes at the property, no signs of underground storage tanks, no signs of disposal on the site, and no evidence of materials that could contain asbestos, lead, or polychlorinated biphenyls in the area.

Previous and Current Land Uses

Review of information regarding past uses of the project site was obtained from interview, review of tax records, topographical maps, and aerial photographs. In 1937, Maui Airport (later named Pu‘unēnē Airport) was opened for commercial air travel. In 1940, the U.S. Navy acquired the airport (renamed to Naval Air Station Pu‘unēnē) and further developed the airfield during World War II. However, the subject site for the proposed facility was unused during wartime operations.

County of Maui tax records indicated that various areas of TMK (2) 3-8-008:001 were used for sugarcane cultivation before and after the existence of Pu‘unēnē Airport. Review of these records show that the project site itself was never cultivated, likely due to the rocky conditions of the site.

Until 1999, the primary uses of TMK (2) 3-8-008: 001 have been for agricultural purposes. Since 1999 to current, the primary use of the subject area has been multi-purpose by the State of Hawai‘i. Surrounding areas continue to be used for agricultural purposes mainly by Alexander & Baldwin, Inc.’s lessee, Hawaiian Commercial and Sugar Company (HC&S).

Government Records Review

MNA conducted searches of standard federal and state government databases of known or potential sources of hazardous materials or waste. The following records from federal and state programs have been reviewed in this process:

- National Priorities List (NPL)
 - Resource Conservation and Recovery Act (RCRA) facilities that are undergoing “corrective action” (CORRACTS)
 - RCRA-Treatment, Storage, & Disposal (TSD)
 - Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS) List
 - Solid Waste & Landfill
 - Leaking Underground Storage Tank (LUST)
-

- Water Wells
- RCRA-Violators/Enforcement
- Underground Storage Tank (UST) list
- Toxic Release Inventory System (TRIS)
- Emergency Response Notification System (ERNS)
- RCRA-Large Generator
- RCRA-Small Generator
- Spills

Phase I ESA Conclusions

The detailed examination of each federal or state database resulted in finding of no evidence of hazardous or waste materials within the subject area, or adjoining and surrounding areas. MNA found no evidence of materials that could contain asbestos, lead, or polychlorinated biphenyls (PCBs) in the proposed project area. No State-registered underground storage tanks were found within or around the project site. Consequently, no potential offsite contamination sources were identified within or around the project site.

3.6.2 Industrial Materials Disposal During Operations

The project will include operational activities that include the handling and processing of materials containing fluids such as oil, grease, and other automotive fluids. As a result, the discharge of such fluids on the site from operations could result in them being transported into drainageways during storms of sufficient size and duration.

To mitigate such effects, the facility operator will be required to comply with necessary mitigative measures to control the effects caused by chemicals or fluids that have the potential to enter the soil, drainageway, or water table. These measures would be developed during the project's design phase and include controls for: oil and grease spills; automotive fluids such as brake fluid, transmission fluids, fuels, and batteries; refrigerants such as R-12 and R-22; and metals such as lead and mercury.

The correct preventive actions will reduce the potential for stormwater pollution associated with improper fluid recovery processes. Best Management Practices (BMP's) for the conveyance of contaminated fluids could require the following:

- Removing all fluids prior to vehicle entering the processing area.
- Implement a fluid recovery process to reduce spills.
- Protect stormwater drainage with berms that divert potential contamination.
- Install oil and grease interceptors at all stormwater catch basins.
- Store potentially contaminated parts at locations away from stormwater drainage collection sites.

These typical wastes would be appropriately collected and disposed of to reduce the potential for pollution of stormwater. The temporary storage areas of these fluids should also be properly labeled, kept out of direct exposure to natural elements, and have adequate space and ventilation. The facility's design and operations will need to comply with both State and County requirements. Given these considerations and the implementation of appropriate measures in the project's design and operation, this project should not result in a significant impact on the environment from such industrial wastes.

3.7 BIOLOGICAL ENVIRONMENT

3.7.1 Botanical Resources

The landscape of the project site has been heavily modified by historic sugar cane cultivation occurring southwest of the access roadway running through the site in an east-west direction. The areas northeast of the project site have been graded and cleared for World War II military and airport operations.

Existing vegetation of the project site consists of moderately dense *kiawe* (*Prosopis pallida*) and *koa hale* (*Leucaena leucocephala*) with knee to waist high grasses within the subject area. The following botanical species can be found throughout the project site: buffelgrass (*Cenchrus ciliaris*) and other alien grass species, and a few occurrences of 'ilima (*Sida fallax*) and 'uhaloa (*Waltheria indica*). There are no known rare, threatened, or endangered plant species in the vicinity of the subject property.

The State Department of Land and Natural Resources (DLNR), Division of Forestry and Wildlife created maps showing the concentrations of threatened and endangered plant species throughout the major islands of the State. These maps were digitized into ArcGIS format by the State Office of Planning in 1992. On these maps, each island is divided into distinct zones of threatened and endangered species concentrations, ranging from low to very high concentrations, and identifies areas of little to no concentration. Based upon review of these maps, the Abandoned Vehicle Facility Project site is located in an area considered to have little to no threatened or endangered species.

Effects on Botanical Resources

The project would not have a significant negative impact on the botanical resources present on the site. None of the vegetation identified within this project site or immediate vicinity is known to be Federal- or State-listed threatened or endangered, or candidate threatened or endangered species. All of the plants can be found in similar vegetation types throughout the Kīhei and Wailuku districts of the island. Also, there are no known natural or historic wetlands within the project site or immediate area. Therefore, the project is not expected to have a significant impact on existing botanical resources.

3.7.2 Avifauna and Fauna

No avian or fauna species listed as endangered, threatened, proposed, or as a candidate species by the U.S. Fish and Wildlife Service or by the State of Hawai'i under its endangered species program are known to be present on the project site or in the immediate vicinity. The project site is not located within a State designated Natural Area Reserve nor is it within an area designated as habitat for the recovery of Hawaiian forest birds (FWS, 2003).

Avian species present on the project site would likely consist of introduced species such as various types of pigeons and doves, babblers, silvereyes, saltators, and cardinals. Mammals present on the project site would likely consist of feral mammals representative of surrounding agricultural lands. Examples of feral mammals generally found in the area would include cats, rats, mice, and mongooses. Animal species in the project vicinity would be typical of species found in the urbanized areas of the Kīhei-Mākena region. No mammals were observed at the project site during a recent visit to the property site.

Effects on Avifauna and Fauna

Vegetation on the project site consists predominantly of introduced species and weeds, and there are no wetlands present on the project site or in the immediate vicinity which may serve as important nesting or foraging habitat for endangered or threatened species. Therefore, the project should not have a significant impact on important avian species. Consequently, construction of this project is not expected to have a significant impact on important avian or mammalian species that may be present in the area.

With the project, existing feral mammals utilizing the property would be displaced due to development of the Abandoned Vehicle Facility. However, this change would not result in a significant negative impact on potential mammalian species present on the property or in the surrounding area because they consist predominantly of alien species such as rodents or feral animals which are harmful to native avian and plant communities.

3.7.3 Hydrogeological Resources

Under the State's *Water Resource Protection Plan*, aquifers in the Island of Maui have been classified under an aquifer coding system. Under this system, the island is divided into Aquifer Sectors which then have Aquifer Systems located within each sector. An Aquifer Sector reflects an area with broad hydrogeological (subsurface) similarities while maintaining traditional hydrographic (surface), topographic and historical boundaries. The Aquifer system is an area within a sector that is more specifically defined by hydrogeologic continuity, particularly hydraulic connections among aquifer types and units (CWRM, 1990).

The project site is located within the Central Aquifer Sector (603) which includes the hydrologic units of Pā'ia, Kahului, Kama'ole, and Makawao. The entire project site is situated within the Kahului hydrologic unit, which stretches from Kahului Bay to Mā'alaea Bay. Aquifers in this system are volcanic in nature and groundwater in the area is not potable (Mink & Lau, 1990).

Ground water resources associated with this Kahului Aquifer System are basal and occur in an arrangement of mixed volcanic materials and sediments from West and East Maui. Sustainable yields are derived for the steady relationship among head, infiltration, and net draft. The Kahului Aquifer System is identified as having a sustainable yield of one million gallons per day (mgd).

Effects on Hydrogeological Resources

The project should not have a significant impact on hydrogeological resources in the surrounding area of the property. Construction activities associated with the property would not alter existing streams or drainage patterns associated with any perennial streams. Thus, the project would not impact surface water resources in the surrounding area. The facility will also be appropriately designed to comply with State Department of Health requirements to address the containment and proper disposal of industrial fluids from operations.

Domestic water service for the project would be provided by the County Department of Water Supply which has a system complying with drinking water standards as approved by the State DOH. Water sources should be available from existing and planned water system improvements discussed in Chapter 5, and necessary water allocations would be obtained.

3.8 HISTORIC, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

3.8.1 Archaeological Inventory Survey

An archaeological inventory survey was conducted for the property by Cultural Surveys Hawaii, Inc. (CSH). In consultation with the State Historic Preservation Division (SHPD), an inventory survey was prepared to support the proposed project's historic preservation review under HRS Chapter 6E-42, HAR Chapter 13-13-284, and State requirements for archaeological field survey (HAR Chapter 13-376-4).

Previous Archaeological Research and Findings

Prior archaeological research for the proposed project area has been minimal. Myra Tomonari-Tuggle has described the area in "*Fire on the Land: Archaeology, Architecture, and Oral History of Former Naval Air Station Pu'unēnē, Pūlehunui, Maui*". Tomonari-Tuggle is the only report that covers the specific project area. It is a comprehensive inventory survey of the Naval Air Station Pu'unēnē site. A total of five State Inventory of Historic Places (SIHP) sites were found – four multi-component complexes (SIHP #50-50-09-4164, 4801, 4803, and 4800) and one single component (SIHP #50-50-09-4802).

The single component site includes the Kīhei Railroad Bed. Three of the four multi-component complexes were minor in quantity and included seven plantation era features, remains of the Ha'ikū Ditch reservoir, and properties displaying pre-war ranching activities. SIHP #50-50-09-4164 included 165 features, all associated with NAS Pu'unēnē. Tomonari-Tuggle also identified a bulldozer pile comprised of multiple push-piles of agricultural boulders, asphalt debris, and concrete rubble, also known as Bulldozer Pile 14, or BD-14.

The proposed project site is located on 14.8 acres of what used to be NAS Pu‘unēnē. Therefore, it follows that most historic evidence found in the general vicinity would have origins from the NAS. Also, prior to the occupation of the military, the area was heavily used for sugar cane cultivation, so it also follows that other historic evidence point to sugar cane origins. Because the Kīhei Plantation Company harvested the sugar cane while HC&S processes it, numerous bridges were built for the trains to travel from one point to another, which would be consistent with the remnants of bridge footings found in a couple of other inventory surveys.

The current project area lies in a barren or transitional zone. This zone marks the transition area between the coastal zone, which is an approximately 0.25-mile wide zone along the shoreline, and the inland zone, which is about 5 to 7 miles inland from the shore. The inland zone is marked by heavier rainfall as well as more lush vegetation than the barren or transitional zone. The light rainfall made it possible for temporary habitation, campsites, and some agriculture, all of which are evident by the inventory survey findings.

Archaeological Fieldwork and Results

The archaeological inventory surveys included the following typical fieldwork procedures:

1. A complete ground survey of the entire project area for the purpose of site inventory. All sites were located, described, and mapped with an evaluation of function, interrelationships, and significance. Documentation included photographs and scale drawings of selected sites and complexes;
2. Research on historic and archaeological background, including searches of historic maps, written records, and Land Commission Award documents. This research focuses on the specific project area, with background on the traditional district, the ahupua‘a, and with special emphases on settlement patterns;
3. The administrative rules of SHPD/Department of Land and Natural Resources (DLNR) also required consultation with community members about their cultural and historical concerns with the project area. CSH conducted a consultation from a list of knowledgeable kama‘āina residents; and,
4. Preparation of a survey report that includes the following:
 - a. A topographic map of the area showing all archaeological sites and site areas;
 - b. Description of all archaeological sites with selected photographs, scale drawings, and discussions of function;
 - c. Historical and archeological background sections summarizing pre-contact and historic use as they relate to the archaeological features;
 - d. A summary of site categories and their significance in an archaeological and historic context;
 - e. Recommendations based on all information generated that specify what steps to be taken to mitigate impact of development on archaeological resources – such as data recovery (excavation) and preservation of specific areas. These recommendations were developed in consultation with the County DPWEM and State agencies.

The project area has undergone numerous changes over the years. The property started off as an agricultural area then changed to a military base with World War II. After the war ended, sugar cane was cultivated. The transfer from the military base resulted in push piles to clear the land. Various concrete rubble piles were left from the demolition of military buildings. There are still some structures and roadways left from military use that have remained intact.

Historic Resources Background

The project site is located on the leeward side of Haleakalā in the moku (district) of Kula and ahupua‘a of Pūlehu Nui. Given the names of the areas surrounding the site, it can be assumed that the lands in the vicinity of Pūlehu Nui were dry and barren agriculturally, but rich in marine resources.

Early Historic Period

The area of Kīhei, an area surrounding the current project area, was a site of early conflict between Kalaniopuu, chief of the island of Hawai‘i, and Kahekili, chief of the island of Maui. Chief Kalaniopuu’s army started off with 800 men when they invaded the shores of Maui. However, after much battle, there were only two of Kalaniopuu’s men left to tell him of their defeat.

Fifteen years after the battles at Kiheipukoa, where Kalaniopuu lost most of his men, Captain George Vancouver started his on-shore expedition of Maui, which included Kīhei. It began the tradition of Kīhei being a regular stop for visiting ships and, therefore, greatly impacted the population of the area. At the same time, the Hawaiian population faced a radical decrease because of the introduction of Western diseases.

In 1820, the Kula district provided an important role in the introduction and preservation of the whaling industry. Even though Kula did not serve as the center of the whaling industry, as Lahaina did, it provided agricultural areas for the production of food, namely the Irish potato. By 1849, demand skyrocketed and Kula became known as “the potato district”. Also present at the time were sugar cultivation and ranching.

Mid to Late 1800s

Land use patterns were changed with The Great Mahele of 1848 and the privatization of land in Hawaii. King Kamehameha III decided to divide his land between the mō‘ī (king), ali‘i, konohiki (overseer of an ahupua‘a), maka‘āinana (tenants of the land) as well as the government. Native Hawaiians who wished to claim the lands on which they resided could do so through the Board of Commissioners to Quiet Land Titles and, if approved, acquire a Land Commission Award (LCA). The current project area sits in LCA 5230, awarded to Keaweamahi as approximately 1670 acres. Other LCA’s awarded within the Pūlehu Nui ahupua‘a were mostly for potato cultivation.

Early to Mid 1900s

The Kīhei Plantation Company was established in 1898 to begin sugar operations in Kīhei and the surrounding areas. In order to increase production rates, the Kīhei Plantation Company built a railroad to move their cane more efficiently. The railway would stop at three different Kīhei plantation camps and then take the sugar cane to the Hawaiian Commercial & Sugar Company (HC&S) mill in Pu‘unēnē to be ground and manufactured into sugar.

As the sugar industry expanded, so did the need to find water in order to sustain and maintain the sugar cane. As water supply was limited, additional wells were drilled and additional ditches constructed in order to accommodate the growing industry. The Lowrie Ditch Project as well as the Waikapū Well was both instrumental in helping the sugar industry flourish on Maui.

Aviation expanded in this era and saw the establishment of the Pu‘unēnē airport, where the project area now lies. Work began in 1940 on barracks, mess halls, a hangar, etc. The airfield was used as a home for Utility Squadron Three (VJ-3) for their radio-controlled aircraft and anti-aircraft training. The VJ-3 and their capabilities helped propel the Navy into advancement of radio-controlled technology.

World War II

December 7th, 1941 served as a turning point for both the United States and Naval Air Station (NAS) Pu‘unēnē. The NAS was used as an active training base as well as headquarters for the Army and Navy on the island of Maui. The VJ-3 now concentrated exclusively on providing radio-controlled aircraft as realistic targets for fleet anti-aircraft gunnery training exercises.

The NAS brought much training for both military and civilian personnel. Employees from Wailuku Sugar Company and HC&S were used to operate heavy equipment. Also, the NAS was used as a “Top Gun” school for fighter-aircraft tactics, one of nine Navy airfields in Hawaii that was used for such advanced training.

After the end of World War II, marked by the surrender of Japan to the United States, the NAS Pu‘unēnē facilities were slowly moved to NAS Kahului. By 1949, the land of NAS Pu‘unēnē was transferred back to the Territory of Hawaii and the structures that once stood to serve the 565 officers and 2798 enlisted men were demolished. The Kahului airport now serves as the major hub for commercial aircraft.

Mid 1900s to present

Since the end of the war, the old Pu‘unēnē airport has been used for an alfalfa farm, kiawe scrub, sugar cultivation, ranching, and racing. Currently, a portion of the airport has been developed by the Hawaii Army Air National Guard for use as an armory. In addition, drag races began being held in 1963 by the Valley Isle Timing Association.

Results of Inventory Survey

Of the five properties that were identified as historic in the Tomonari-Tuggle inventory survey, only one is located in close proximity to the project boundaries. This site is designated as State Inventory of Historic Places (SIHP) Site #50-50-09-4800 and information on it is provided below.

SIHP Site #50-50-09-4800 (See Photo ►)

Feature: BB

Feature type: Unknown

Feature function: Military Use

Age: Unknown

Historic Dimensions: 31 m by 9 m by 2.01 m

Upon closer inspection via a pedestrian survey, it has been determined that the project, including its construction, will have no negative impact on SIHP Site #50-50-09-4800. The required 50-foot buffer zone will be maintained in order to preserve the integrity of the historic site. The structure known as Feature BB will remain untouched.

Another site identified as BD-14 (Bulldozer Pile 14) lies within the current project area. It was determined to not have any historical significance, and has been recommended as ineligible for historic status. The debris was created during the demolition of “Housing Area B” during the late 1940s when the Navy decided to move their base from Pu‘unēnē to Kahului and subsequently, the land was being cleared to make way for sugar cane cultivation. All debris and piles will be cleared prior to construction.



State Site #50-50-09-4800

The inventory survey report for the project site was reviewed and approved by the State Historic Preservation Division (SHPD) on August 30, 2006 (LOG NO: 2006.2922 DOC NO: 0608MK44). SHPD concurs with the description and determination of SIHP Site #50-50-09-4800 as significant and appropriately re-interpreted as World War II (WWII) associated which has resulted in changes to the site’s identification number. Therefore, this re-interpretation of Feature BB’s historical association with WWII will include it with SHIP-4164, as opposed to the collective plantation era features designated SIHP-4800. This feature will hereafter be referred to as “SIHP 50-50-09-4164, Feature BB (formerly SHIP 50-50-09-4800, Feature BB).”

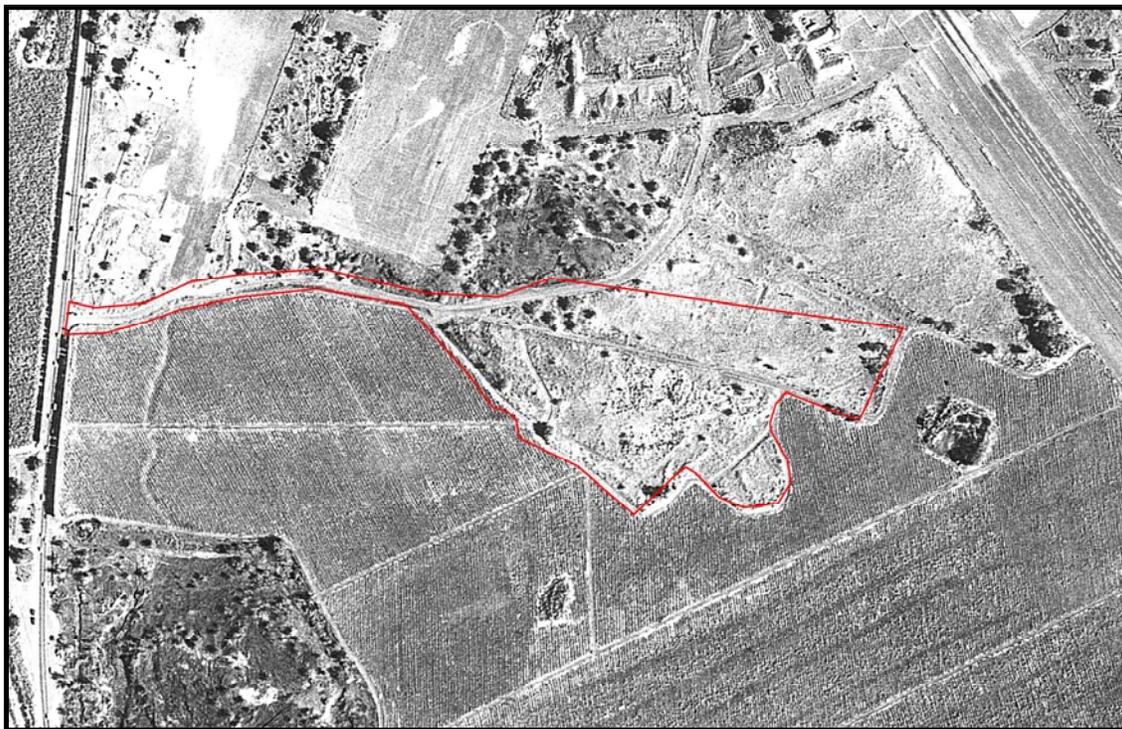
SHPD concurred with CSH’s mitigation recommendation to establish a 50-foot wide protective buffer around SIHP 50-50-09-4164, Feature BB (formerly SIHP 50-50-09-4800, Feature BB). They also agreed that highly-visible orange construction fencing be placed along the buffer and confirmed via photographs to their office. Thus, SHPD has found the inventory survey report to be acceptable and considers the historic preservation review process concluded. The recommendation by SHPD was “development of the project areas will have ‘no effect’ on significant historic sites, if the designated preservation measures are followed.” This letter is included in Appendix D.

3.8.2 Cultural Resources

A cultural impact evaluation was conducted by CSH in coordination with an archaeological inventory survey of the project site. The area under consideration for the project consists of a parcel of property (14.8 acres), as well as the supporting access roadway (0.69 acres) which intersects Mokulele Highway. The area of potential effect (APE) for the project under consideration includes the section of roadway located outside and adjacent to the project area.

Scope of Work and Methods

The scope for the cultural impact evaluation included research of historical data that included a study of archival sources, historic maps, Land Commission Awards, and previous archaeological reports. This research was used to model the history of land use and determine if archaeological sites, which might indicate past traditional cultural practices, have been recorded on or near this property. Consultation with individuals in the community on an informal basis was also conducted to identify and describe any present cultural concerns and assess the potential impacts the project may have on traditional cultural practices.



Area of Potential Effect (APE) shown in red (Aerial photo circa 1973)

CSH investigated numerous published and unpublished accounts, surveys, reports, maps and photographs found in public and private collections pertaining to the Naval Air Station (NAS) Pu'unēnē project area. Historical documents, maps and existing archaeological information pertaining to the sites in the vicinity of this project were researched at the SHPD library and the Engineering Offices at the Hawai'i State Department of Transportation, Airports Division.

The Office of Hawaiian Affairs, The Maui/Lāna‘i Islands Burial Council, and members of other community organizations were contacted in order to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the study area and the surrounding vicinity. However, not all prospective community contacts were available to be interviewed. Potential community contacts were also provided by colleagues at CSH and from the researcher’s familiarity with other historians in the field of naval aviation history. Please refer to Appendix E for a complete list of individuals and organizations contacted.

Research regarding the history of NAS Pu‘unēnē was conducted using the services of the National Archives and Records Administration, in College Park, Maryland, and the U.S. Naval Historical Center, located within the Washington Navy Yard, Washington, D.C. All relevant Land Claim Awards (LCA) and Royal Patents were researched using resources associated with the Waihona Aina online database (Waihona Aina Corp., 2002).

Background Research

The division of Maui’s lands into political districts occurred during the rule of Kaka‘alaneo, under the direction of his *kahuna*, Kalaiha‘ōhi‘a. This division resulted in twelve districts or *moku* during traditional times: Honua‘ula, Kahikinui, Kaupō, Kīpahulu, Hana, Ko‘olau, Hāmākua Loa, Hāmākua Poko, Ka‘anapali, Lahaina, and Kula. The current project area is located on the leeward flank of Haleakalā in the *moku* of Kula and *ahupua‘a* of Pūlehu Nui at a place where the Pūlehu Nui Stream ends.

Throughout the course of this evaluation, an effort was made to contact and consult with Hawaiian cultural organizations, government agencies, and individuals who might have knowledge of, and/or concerns about traditional cultural practices related to the specific project area. This effort was made by letter, e-mail, telephone, and by personal interviews. Community contacts were mailed a letter of introduction outlining the type of information being sought, as well as maps and photographs of the project area

Traditional Cultural Practices

Traditional cultural practices are based on a profound awareness concerning the harmony between man and his surrounding natural resources. Native Hawaiian populations depended on these cultural practices for their very survival. A familiarity with specific environments allowed Hawaiian populations to devise systems that fostered sustainable uses for resources. Many of these cultural practices have been passed down from generation to generation. Some Hawaiian communities continue to observe traditions and preserve their culture, to maintain the continuity of these practices. The Cultural Impact Evaluation (CIE) assessed traditional cultural practices as well as resources pertaining to the project area within Pūlehu Nui Ahupua‘a.

Cultural specialists and practitioners of traditional Hawaiian culture who were contacted to comment on traditions associated with the Pūlehu Nui Ahupua‘a were unanimous in associating pre-contact references to the “Battle of Kakanilua” within the vicinity of the project area. The

movement of Kalani‘opu‘u’s forces across the central isthmus of Maui is a well-known account of an event which occurred just prior to contact between British explorer James Cook, and the population of the Hawaiian Islands.

Samuel Kamakau also makes reference to the area of Kama‘oma‘o as a place where guardian spirits dwell. “The *‘aumakua* and *kumupa‘a* ancestral deities were the “guardian angels” of men, *anela kia‘i kino*. When a man died, his *‘aumakua* or *kumupa‘a* took charge of him after death...There are many who have died and have returned to say that they had no claim to an *‘aumakua* [realm] (*kuleana ‘ole*). These are the souls, it is said, who only wander upon the plain of Kama‘oma‘o on Maui, or on the plain at Pu‘uokapolei on O‘ahu. Spiders and moths are their food” (Kamakau, 1870). Those contacted for this cultural impact evaluation retold this belief that the central isthmus of Maui, known traditionally as Kama‘oma‘o, was a place where the spirits dwelled.

Known traditional accounts of the use of the central valley region of Maui for purposes other than transit were not indicated by most of the individuals contacted for this project. One practitioner of Hawaiian culture, however, did feel strongly that sweet potatoes were cultivated in the broad region of the project area, primarily because the growing conditions represented in the region are perfect for growing sweet potatoes.

While there is certainly a probability of sporadic pre-contact *kula* (dryland) agriculture in the area, very little is actually known of habitation and agricultural activities of pre-contact populations that may have resided on this arid plain. Surface evidence of any possible pre-contact settlement in this region has probably been destroyed by the extensive agricultural development of the isthmus. By 1878, the Hāmākua Ditch supplied water for thousands of new acres of sugar along the Pā‘ia coastline. Additional ditches pushed the fields southward, past Pu‘unēnē. Within 20 years, sugar fields fanned out along the Kīhei shoreline, and were extensively developed northward. By 1910, sugar covered the central plains from Kanahā Pond to Keālia Pond, and any surface evidence that the lower reaches of the Waikapū Stream or the Pūlehu Stream had been inhabited, was demolished.

In areas set aside by the large ranch holdings of Ka‘ono‘ulu, archaeologists found evidence of pre-contact habitation, agricultural, and activity areas. Although these findings are scant, they do show evidence that pre-contact archaeological sites exist in the barren lands away from the shoreline.

Summary and Recommendations

Reviewing the information provided by the elements of the cultural impact evaluation – historical documentation, archaeological research, and community contacts – there emerges a more detailed picture of the traditional landscape of Pūlehu Nui Ahupua‘a and the present project area. Nineteenth-century documents – Land Commission Award records and historic maps – indicate parcels containing house sites, *kula* lands, and Irish potato patches located in the upper reaches of the *ahupua‘a*, at about 2,000 feet in elevation.

Kirch (1985) presumed that agricultural sites for this area of Maui would have occurred in the “upland zone of this region”, and not in the transitional/ barren zone of the project area. In addition, the Land Commission Award map for the Pūlehu Nui Ahupua‘a indicate that the barren lands of the *ahupua‘a* were *konohiki* lands (Alexander, 1880): 1,668 acres having been awarded to one Keaweamahi.

The Land Commission Award parcels of the upland areas of Pūlehu Nui are likely the remnants of a traditional Hawaiian settlement, located within surrounding ranch, dairy, and farm lands of the 1880’s. The early Hawaiian settlements of the upcountry Maui region appear concentrated along streams. With the project area located in the transitional/barren zone of the pre-contact settlement pattern accepted for this region of Maui, pre-contact site density was expected to be low. The lands in and surrounding the current project area have undergone heavy landscape modifications by historic sugar cultivation, ranching, and military construction operations. These activities effectively eliminated any surficial pre-contact archaeological sites.

None of the community contacts queried for this evaluation identified any cultural resources in the project area, or recalled anyone entering the project area – either in the past or present – for any traditional cultural practice. Based on the evidence gathered, at present, no contemporary or continuing cultural practices occur within the project area.

Based on the findings of this evaluation, the project will have minimal impact upon Native Hawaiian cultural resources and practices within the project area. There were comments regarding the negative impact that the facility may have on the view plane from homes built on Hawaiian Home Lands by creating a visual eye-sore on the landscape. Additional comments were also received regarding the location of the facility proximate to existing recreational areas popular with Maui families.

As discussed in the visual resources section of this document, appropriate landscaping and other mitigative measures can be implemented during the project’s design phase to address such concerns. Also views of this site are generally limited due to the existing surrounding landscape of the area.

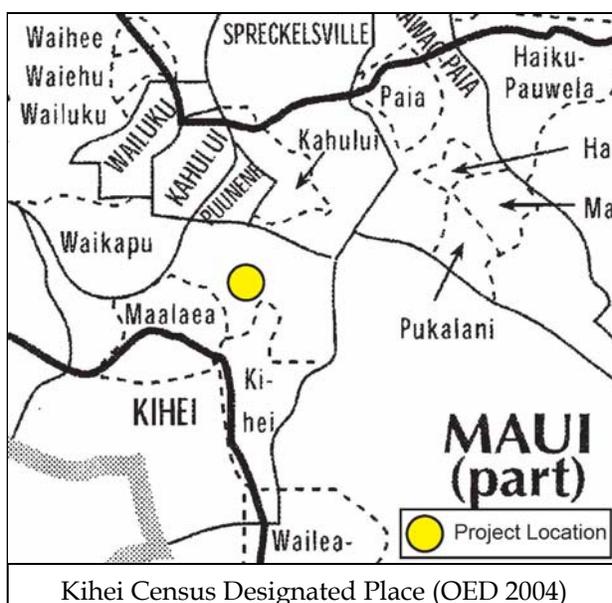
CHAPTER 4 ECONOMIC AND SOCIAL FACTORS

This chapter discusses the project’s probable impact on economic and fiscal factors associated with the State and County, as well as social factors such as changes in resident population, housing, and character of the community.

4.1 EXISTING SOCIAL AND ECONOMIC CONTEXT

Population And Demography

The County of Maui has a total population of 138,347 residents based upon July 4, 2004 census figures modified by provisional estimates supplied by the Federal-State Cooperative Program for Population Estimates. This estimate is based on place of usual residence, and includes armed forces stationed or home-ported in Hawai‘i and residents temporarily absent, excludes visitors present. The project site is situated within an area not having any residences, but is generally associated within the Kihei census designated district. Kihei is one of the County’s most populated towns and that Census Designated Place (CDP) had a total population of 16,749 in 2000.



Description	Kihei CDP	
Total Population	16,749	
	No.	%
Age:		
0 - 5 years	1,145	6.8%
5 - 17 years	3,057	18.2%
18 - 64 years	11,370	67.9%
65 + years	1,177	7.0%
Median Age	35.8 years	

Source: Maui County Data Book 2005 (OED, 2005)

Growth in the County is expected to continue at a steady pace, especially in areas such as Kihei due to new residential development and tourism attractions there. Since 2000, the Maui County population has increased by an average of 1.86 percent each year. The Kihei CDP represents the second highest CDP population in the County. A summary of the Kihei CDP population by age group is shown in Table 4.1(see table ◀).

Economy

The economy of Maui is heavily dependent on the tourism industry. In 2004, Maui's total visitor arrivals by air numbered 2.155 million and visitors stayed on Maui for an average of approximately one week (OED, 2005). The Kīhei-Wailea region of Maui is the second largest destination for tourism based upon the 2004 Visitor Plant Inventory (DBEDT, 2005). This region currently accounts for 7,258 total available transient accommodation units, second to the Lahaina-Kā'anapali-Nāpili-Kapalua region with 9,597 units.

Within the Pu'unēnē Airport area, existing development is very limited since the majority of land uses in the area are agriculture. This airport area includes several active recreational operations for the general public along with the Hawai'i Army National Guard facility. Thus, economic activity in this project area is generally limited to governmental uses and recreational activities.

4.2 ECONOMIC AND FISCAL FACTORS

This section discusses both the short and long-term effects of the project on both the County and State's economic and fiscal factors. Development of the project will have different impacts in relation to Maui County and the State of Hawai'i. Construction of this new facility will have a small minor positive economic impact mainly associated with the creation of short-term construction related jobs and long-term permanent jobs.

Short-Term Construction Related Jobs

The estimated construction cost for this Abandoned Vehicle Facility is approximately \$2.25 million as discussed in Chapter 2. As a result, this construction project would create several construction jobs. In discussions of jobs and income, three broad types are distinguished:

- *Direct* jobs are immediately involved with construction of a project or with its operations.
- *Indirect* jobs are created as businesses directly involved with a project purchase goods and services in the local economy.
- *Induced* jobs are created as workers spend their income for goods and services.

Construction of the project should have a positive economic impact associated with the creation of short-term construction related jobs. Direct construction jobs would typically consist of on-site laborers, tradesmen, mechanical operators, supervisors, etc. These new jobs created would also generate additional personal income for construction workers. Personal income is defined as the wages paid to the direct construction workers or operational employees associated with a development. It is anticipated that these construction jobs would likely be filled by residents from the Island of Maui employed within the construction industry.

Direct construction jobs created would also stimulate indirect and induced employment within other industries on the island such as retail, restaurants, material distributors, and other related businesses supporting the construction industry.

The operator selected by the County for this facility will require some permanent full-time jobs to run and operate the facility. The number of estimated staff needed for this facility is rather small in the order of six employees. Thus, the project would have a small minor positive effect in generating additional job opportunities for residents. However, if the operator selected for this site is from an existing privately run operation on the island, there would be no increase in new permanent jobs since staff would be relocated to this new site.

The potential additional jobs created would provide additional personal income to individuals which would also stimulate indirect and induced employment within the County from the spending of these wages. However, these indirect and induced effects would be rather minimal to low number of staff required to run the facility, and thus not generate a significant effect on the local economy.

Fiscal Factors

Fiscal impacts associated with this project would primarily involve some additional tax revenue generated to the State. Tax revenue sources for State government are composed primarily of general excise taxes (GET) on development costs and construction materials, along with corporate income tax, and personal income tax from construction workers and long-term permanent jobs. Construction related tax revenues are one-time or short-term increases in revenue since they are only associated with construction activities. However, operation jobs will continually increase tax revenues due to their long-term nature.

Changes to State revenues from operational employment resulting from the project would be associated with the possible in-migration of persons to fill new full-time jobs created. However, due to the low number of permanent positions created by this project, it is likely that these jobs will be filled by current State of Hawai'i residents. State revenue generated from new operational jobs would include additional income tax and excise tax from the spending of this income.

4.3 CUMULATIVE AND SECONDARY IMPACTS

Cumulative Impacts

Cumulative impacts are effects on the environment which result from the incremental impact of a project when added to past, present, and reasonably foreseeable future actions.

There are no other known private developments or major projects planned to occur in the project area before the construction timeframe or completion date for this project. Consultation with the State Public Safety Division regarding their plans for a future correctional center in Pu'unēnē indicated they have no development plans established at this time, and don't anticipate anything in the near future. The parcel situated adjacently east of the project site is designated for future use by the County Police and Fire Departments. However, there are no development plans available associated with this site or planned in the immediate future.

Therefore, the discussion of impacts presented within this document has addressed the cumulative impacts associated with the project and other reasonably foreseeable future actions being implemented. The assessment results in this show that there are no major cumulative impacts associated with this project.

Secondary Impacts

Secondary impacts, or indirect effects, are effects which are caused by an action and are later in time or farther removed in distance, but are still reasonably foreseeable. Such effects may include growth-inducing impacts and other effects related to changes in land use patterns, population density or growth rate, and related effects on air, water, and other natural systems.

The proposed project is expected to have minimal, if any, secondary impacts on resident populations, land use patterns, public facilities and infrastructure, and the natural environment. This project would not affect the County's resident population growth because there are no residences or visitor units associated with this project. It would also not influence land use patterns in the Pu'unēnē area because this site is situated within government owned property, and is not a type of land use that would generate development pattern changes surrounding it such as a Costco or university. The project would not involve secondary effects increasing demand for housing or adversely impact demand on infrastructure or public facilities such as schools and parks since there wouldn't be any changes to the resident population.

Construction of this project is expected to generate minor short-term effects associated with construction activities. However, the creation of short-term construction jobs is not expected to generate a substantial number of workers in-migrating to the Island of Maui to fill these jobs. It is anticipated that qualified local contractors on the island or within the State of Hawai'i would likely be used for the project's construction. These workers would thus have minimal if any permanent effect on the County's residential population or housing demand.

The project could add some new permanent jobs associated with the County selected operator for the facility. The selected operator could come from an existing operation on the island or a new operation. However, the number of estimated full-time jobs for this operation would be relatively insignificant (about 6 employees). It would thus have minimal, if any, effect on the County's rate of in-migration or potential relocation of residents to the island.

CHAPTER 5

INFRASTRUCTURE FACILITIES

This chapter discusses the project's probable impacts on infrastructure facilities serving the project site and surrounding area.

5.1 WATER FACILITIES

Water for the project will be supplied from the County of Maui, Department of Water Supply's Central Maui Water System. The 'Īao Aquifer is the major source of water for this system. The sustainable yield of the 'Īao Aquifer is 20 million gallons per day (MGD). Supplementing the 'Īao Aquifer is the Waihe'e Aquifer. Numerous wells, including four (4) wells with a capacity of 1.0 MGD each, and two (2) wells pumping at a combined rate of 1.5 MGD, draw water from the Waihe'e Aquifer.

Existing waterlines within the vicinity of the proposed project site include an abandoned 6-inch cast iron waterline located along Mokulele Highway, a 36-inch concrete waterline located in Mehameha Loop, and an 18-inch cast iron waterline also located in Mehameha Loop. Additionally, a 12-inch waterline was installed to serve the Hawai'i Army National Guard facility. This waterline runs along the highway and connects to the 36-inch waterline in Mehameha Loop. The 36-inch Central Maui water main provides water to the Kīhei/Mākena district. Presently, there are no existing water system improvements located within the proposed project site.

Other water system improvements in the vicinity of the project site are no longer in use. These include a World War II-era water tank north of the Hawaiian Cement Quarry and two (2) abandoned wells in the old Pu'unēnē Airport area east of Mokulele Highway (MHI, 2001).

Water system improvements proposed for the project include a new water service line for domestic use and irrigation as well as a new fire line for fire protection purposes. The proposed facility will be served via a distribution main that runs along Mokulele Highway and Mehameha Loop. Connection to this distribution main shall be included as part of the project improvements. Construction plans will be appropriately coordinated with the Department of Water Supply during the design phase of this project, and the availability of water will be confirmed when application is made for the building permit.

Impacts on Water Facilities

Based on a consumption rate of 6,000 gallons per acre (light industrial land use) and approximately 4.5 acres of actual developed property for the proposed facility (total project site is about 14.8 acres), the maximum daily demand is estimated to be 40,500 gallons per day (gpd) (1.5 times average daily) and the peak hour flow at 81,000 gpd (3 times average daily). Fire flow requirements are approximated at 2,500 gpd/2 hours.

The project will likely produce a small increase in water demand due to increases in fixture units. The average daily water demand for this project is estimated to be 27,000 gpd. These increases in demand, however, are not expected to have a significant impact on the Department of Water Supply's overall water system or source capacity. Coordination with the Department of Water Supply will be conducted during the project's design phase to ensure available source and storage facilities are properly planned for and established to support this project.

Annual withdrawals from the 'Īao Aquifer are within the sustainable yield of the aquifer. It is not anticipated that the added withdrawals due to the addition of the facility will cause the annual withdrawals to surpass the overall sustainable yield of the aquifer.

5.2 WASTEWATER FACILITIES

The project is located beyond the County of Maui's existing sewer system limits. Therefore, there are no available sewer lines in the vicinity to serve the proposed project. Although the County of Maui has a long range plan designated for this Pu'unēnē Airport area, there are no immediate plans to provide sewer service to the vicinity of this project site. (MHI, 2001).

Domestic wastewater from the facility will consequently be processed by a septic system to be constructed on-site. This new system shall be designed and constructed in accordance with all applicable County and State standards and requirements. The estimated wastewater flow that could be generated by the proposed project is approximately 25,650 gpd. Because domestic wastewater from the facility will be processed on-site by a septic system, this project will not place any additional demands on the existing County of Maui wastewater system.

5.3 DRAINAGE FACILITIES

Based on the Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM) Community Panel Number 150003 0255 B (1981), the project site is located outside of the 500-year flood plan (Zone X). The location of the project site is in the general proximity of Haiku Stream and Pūlehu Gulch which are located a considerable distance away to the south.

Since the area surrounding the project site is either undeveloped or consisting of large scale plantation agriculture (sugar cane), surface runoff will generally follow the natural slope and existing drainage patterns.

There is no existing drainage system established within the project site. In the vicinity of the site however, the State Department of Transportation is planning to install four drainage crossings associated with the Mokulele Highway widening project. A drainage culvert comprised of three (3) 24-inch drainlines carries storm water under Maui Raceway Park. A 145 linear foot (lf) culvert, made of two (2) 24-inch drainlines, will cross Mokulele Highway just north of Maui Raceway Park. Further north, a 134 lf culvert will also cross under Mokulele Highway. Even further north will be a 160 lf culvert comprised of two (2) 24-inch drainlines. Runoff water associated with these culverts will collect into swales and sheet flow onto nearby sugar cane fields.

Development of this facility should have minimal impacts on the existing drainage pattern of the project area. On-site improvements that may affect existing drainage patterns include grading of the property, constructing an interior roadway and constructing retention basins on the site. Additional paved areas constructed on the property will increase the amount of impervious areas associated with the project site. However, this increase will be minimal, and should have a negligible effect on the existing runoff quantities. Drainage facilities planned for the site will include retention basins to achieve a no net increase in runoff from the site, and will be designed in accordance with County standards.

5.4 SOLID WASTE

The County of Maui provides solid waste collection services to single-family residences on a twice-a week basis. County crews dispose of the residential solid waste at the County's Central Maui Landfill which is located four miles southeast of the Kahului Airport. The Central Maui Landfill also receives commercial waste from private collection companies. For the proposed project site, a private waste contractor will provide solid waste disposal services.

Construction of the proposed facility will generate solid waste typical of normal construction related activities. Generated wastes will consist primarily of vegetation, rocks, and other debris encountered when clearing and grubbing an undeveloped area. The volume of solid waste generated is expected to be minor and temporary due to the limited area of development. The contractor will be required to remove all debris from the site and properly dispose of them. Such activities are expected to have a minor impact on County solid waste facilities.

The project is not expected to generate a significant increase of solid waste material that needs to be disposed of at the County landfill. Such waste would consist of office related materials associated with the normal daily operations of the facility such as food products eaten by staff, paper products, etc. The quantity of these materials should be relatively low and insignificant in relation to the amount of solid waste disposed of daily for the island. If the operator selected for this facility comes from an existing operation on the island, then there would essentially be no increase in such solid waste materials.

This project is essentially a metals recycling operation that will help reduce the amount of materials being disposed at the landfill. Abandoned and derelict cars along with white goods and ferrous metals would be processed at the facility for shipping to market. Therefore, this project would have a positive effect in reducing the potential quantities of materials disposed at the landfill. Other fluids and industrial waste removed from vehicles and white goods would be disposed of under current State and County requirements and procedures. This project will require a State DOH Solid Waste Management Facility Permit to ensure that the facility is designed, built, and equipped in accordance with the best practicable technology.

5.5 TRANSPORTATION FACILITIES

5.5.1 Existing Facilities and Conditions

Mokulele Highway is the main roadway facility providing vehicular access to the project site and surrounding area of Pu‘unēnē. This highway is a State Department of Transportation (DOT) operated highway running through the central region of the island connecting the island’s major urban centers of Kahului and Kīhei. Other highway facilities present in this region include Honoapi‘ilani Highway and Kūihelani Highway. However, these State highway facilities provide vehicular access connecting the urban centers of West Maui with Wailuku and Kahului, respectively.

Mokulele Highway is presently a two-way, four-lane divided highway from Pu‘unēnē Avenue in Kahului up to the north end of Mehamaha Loop. This section of the highway was widened from two-lanes over the past few years and has a grassed median separating the directional lanes. Figure 5.1 identifies these roadway facilities present in the project vicinity.

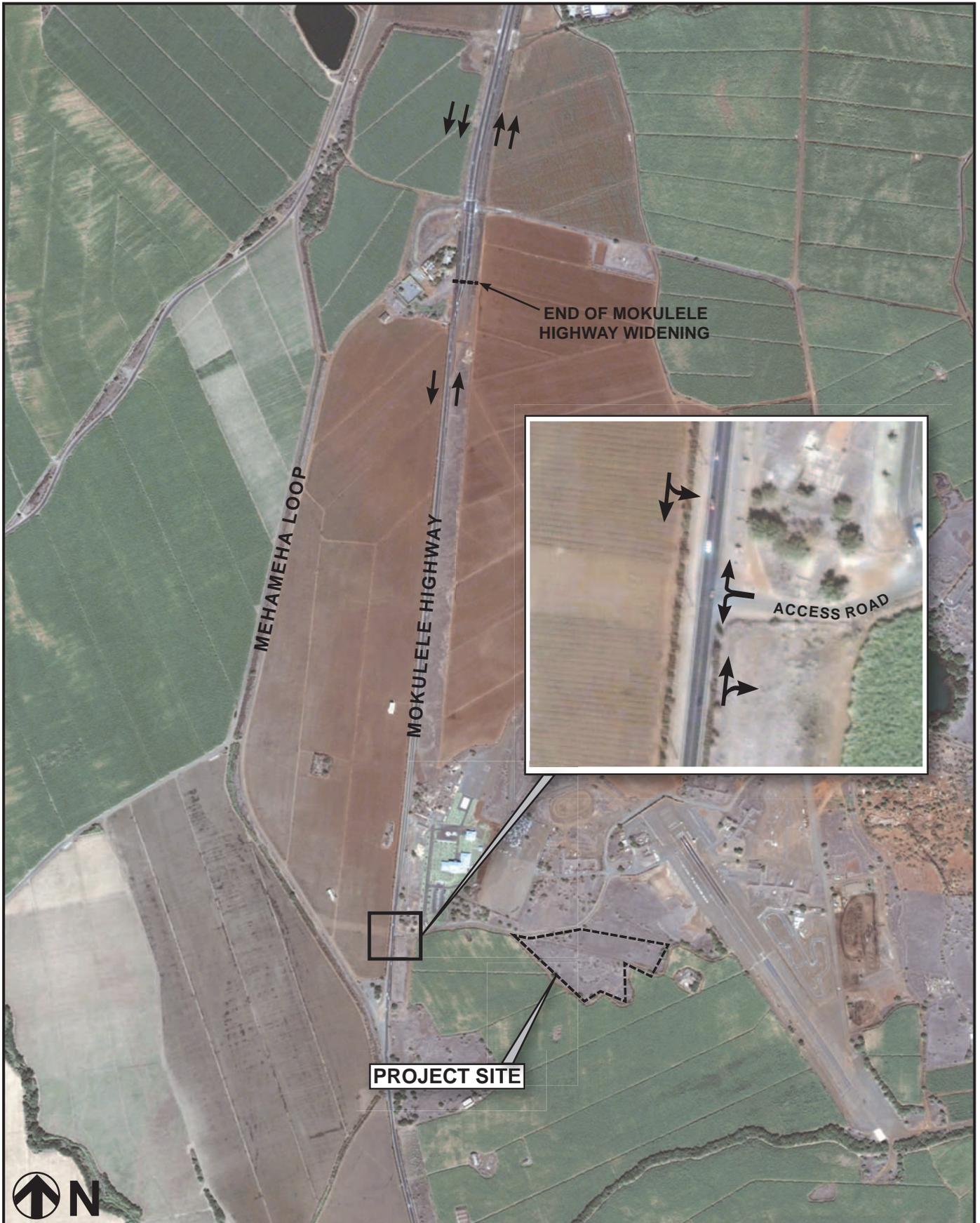
Mokulele Highway then continues as a two-way, two-lane undivided highway from this north end of Mehamaha Loop up to the intersection with Pi‘ilani Highway in north Kīhei. In the vicinity of the project, this highway has a pavement width of 30 feet and a right-of-way of 40 feet (MAHI, June 2000). The posted speed limit on Mokulele Highway is 50 miles per hour. The topography of this highway is relatively flat and generally has a straight alignment in this project area.

Access to the project site from Mokulele Highway is from a paved access road as shown in the figure. This access road also provides access to the Hawai‘i Army Air National Guard facility, Maui Raceway Park, and other recreational uses within this Pu‘unēnē Airport area.

Existing Intersection

The study intersection of Mokulele Highway with the Access Road consists of an unsignalized T-intersection (three-leg intersection). Mokulele Highway consists of one through lane in each direction with no storage lanes at this intersection. The Access Road is Stop Sign controlled for vehicles entering onto the highway (see photos ▼).





EXISTING ROADWAY LANEAGE

Figure 5.1

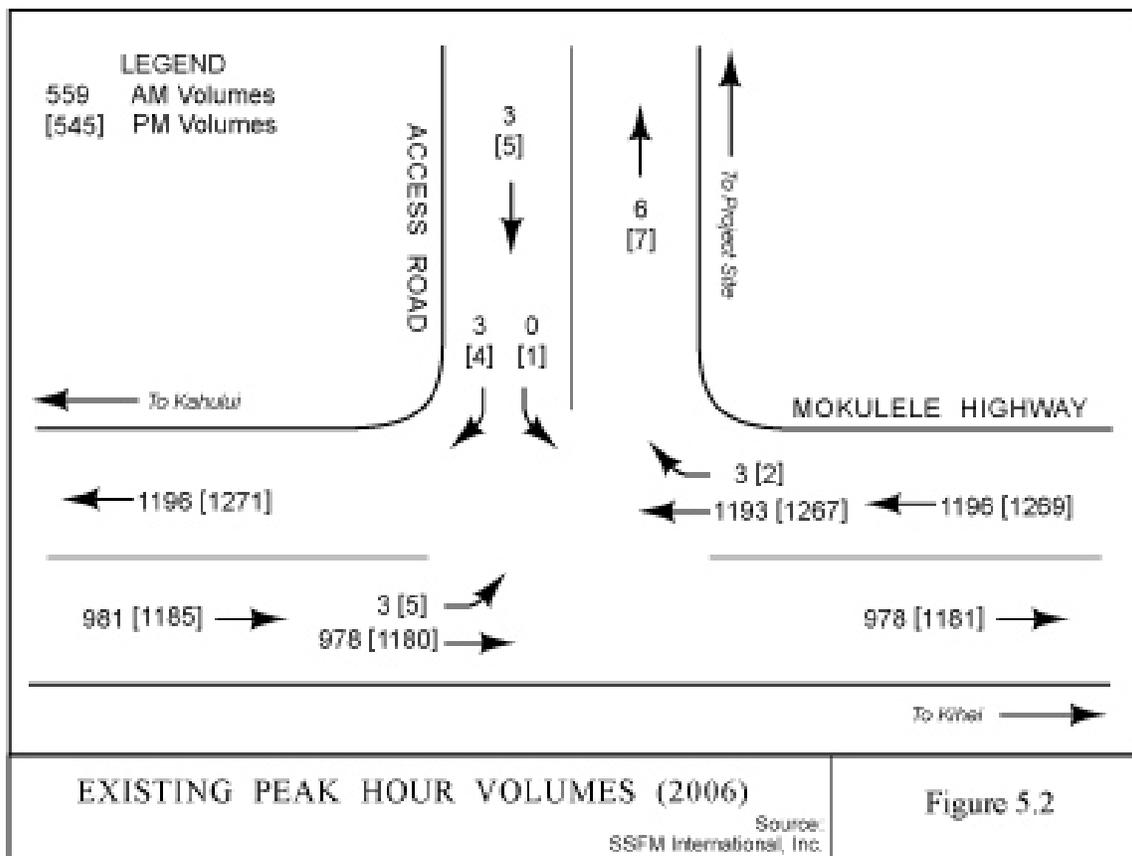
Existing Traffic Volumes

Historical State DOT traffic count data along Mokulele Highway for the following traffic count stations were obtained and reviewed.

1. Station No. 8-A - Mokulele Highway with Pu'unēnē Avenue; and
2. Station No. 13-D - Mokulele Highway with Pi'ilani Highway.

Manual traffic counts were subsequently taken for the study intersection of Mokulele Highway with the Access Road on Thursday, March 9, 2006 during the morning peak commuter period from 6:30 to 8:30 a.m., and during the afternoon peak commuter period from 3:00 to 5:00 p.m. Traffic volume data at the intersections were manually collected using electronic traffic data collectors.

The counts indicated that the morning peak hour occurred from 7:00 to 8:00 a.m., and the afternoon peak hour occurred from 3:30 to 4:30 p.m. Figure 5.2 shows the resulting peak hour traffic volumes by turning movements for both the morning and afternoon peak hours. These traffic volumes were used as the baseline conditions upon which future estimated traffic volumes were added.



5.5.2 Future Traffic Conditions

Future traffic conditions in the year 2009 were forecast for both without project and with project conditions. A discussion of the resulting future conditions developed is provided.

Future Mokulele Highway Widening

The State DOT planned to start construction in the Summer of 2006 to widen another section of Mokulele Highway starting from the north end of Mehameha Loop up to an area south of the southern end of Mehameha Loop. This section will be similarly widened to four lanes with a grassed median, and is expected to be completed in 2008. The following improvements are also planned to this highway's intersection with the Access Road into the Pu'unēnē Airport area:

1. Mehameha Loop (South) will be realigned across of the Access Road creating a new four-way intersection.
2. Provide left-turn storage lanes for both northbound and southbound vehicles of about 560 feet plus taper and 600 feet plus taper, respectively
3. Provide a right-turn deceleration lane of about 430 feet for northbound vehicles.
4. The Access Road right-of-way at this intersection will be wide enough to provide separate left and right-turn lanes for westbound approaching vehicles.
5. Provide the infrastructure to accommodate a future traffic signal planned at this intersection.

The State DOT's planned widening of this highway will result in improvements to the study intersection resulting in a new four-way intersection with the realigned Mehameha Loop (South) and other improvements as previously identified. This new intersection was presumed to remain unsignalized within the 2009 study year for this project.

Background Traffic Growth Along Highway

Background traffic volumes are the result of regional growth that cannot be attributed to a specific project or related projects in the vicinity of a project site. In this case, background traffic refers to "through" traffic traveling along Mokulele Highway with no specific origin or destination near the project site. Based upon the State DOT historical traffic count data, traffic volumes along this highway between Pu'unēnē Avenue and Pi'ilani Highway increased an average of less than 3.5 percent a year over a 12 year period (1991 to 2003).

There are no other known major developments planned to be completed and operational in the immediate vicinity of the project site within the 2009 study timeframe. Consultation with the County indicated there are no plans for other major changes to County property within the Pu'unēnē Airport area. Consultation was also conducted with the State Public Safety Division regarding plans for a future correctional center in Pu'unēnē. They indicated there are no development plans established for this prison at this time, and don't anticipate anything in the near future.

Future Traffic With Project

Future traffic generated from the project was forecast by adding the project generated traffic to the forecasted traffic without the project. The standard three-step procedure of trip generation, trip distribution, and traffic assignment was used to estimate peak hour traffic volumes for the project.

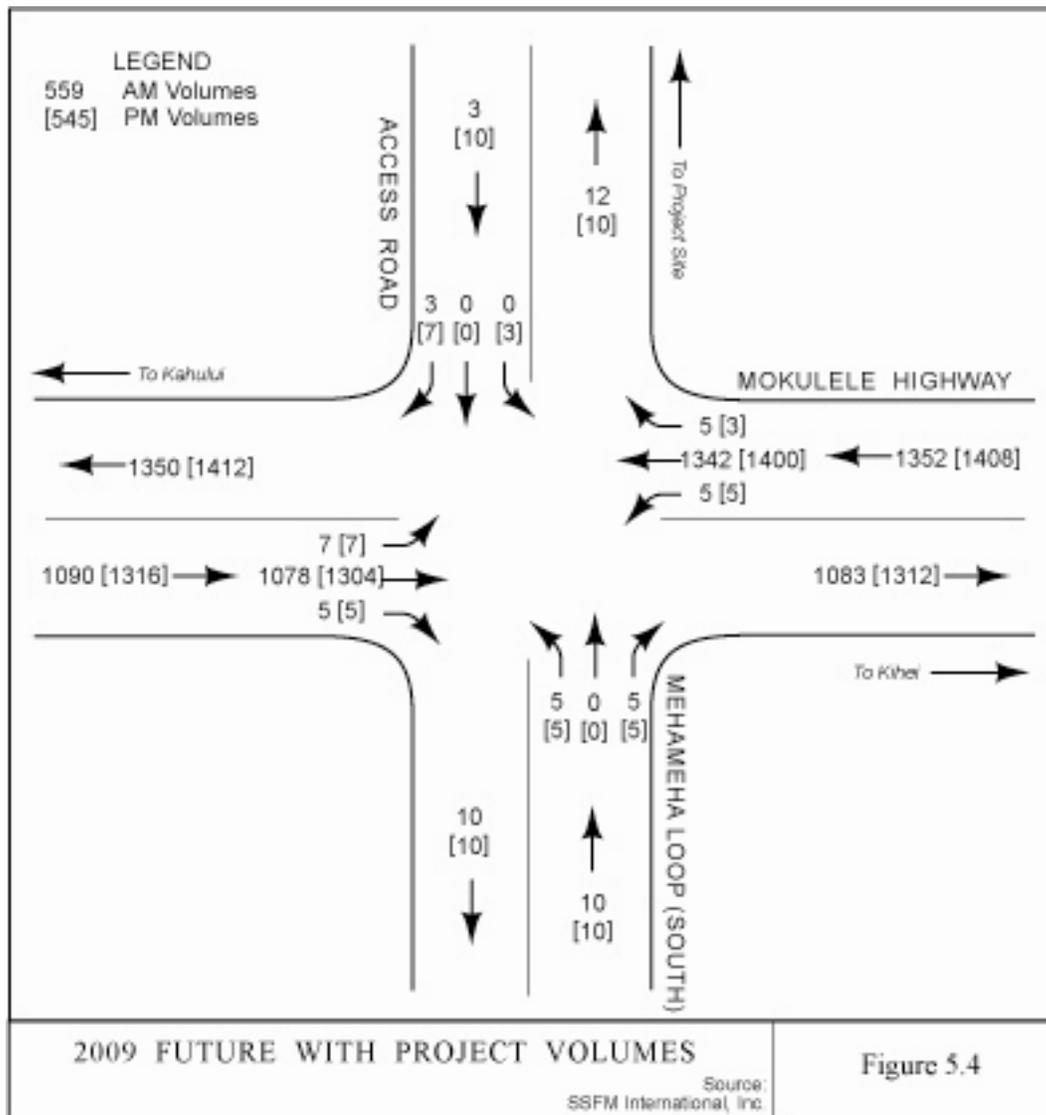
Trip generation rate data from the ITE published *Trip Generation Handbook*¹ for this type of project was very limited. Data from the General Heavy Industrial (Land Use Code 120) and Manufacturing (Land Use Code 140) using projected employees for the project (6 staff) would generate minimal trips during both morning and afternoon peak hours. As a result, the following other factors were considered to more conservatively (higher) estimate the projected trips which are provided in Table 5.1.

1. The facility would open from 8:00 a.m. Therefore, only employee generated trips (going to work) would likely occur during the morning peak hour (7:00 – 8:00 a.m.) since deliveries would occur after the peak hour.
2. The facility would close at 4:30 p.m. Therefore, the majority of employee generated trips (returning home) would likely occur after the afternoon peak hour (3:30 – 4:30 p.m.).
3. Since the facility closes at 4:30 p.m., deliveries during the afternoon peak hour would be limited since there wouldn't be sufficient time to process many within the last hour of daily operation.

Table 5.1. Trip Generation Summary for Proposed Project							
Land Use Description	Parameter	Morning Peak Hour			Afternoon Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation							
1. Employees (6 staff)	Employees	6	0	6	0	2	2
2. Abandoned Vehicles & White Goods	Est. Deliveries	0	0	0	3	3	6
Total Project Trips Generated		6	0	6	3	5	8

The projected trips generated by this project were then distributed to their predicted origins and destinations. Vehicle trips were then assigned to the specific routes on the roadway network by probable approach and departure routes. The distribution of project generated traffic was estimated based upon review of population data for the County of Maui. This data showed that about 65 percent of the population would travel to and from north (Kahului, Wailuku, etc.) of the project site with the remaining 35 percent traveling from the south (Kihei, Lahaina, etc.). The resulting traffic volumes at the study intersection including project generated trips are shown on Figure 5.4.

¹ Institute of Transportation Engineers, *Trip Generation Handbook*, 7th Edition, Washington, D.C., 2003.



5.5.3 Analysis Results

The procedures outlined in the Highway Capacity Manual (Transportation Research Board 2000), or HCM, were used to analyze and evaluate the operating condition of the study intersection. The Level-of-Service concept was used to describe the operational conditions. “Level-of-Service” is a term that denotes any of an infinite number of combinations of traffic operating conditions that may occur on a given lane or roadway when it is subjected to various traffic volumes. Level-of-Service, or LOS, is a qualitative measure of the effect of a number of factors which include space, speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Unsignalized Intersection Analysis

The level-of-service for unsignalized intersections is based on the use of gaps in traffic on the major street by vehicles crossing through or turning onto that stream. Specifically, the capacity of the controlled legs of an intersection is based on two factors: 1) the distribution of gaps in the major street traffic stream, and 2) driver judgment in selecting gaps through which to execute a desired maneuver. The criteria for the LOS at an unsignalized intersection are therefore based on delay of each turning movement.

There are six levels-of-service, A through F, that relate to the driving conditions from best to worst, respectively. The characteristics of traffic operations for each level-of-service are summarized below. In general, LOS “A” represents free-flow conditions with no congestion. LOS “F”, on the other hand, represents severe congestion with stop-and-go conditions.

Level of Service Criteria for Unsignalized Intersections

<u>LOS</u>	<u>Description of Estimated Delay to Street Traffic</u>	<u>Average Delay at Unsignalized Intersection (seconds)</u>
A	Little or no delay	(≤10 seconds)
B	Short traffic delays	(>10 and ≤15 seconds)
C	Average traffic delays	(>15 and ≤25 seconds)
D	Long traffic delays	(>25 and ≤35 seconds)
E	Very long traffic delays	(>35 and ≤50 seconds)
F	Demand volumes exceeds capacity resulting in extremely delays with queuing that may cause severe congestion and affect other movements at the intersection.	(>50 seconds)

Analysis Results For Existing Conditions

The results of the unsignalized intersection analysis of existing conditions for the study intersection are shown on Table 5.2. During the morning peak hour, the study intersection generally operates as acceptable levels-of-service with LOS C or better. Left-turns from Mokulele Highway experience little delays (LOS A). During the afternoon peak hour, left-turns from the highway also operate with little delays. Vehicles exiting from the Access Road experience long delays (LOS F) primarily for those trying to make a left-turn onto the highway. A vehicle turning right onto the highway experiences less delay since there is sufficient space for right-turns at this intersection without having to wait for left-turn movements to clear.

Analysis Results Without The Project

Without the project in the year 2009, changes to this intersection will occur from the widening of Mokulele Highway to four lanes and adding a fourth leg for Mehamehe Loop (South). The main increases in traffic will be associated with through traffic along the highway. The analysis results are shown on Table 5.3.

Intersection and Movement (Mokulele Highway with Access Road)	2006 Morning Peak Hour		2006 Afternoon Peak Hour	
	AVD ¹	LOS ²	AVD ¹	LOS ²
<u>Mokulele Highway</u>				
Southbound Left-Turn (To Kihei)	0.2	A A	0.6	A A
<u>Access Road</u>				
Westbound Shared Left & Right-Turn	24.0	C C	55.2	F F
NOTES: (1) Delay is average vehicle delay per vehicle in seconds. (2) LOS shown for Lane and for overall Approach				

Intersection and Movement	2009 Without Project		2009 With Project	
	AVD ¹	LOS ²	AVD	LOS
<i>Morning Peak Hour</i>				
<u>Mokulele Highway</u>				
Northbound Left-Turn (To Mehamaha Loop)	11.1	B	11.1	B
Southbound Left-Turn (To Access Road)	12.9	B	13.0	B
<u>Access Road</u>				
Westbound Left & Through (To Kihei)	0.00	A C	0.00	A C
Westbound Right-Turn (To Kahului)	15.1	C	15.1	C
<u>Mehameha Loop (South)</u>				
Eastbound Left/Through/Right	62.3	F	63.7	F
<i>Afternoon Peak Hour</i>				
<u>Mokulele Highway</u>				
Northbound Left-Turn (To Mehamaha Loop)	12.6	B	12.6	B
Southbound Left-Turn (To Access Road)	13.3	B	13.4	B
<u>Access Road</u>				
Westbound Left & Through (To Kihei)	>100.0	F E	>100.0	F F
Westbound Right-Turn (To Kahului)	15.6	C	15.7	C
<u>Mehameha Loop (South)</u>				
Eastbound Left/Through/Right	>100.0	F	>100.0	F
NOTES: (1) AVD - Average vehicle delay in seconds. (2) LOS denotes Level-of-Service calculated using the operations method described in Highway Capacity Manual.				

As shown on Table 5.3, left-turn movements from Mokulele Highway would operate with only slight delays (LOS B) during both peak hours. Vehicles making left-turns from both Mehamaha Loop and the Access Road onto the highway would experience long delays contributing to the LOS F. Right-turns from both roadways should experience significantly less delays since they wouldn't have wait for the left-turns to clear.

Analysis Results With The Project

With the project in the year 2009, there would be minimal changes to the projected operating conditions at the intersection of Mokulele Highway with Access Road/Mehameha Loop as compared with conditions without the project. This is attributable to the low number of project generated trips being added to this intersection. Table 5.3 also shows the resulting analysis results. As shown, there is generally no change to the levels-of-service. The only change is during the afternoon peak hour where the Access Road approach would be LOS F due to the increased delays from left-turns.

Conclusions

The project is expected to have minimal impact to the intersection of the improved Mokulele Highway with the Access Road / Mehameha Loop (South). This is attributable to the low number of project generated trips being added to the roadway network during the commuter peak hours. Highway improvements being constructed for this intersection include widening the highway to provide two through lanes in each direction, plus left-turn storage lanes, and a right-turn deceleration lane into the Access Road. As a result, these improvements will improve through traffic flow along the highway and minimize delays at this intersection.

The only significant delays will be for cars making left-turns entering onto the highway from both the Access Road and Mehameha Loop (South). However, that condition exists even without the proposed project. Vehicles making right-turns from these roadways would experience fewer delays due to the low number of them turning, and because the Access Road will be channelized to allow these movements to proceed without waiting for left-turn movements to clear. Signalization of this intersection is thus not warranted due to the low number of approach vehicles from these minor streets.

CHAPTER 6

PUBLIC FACILITIES AND UTILITIES

This chapter addresses the probable impact on public facilities and utilities in the project area resulting from the Abandoned Vehicle, Scrap Metal, and White Goods Facility Project.

6.1 ELECTRICAL AND COMMUNICATION FACILITIES

Maui Electric Company maintains an overhead distribution line along Mokulele Highway. The electrical service to the facility will be supplied by Maui Electric Company through an extension of the existing line currently servicing the Hawaii Army National Guard's facility. Electrical services for the proposed project will be coordinated with Maui Electric Company.

Hawaiian Telcom maintains an above-ground telephone line along Mokulele Highway. Telephone service to the site will be provided through an extension of the existing line from the Hawaii Army National Guard's facility to the project site.

6.2 RECREATIONAL FACILITIES

There are numerous recreational facilities within the Kīhei area. Silversword Golf Course, Kalama Park, Kama'ole Beach Park, and numerous other beach parks are located along the Kīhei coastline. Shoreline recreation includes swimming, fishing, picnicking, snorkeling, and windsurfing (Munekiyo & Hiraga, Inc., Hawaii National Guard Pu'unēnē Armory 2001). In addition, the Wailea-Mākena resort areas located to the south of the project site offers additional recreational activities. Motorized sports recreational facilities within the vicinity of the project site include the Maui Motor cross Track, Kart Racing and Nelson Boteiho Jr., Memorial R/C Flying Field.

The construction related activities of the proposed project are not expected to have an impact on the existing recreational facilities in the immediate area. Most of the recreational facilities are located a considerable distance away from the project site which is surrounded by undeveloped land. Thus, potential disturbances from construction noise, fugitive dust emissions, and construction traffic should not negatively affect activities at recreational facilities.

The proposed project is not considered to be a population generator. As a result, additional demand on existing recreations facilities is not anticipated.

6.3 MEDICAL FACILITIES

Maui Memorial Medical Center, located approximately four miles northwest of the proposed project site, is the only major medical facility on the island of Maui. The facility is licensed for 194 beds, and provides acute, general, and emergency care for all Maui residents and visitors. Medical/dental offices are located in the Kīhei area to service the residents in the area. No other existing medical facilities are located within the vicinity of the project site.

It is not anticipated that the proposed project will have an impact on the service capabilities of Maui Memorial Medical Center. The proposed project is not expected to affect the Center's ability to provide medical services for island residents and the general public.

6.4 EDUCATIONAL FACILITIES

The State of Hawai'i Department of Education operates three (3) schools in the Kīhei area. Kīhei Elementary School and Kamali'i Elementary School both cover grades K to 5, while Lokelani Intermediate School includes grades 6 to 8. Public school students in grades 9 through 12 attend Baldwin High School, located in Wailuku.

The proposed project is not expected to affect student enrollment at these facilities, and therefore will not hinder the educational services provided to residents in the area.

6.5 POLICE PROTECTION

The County of Maui Police Department Headquarters is located in Wailuku, approximately 5.5 miles northwest of the project site. The Kīhei substation is located in the Kīhei Town Center, approximately 5.5 miles southeast of the project site (MHI, 2001). There are currently no existing police facilities within the vicinity of the project site.

The proposed project will have no impact on the service capabilities of the Maui County Police Department. The project is not expected to affect the Department's ability to continue providing law enforcement and protective services for area residents and the general public.

6.6 FIRE PROTECTION

Fire protection services are provided by the Maui County Fire Department. The Kīhei substation is located on South Kīhei Road, approximately 5.5 miles southeast of the project site. The Kahului substation is located on Dairy Road, approximately five miles north of the project site (MHI, 2001). There are currently no existing fire protection facilities within the vicinity of the project site.

The proposed project will have no impact on the service capabilities of the Maui County Fire Department. The project is not expected to affect the Department's ability to continue providing fire protection services for area residents and the general public. The proposed project will be designed to meet fire code requirements, and building permit application plans submitted to the County will be reviewed by the Fire Department.

CHAPTER 7 CONFORMANCE WITH PLANS AND POLICIES

This chapter discusses the project's conformance with the State Land Use District regulations, State Environmental Policy, and the County's General Plan goals and policies, and Zoning District Standards.

7.1 STATE LAND USE DISTRICT

Pursuant to Chapter 205, Hawaii Revised Statutes, all lands in the State have been placed into one of four land use districts by the State Land Use Commission. These land use districts have been designated Urban, Rural, Agricultural, and Conservation. The boundaries of these districts are shown on maps referred to as State Land Use District Boundary Maps.

The project site is located within the State's Agricultural District, as previously shown on Figure 1.2. The proposed facility will thus require reclassification of the project site from the Agricultural District to the Urban District.

State Urban District

Permitted uses within the State Land Use District are prescribed under Title 13, Chapter 205 (Land Use Commission), HRS, and the State Land Use Commission's Administrative Rules prescribed under Title 15, Subtitle 3, Chapter 15, Hawai'i Administrative Rules. Land uses within Urban Districts are governed by the ordinances or regulations of the county within which the urban district is situated.

The proposed reclassification of the subject property will be in conformance with the following standards of the "Urban" District set forth in Chapter 15-15-18, Hawaii Administrative Rules:

HAR Chapter 15-15-18

1. *It shall include lands characterized by "city-like" concentrations of people, structures, streets, urban level of services and other related land uses.*

The proposed project will be located in close proximity to the Hawaii Army National Guard's Pu'unēnē Armory, the Maui Humane Society and Hawaiian Cement, amidst Project District 10, a 561-acre area adjacent to Mokulele Highway, which was established to provide for future recreational needs and industrial activities, including government facilities, thus accommodating for urban growth.

2. *It shall take into consideration the following specific factors:*
 - A. *Proximity to centers of trading and employment except where the development would generate new centers of trading and employment.*

The proposed project site is located approximately 5.0 miles from Kahului, the island's center of trade and employment. The Kīhei Gateway light industrial complex is located approximately 3.0 miles to the south of the project site. The parcel's generally equidistant location between these major centers of employment and trade provides for an ideal location for the establishment of the proposed facility.

B. Availability of basic services such as schools, parks, wastewater systems, solid waste disposal, drainage, water, transportation systems, public utilities, and police and fire protection.

The area proposed for reclassification is located in close proximity to Mokulele Highway, a major State arterial highway facility. Drainage mitigation will be accommodated onsite while limited wastewater and water needs will be satisfied by the contractor. The Kahului Fire Station is located approximately 5.0 miles to the north while the Kīhei Fire Station is located about 4.0 miles to the south. Police services are provided by the Maui Police Department which is headquartered in Wailuku approximately 7.0 miles from the project site. The Kīhei Substation is located along South Kīhei Road, next to Kalama Park, about 4.0 miles from the project site. The proposed action is designed to address a solid waste management need.

C. Sufficient reserve areas for foreseeable urban growth.

The area proposed for reclassification is intended to be fully integrated with other elements of Project District 10. Project District 10 encompasses 561 acres and is intended to meet future recreational and industrial needs. Project District 10 provides for sufficient additional capacity for these uses.

- 3. *It shall include lands with satisfactory topography, drainage, and reasonably free from the danger of any flood, tsunami, unstable soil condition, and other adverse environmental effects.***

The project site is located in Zone C, an area of minimal flooding. The project site is not subject to tsunami inundation, nor is it characterized by unstable soil conditions. As part of a former airfield facility, the project site is topographically flat.

- 4. *Land contiguous with existing urban areas shall be given more consideration than non-contiguous land, and particularly when indicated for future urban use on state or county general plans.***

The parcel is removed from residential locales. Although the proposed development will not be contiguous with other urban areas, it is located in an area intended for future urban use, specifically outdoor recreational and industrial use, as stipulated by the Project District 10 designation in the Kīhei-Mākena Community Plan.

5. ***It shall include lands in appropriate locations for new urban concentrations and shall give consideration to areas of urban growth as shown on the state and county general plans***

The proposed reclassified area is intended to be fully integrated with Project District 10 and will be developed as part of the project district's updated master plan.

6. ***It may include lands which do not conform to the standards in paragraphs (1) to (5):***
- A. *When surrounded by or adjacent to existing urban development; and*
 - B. *Only when those lands represent a minor portion of this district*

Although the subject property is not contiguous with existing urban areas, the parcel lies approximately midway between the island's largest urbanized areas of Kahului and Kīhei. Further, the subject parcel is designated for future urban uses, specifically recreational and industrial use, by the Kīhei-Mākena Community Plan. The nearby, newly constructed Hawai'i Army National Guard armory is a reflection of the urban use intent.

7. ***It shall not include lands, the urbanization of which will contribute toward scattered spot urban development, necessitating unreasonable investment in public infrastructure or support services.***

The project site is located in the midst of a 561-acre area intended for urban uses. Although comprehensive entitlements action, and detailed design and construction implementation for the surrounding Project District 10 is yet to be initiated, the subject parcel is a compatible industrial use and in the context of the larger project area, is not deemed spot zoning.

8. ***It may include lands with a general slope of twenty percent or more if the commission finds that those lands are desirable and suitable for urban purposes and that the design and construction controls, as adopted by any federal, state or county agency, are adequate to protect the public health, welfare and safety, and the public's interest in the aesthetic quality of the landscape.***

The subject parcel has a slope of less than 20 percent.

Additional considerations for the granting of a district boundary amendment are set forth in Chapter 20-5-17, Hawai'i Revised Statutes, as discussed below:

HRS Chapter 20-5-17

1. ***The extent to which the proposed reclassification conforms to the applicable goals, objectives, and policies of the Hawaii state plan and relates to the applicable priority guidelines of the Hawaii state plan and adopted functional plans.***

Compliance with Chapter 226, HRS, Hawai‘i State Plan is addressed in a subsequent section of this Chapter.

2. *The extent to which the proposed reclassification conforms to the applicable district standards.*

The proposed reclassification conforms to “Urban” District standards as identified in Chapter 205-2 and is consistent with the Maui County General Plan.

3. *The impact of the proposed reclassification on the following areas of state concern:*

- A. *Preservation or maintenance of important natural systems or habitats.*
- B. *Maintenance of valued cultural, historical, or natural resources.*
- C. *Maintenance of other natural resources relevant to Hawai‘i’s economy, including, but not limited to, agricultural resources.*
- D. *Commitment of State funds and resources.*

There are no important natural systems or habitats within the proposed reclassification areas. The project area is currently not in use for agricultural production. Moreover, the project area is located amidst Project District 10, an area established to provide for future recreational needs and industrial activities, including government facilities, thus accommodating for urban growth. The proposed project function will be consistent with such use. The proposed reclassification will not require commitment of State funds or resources.

4. *Provision for employment opportunities and economic development.*

The implementation of the proposed land use in the project area will provide new employment opportunities for Maui residents.

5. *Provision for housing opportunities for all income groups, particularly the low, low-moderate, and gap groups.*

Because the proposed project will occur within Project District 10, an area established to provide for future recreational needs and industrial activities, including government facilities, there will be no provision of housing opportunities.

HRS Chapter 226 (Hawai‘i State Plan)

Chapter 226, HRS, also known as the Hawai‘i State Plan, is a long-range comprehensive plan which serves as a guide for the future long-range development of the State by identifying goals, objectives, policies, and priorities, as well as implementation mechanisms. The proposed action is consistent with the following goals of the Hawai‘i State Plan.

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

- A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.
- Physical, social, and economic well-being, for individuals and families in Hawai‘i, that nourishes a sense of community responsibility, of caring, and of participation in community life.

The proposed reclassification is consistent with the following objectives and policies of the Hawai‘i State Plan:

1. Objectives and Policies for Population

(a) *It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic, and social objectives contained in this chapter.*

(b) *Policies*

2. *Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.*
3. *Promote increased opportunities for Hawai‘i's people to pursue their socio-economic aspirations throughout the islands.*

2. Objectives and Policies for the Physical Environment - Land-Based, Shoreline, and Marine Resources.

(a) *Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:*

2. *Effective protection of Hawai‘i's unique and fragile environmental resources.*

(b) *Policies*

3. *Take into account the physical attributes of areas when planning and designing activities and facilities.*
8. *Pursue compatible relationships among activities, facilities, and natural resources.*

3. Objective and Policies for Facility Systems–In General

(a) *Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.*

(b) *Policies*

1. *Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.*
2. *Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.*
3. *Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.*

4. Objectives and Policies for Facility Systems—Solid and Liquid Wastes

- (a) *Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:*
 1. *Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.*
- (b) *Policies*
 2. *Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.*

5. Priority Guidelines of the Hawai'i State Plan

The proposed action coincides with the following priority guidelines of the Hawai'i State Plan.

- (a) *Economic Priority Guidelines:*
 1. *Seek a variety of means to increase the availability of investment capital for new and expanding enterprises. Encourage investments which:*
 - (i) *Reflect long term commitments to the State;*
 - (ii) *Rely on economic linkages within the local economy;*
 - (iii) *Diversify the economy;*
 - (iv) *Reinvest in the local economy;*
 - (v) *Are sensitive to community needs and priorities; and*
 - (vi) *Demonstrate a commitment to management opportunities to Hawaii residents.*
- (b) *Growth and Land Resources Priority Guidelines:*
 1. *Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.*
 2. *Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.*

3. *Make available marginal or non-essential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.*
4. *Utilize Hawai‘i’s limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline conservation lands, and other limited resources for future generations.*

7.2 CHAPTER 344, STATE ENVIRONMENTAL POLICY

This section discusses the project’s conformance and consistency with the pertinent goals, policies, and guidelines described under Chapter 344, HRS, State Environmental Policy.

Environmental Policy

1. *Conserve the natural resources, so that land, water, mineral, visual, air and other natural resources are protected by controlling pollution, by preserving or augmenting natural resources, and by safeguarding the State’s unique natural environmental characteristics in a manner which will foster and promote the general welfare, create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the people of Hawai‘i.*

The project would be consistent with this environmental policy as it will conserve important natural resources of Maui, including visual and scenic resources. This project would not have an adverse impact on natural resources or the environment as discussed in the various sections of this document.

Design of this project will protect and safeguard the unique natural environment and characteristics associated with this project area. The new facility would meet all applicable State and County building requirements and regulations to protect the environment. Best management practices would be implemented during construction to minimize runoff and other short-term impacts such as fugitive dust and noise. Therefore, this project will conserve natural resources such as open space lands, and is not anticipated to impact the shoreline and the ocean waters beyond.

2. *Enhance the quality of life by:*
 - A. *Setting population limits so that the interaction between the natural and manmade environments and the population is mutually beneficial.*
 - B. *Creating opportunities for the residents of Hawai‘i to improve their quality of life through diverse economic activities which are stable and in balance with the physical and social environments.*

- C. Establishing communities which provide a sense of identity, wise use of land, efficient transportation, and aesthetic and social satisfaction in harmony with the natural environment which is uniquely Hawaiian.*
- D. Establishing a commitment on the part of each person to protect and enhance Hawai‘i’s environment and reduce the drain on nonrenewable resources.*

This project would be consistent with these environmental polices regarding the quality of life. The new facility would not affect the existing or future resident population in Pu‘unēnē or the establishment of new communities. The proposed building does not involve any new homes or visitor units, and short-term construction jobs are expected to be filled by Hawai‘i residents not resulting in any in-migration. Construction of this project would create additional short-term construction related jobs for island residents involved in the industry and generate indirect benefits to other businesses.

Guidelines

1. Population

- A. Recognize population impact as a major factor in environmental degradation and adopt guidelines to alleviate this impact and minimize future degradation.*
- B. Recognize optimum population levels for counties and districts within the State, keeping in mind that these will change with technology and circumstance, and adopt guidelines to limit population to the levels determined.*

The project would not affect the existing or future resident population in Pu‘unēnē or cause the establishment of new communities. The proposed project does not involve any new homes or visitor units, and short-term construction jobs are expected to be filled by Hawai‘i residents not resulting in any in-migration.

2. Land, water, mineral, visual, air, and other natural resources

- A. Encourage management practices which conserve and protect watersheds and water sources, forest, and open space areas.*
- B. Establish and maintain natural area preserves, wildlife preserves, forest preserves, marine preserves, and unique ecological preserves.*
- C. Promote the optimal use of solid wastes through programs of waste prevention, energy resource recovery, and recycling so that all our wastes become utilized.*

This project would be consistent with these guidelines because the improvements would not impact those natural resources identified such as watersheds, forest preserves, wildlife preserves, or unique ecological preserves. The project would not impact an area that is valuable as important open space since the project site is a vacant area. Appropriate measures would be incorporated into the project’s design to minimize erosion and address appropriate drainage requirements. The project is one that intends to

mitigate misuse of solid waste by establishing a building to remove tires, fluids, batteries, and mercury switches properly. There will also be an automobile baler to crush cars into dense shapes that will enable efficient shipping.

3. *Economic development*

- A. *Encourage industries in Hawai'i which would be in harmony with our environment.*
- B. *Encourage all industries including the fishing, aquaculture, oceanography, recreation, and forest products industries to protect the environment.*

The project would be consistent with these guidelines as development of the new facility will preserve the environment by alleviating the amount of derelict and abandoned cars left on the side of the road and highway. Derelict and abandoned vehicles can sometimes leak hazardous materials. Therefore, by providing a facility for individuals to turn in their abandoned or derelict vehicles, protection of the environment is perpetuated.

4. *Transportation*

- A. *Adopt guidelines to alleviate environmental degradation caused by motor vehicles.*

Since the intent of this project is to alleviate the amount of derelict and abandoned vehicles left on the side of the road, it is inherent that the project is consistent with the above guidelines.

5. *Citizen participation*

- A. *Encourage all individuals in the State to adopt a moral ethic to respect the natural environment; to reduce waste and excessive consumption; and to fulfill the responsibility as trustees of the environment for the present and succeeding generations.*
- B. *Provide for expanding citizen participation in the decision making process so it continually embraces more citizens and more issues.*

The environmental review process allows for public and government agency input to express concerns and comments associated with the project. Such opportunities include pre-assessment consultation efforts and the availability of the Draft EA for public review. Thus, the public consultation process incorporated within this environmental review process provides the general public and decision-makers with a diverse array of information to consider in evaluating this project.

7.3 COUNTY OF MAUI GENERAL PLAN

This section discusses the project's conformance with pertinent policies from the County of Maui's *General Plan* which was adopted under Ordinance No. 1052 and became effective on June 24, 1980. The 1990 update of the Maui County General Plan establishes broad objectives and policies to guide the long-range development of the County. As indicated by the Maui County Charter, the purpose of the *General Plan* shall be to:

"... indicate desired population and physical development patterns for each island within the county; shall address the unique problems and needs of each island and region within the county; shall explain the opportunities and the social, economic, and environmental consequences related to potential developments; and shall set forth the desired sequence, patterns, and characteristics of future developments. The general plan shall identify objectives to be achieved, and priorities, policies and implementing actions to be pursued with respect to population density, land use maps, land use regulations, transportation systems, public and community facility locations, water and sewage systems, visitor destinations, urban design, and other matters related to development."

The Maui County General Plan emphasizes five (5) major themes that focus on the overall goals of the plan. The proposed project relates to the following General Plan themes:

Theme Number 2

Prepare a Directed and Managed Growth Plan

- Amendments to the General Plan will preserve a desired quality of life where areas of urban settlement must be managed and directed within a framework that consistently and concurrently balances growth demands against human service needs and physical infrastructure supply.

Theme Number 4

Maintain a Viable Economy that Offers Diverse Employment Opportunities for Residents

- Amendments to the General Plan recognize the need to maintain a healthy economy and broaden our economic base so that we are not so dependent on tourism.

The proposed action is consistent with the following General Plan objectives relating to land use, public utilities and facilities and government.

Consistency with Applicable Policies and Implementing Actions

Land Use

1. Objective:

- (a) To preserve for present and future generations existing geographic, cultural and traditional community lifestyles by limiting and managing growth*

through environmentally sensitive and effective use of land in accordance with the individual character of the various communities and regions of the County.

2. *Policy:*
 - (a) *Provide and maintain a range of land use districts sufficient to meet the social, physical, environmental and economic needs of the community.*

Public Utilities and Facilities

1. *Objective:*
 - (a) *To improve the quality and availability of public facilities throughout Maui County.*
2. *Policy*
 - (a) *Seek improvement in the maintenance and operation of public facilities.*

Government

1. *Objective:*
 - (a) *Improve the delivery of services by government agencies to all community plan areas.*
2. *Policy:*
 - (e) *Insure that necessary services not provided by the private sector are made available by government.*

7.4 KĪHEI-MĀKENA COMMUNITY PLAN

The project site is located within the Kīhei-Mākena Community Plan region, one (1) of nine (9) community plan regions established in the County of Maui. Planning for each region is guided by the respective community plans, which are designed to implement the Maui County General Plan. Each community plan contains recommendations and standards which guide the sequencing, patterns and characteristics of future development in the region.

The Kīhei-Mākena Community Plan was adopted by the County of Maui through Ordinance No. 1490 which took effect in 1985, and updated in 1997. The subject property is situated within an area designated as Project District 10. The Kīhei-Mākena Community Plan describes the permitted uses within Project District 10 in the following terms:

The objective of this project district is to establish a master planned recreational and industrial expansion area to meet future recreational needs and to provide areas for industrial activities, including government facilities, whose locations are better suited away from urban areas.

Although the subject property lies within the community plan-designated area of Project District 10, a Community Plan Amendment is being sought to establish the “Heavy Industrial” land use designation for the abandoned vehicle site. The “Heavy Industrial” land use designation will allow for the abandoned vehicle facility, consistent with the overall objective of Project District 10.

Project District 10 zoning has not yet been established for the 561-acre area and, therefore, Project District zoning standards (Phase I approval) are not in place to enable timely development of the property for the abandoned vehicle facility. In the future, when comprehensive entitlements are sought for Project District 10, the County of Maui will have the option of incorporating the subject property as a part of the Project District.

The proposed action is consistent with the following goals, objectives, and policies of the Kīhei-Mākena Community Plan.

Goal (Physical and Social Infrastructure):

Provision of facility systems, public services and capital improvement projects in an efficient, reliable, cost effective, and environmentally sensitive manner which accommodates the needs of the Kīhei-Mākena community, and fully support present and planned land uses, especially in the case of project district implementation.

Allow no development for which infrastructure may not be available concurrent with the development's impacts.

Objectives and Policies:

- b. Provide efficient, safe and environmentally sound systems for the reuse, recycling, and disposal of liquid and solid wastes.*
- c. Encourage public awareness of the need to reduce, reuse, recycle and compost waste materials, and make composting facilities available to the public.*

Goal (Government):

Efficient, effective and responsive government services in the Kīhei-Mākena region.

Objectives and Policies:

- a. Improve the delivery of services by government agencies to the Kīhei-Mākena region.*

7.5 COUNTY ZONING DISTRICT

As discussed previously, a Community Plan Amendment for the subject parcel is being sought to establish the “Heavy Industrial” land use designation for the property. Along with the Community Plan Amendment, a change in zoning application is being filed to establish “M-2, Heavy Industrial” zoning. Such zoning designation will be required to enable the proposed land use.

7.6 COASTAL ZONE MANAGEMENT OBJECTIVES AND POLICIES

Pursuant to Chapter 205A, Hawaii Revised Statutes, projects should be evaluated with respect to Coastal Zone Management (CZM) objectives, policies and guidelines. The subject property is not located within the County of Maui's Special Management Area, however, the applicability of coastal zone management considerations have been reviewed and assessed.

1. Recreational Resources

(a) Objective:

- 1. Provide coastal recreational opportunities accessible to the public.*

(b) Policies:

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

The project site is located inland, miles away from the coastline. As such, there should be no impact on coastal recreational opportunities or adverse effect on existing public access to the shoreline.

2. *Historic resources*

(a) *Objective:*

1. *Protect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.*

(b) *Policies:*

1. *Identify and analyze significant archeological resources;*
2. *Maximize information retention through preservation of remains and artifacts or salvage operations; and*
3. *Support state goals for protection, restoration, interpretation, and display of historic resources.*

The archaeological inventory survey of the project site found no archaeological sites, human burials, or subsurface deposits within the project site. One previously recorded historic property (Feature BB) was identified and is located near the project site's northern border. This feature is proposed to have a 50-foot buffer area that will encroach into the project site. However, the project will be designed to accommodate this buffer area. No further archaeological work for the project area was recommended. Should human remains be inadvertently discovered during groundbreaking activities, work in the immediate vicinity of the find will cease and the applicant will contact the State Historic Preservation Division for appropriate mitigation, pursuant to Chapter 6E, HRS.

3. *Scenic and Open Space Resources*

(a) *Objective:*

1. *Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.*

(b) *Policies:*

1. *Identify valued scenic resources in the coastal zone management area;*
2. *Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;*
3. *Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*
4. *Encourage those developments which are not coastal dependent to locate in inland areas.*

The proposed project will be developed to ensure visual compatibility with the surrounding environments. The project is not anticipated to impact coastal or scenic, open space resources.

4. Coastal Ecosystems

(a) *Objective:*

1. *Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*

(b) *Policies:*

1. *Improve the technical basis for natural resource management;*
2. *Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*
3. *Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*
4. *Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.*

The proposed action is not expected to adversely impact coastal ecosystems. Drainage system improvements will be designed in accordance with applicable regulatory standards to ensure there is no adverse effect on downstream properties. Best Management Practices will be utilized to mitigate any potential coastal water impact associated with disposal of waste products. Appropriate erosion control measures will be implemented during project construction to minimize the effects of stormwater runoff and ensure that coastal ecosystems are not adversely impacted.

5. Economic Uses

(a) *Objective:*

1. *Provide public or private facilities and improvements important to the State's economy in suitable locations.*

(b) *Policies:*

1. *Concentrate coastal dependent development in appropriate areas;*
2. *Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and*
3. *Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:*
 - (i) *Use of presently designated locations is not feasible;*

- (ii) *Adverse environmental effects are minimized; and*
- (iii) *The development is important to the State's economy.*

The proposed project will stimulate the economy through the generation of jobs for operation of the abandoned vehicle facility, construction-related expenditures and creation of construction-related job opportunities. The project area does not abut the shoreline, nor does it affect coastal development necessary to the State's economy. The project is in keeping with the Project District land use objectives established by the Kīhei-Mākena Community Plan.

6. Coastal Hazards

(a) Objective:

1. *Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence and pollution.*

(b) Policies:

1. *Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;*
2. *Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint pollution hazards;*
3. *Ensure that developments comply with requirements of the Federal Flood Insurance Program;*
4. *Prevent coastal flooding from inland projects; and*
5. *Develop a coastal point and nonpoint source pollution control program.*

The project site falls within Zone C, an area of minimal flooding. Drainage improvements will be designed in accordance with the Drainage Standards of the County of Maui to ensure that the project will not adversely affect downstream properties from the effects to flooding and erosion. Moreover, there would be no tsunami inundation concern for the subject property.

7. Managing Development

(a) Objective:

1. *Improve the development review process, communication, and public participation in the management of coastal resources and hazards.*

(b) Policies:

1. *Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*
2. *Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements; and*
3. *Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life-cycle and in terms*

understandable to the public to facilitate public participation in the planning and review process.

The Chapter 343, HRS Environmental Assessment, Community Plan Amendment and Change in Zoning application processes involve review by governmental agencies, the Maui Planning Commission and the Maui County Council. The public is afforded the opportunity to participate in hearings on these processes. Additionally, the County of Maui intends to hold community meetings to receive feedback on the proposed project. Applicable State and County requirements will be adhered to in the design and construction of the project.

8. Public Participation

(a) Objective:

- 1. Stimulate public awareness, education, and participation in coastal management.*

(b) Policies:

- 1. Maintain a public advisory body to identify coastal management problems and to provide policy advice and assistance to the coastal zone management program;*
- 2. Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal-related issues, developments, and government activities; and*
- 3. Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.*

An opportunity for agency and public review will be provided as part of the notification review and comment process required for the Environment Assessment. Opportunities for public awareness, education and participation pertaining to significant resource attributes of the coastal zone are available through the Community Plan Amendment and Change in Zoning processes, for which public hearings will be required.

9. Beach Protection

(a) Objective:

- 1. Protect beaches for public use and recreation.*

(b) Policies:

- 1. Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;*
- 2. Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering*

solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

3. *Minimize the construction of public erosion-protection structures seaward of the shoreline.*

The proposed project is located inland, away from the shoreline and as a result, there should be no effect on beaches.

10. Marine Resources

(a) Objective:

1. *Implement the State's ocean resources management plan.*

(b) Policies:

1. *Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*
2. *Assure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*
3. *Coordinate the management of marine and coastal resources and activities management to improve effectiveness and efficiency;*
4. *Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;*
5. *Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and*
6. *Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.*

As previously stated, the project is located inland, away from the ocean and is therefore, not anticipated to have any impact on marine or coastal resources. Appropriate Best Management Practices will be utilized to ensure that construction runoff is appropriately captured, minimizing any impact on coastal waters. Once completed, site operations will be managed to ensure that oils and other petroleum fluids are retained onsite and disposed in accordance with appropriate regulatory requirements.

CHAPTER 8 CONSULTATION EFFORTS

Consultation with various government agencies has been conducted for this project as part of the process in preparing this document. Such efforts consisted of distributing solicitation letters to several agencies to obtain their input and comments on the project identifying issues which should be addressed along with the publication of the Draft EA. These consultation efforts are discussed in this Chapter, and copies of comments received are included in Appendix B of this document.

8.1 DRAFT EA PRE-ASSESSMENT CONSULTATION

Consultation with various Federal, State, and County government agencies was conducted to obtain their comments and concerns associated with the project as part of the environmental assessment process. Letters providing project information along with a location map was sent to these parties in March 2006 for their review.

A listing of agencies and organizations for which consultation letters were sent is provided below. Those providing written response are identified with a “»” symbol. Copies of their written comments received along with responses are included in Appendix B.

Federal Agencies

- » Department of Agriculture, Natural Resources Conservation Service
- » Department of the Army, U.S. Army Engineer Division, Honolulu
- Department of the Interior, Fish and Wildlife Service, Pacific Islands Region
- Department of the Interior, Water Resources Division, U.S. Geological Survey
- Department of Transportation, Federal Highways Administration

State of Hawaii Agencies

- » Department of Accounting and General Services
- Department of Agriculture
- Department of Business, Economic Development & Tourism
- » Department of Education
- Department of Hawaiian Home Lands
- Department of Health, Environmental Planning Office
- Department of Land and Natural Resources
- Department of Land and Natural Resources, State Historic Preservation Division
- » Department of Transportation
- » Dept. of Business, Economic Development & Tourism, Land Use Commission
- » Office of Hawaiian Affairs
- » Dept. of Business, Economic Development & Tourism, Office of Planning

County of Maui Agencies

- The Honorable Alan M. Arakawa, Mayor
- Department of Civil Defense
- » Department of Fire
- Department of Parks and Recreation
- » Department of Planning
- » Department of Police
- Department of Public Works and Environmental Waste Management
- » Department of Transportation
- Department of Water Supply

Maui Utility Companies

- » Maui Electric Company
- » Hawaiian Telcom, Maui
- Oceanic Time Warner Cable

Maui Community Groups

- Council Member Joseph Pontanilla, Maui County Council
- Vice-Chairman Robert Carroll, Maui County Council
- Honorable Senator Shan S. Tsutsui, 4th Senatorial District
- Honorable Senator Rosalyn H. Baker, 5th Senatorial District
- Honorable Representative Chris Halford, 11th Representative District
- Honorable Representative Bob Nakasone, 9th Representative District
- Alexander & Baldwin, Inc.
- Hawai'i State Go Karting Organization, Maui

8.2 DRAFT EA COMMENTS

The Draft EA for this Abandoned Vehicle, Scrap Metal, and White Goods Facility Project was published in the June 23, 2006 issue of the State Office of Environmental Quality Control's *The Environmental Notice*, initiating a 30-day public comment period that ended on July 24, 2006. Copies of the Draft EA were distributed to the following parties for review and comments.

Those parties that submitted comments are indicated by "»" next to them. Comment letters received from these parties along with corresponding response letters from the applicant are included in Appendix B. This Final EA has incorporated additional information in response to comments received on the Draft EA.

Federal Agencies

- » Department of Agriculture, Natural Resources Conservation Service
- » Department of Agriculture, Natural Resources Conservation Service, Maui
- Department of the Army, U.S. Army Engineer Division, Honolulu

- Department of the Interior, Fish and Wildlife Service, Pacific Islands Region
- » Department of the Interior, Water Resources Division, U.S. Geological Survey
- Department of Transportation, Federal Highways Administration

State of Hawaii Agencies

- » Department of Accounting and General Services
- Department of Agriculture
- Department of Business, Economic Development & Tourism
- Department of Defense, Hawai‘i Army National Guard
- » Dept. of Business, Economic Development & Tourism, Land Use Commission
- » Dept. of Business, Economic Development & Tourism, Office of Planning
- Department of Education
- » Department of Hawaiian Home Lands
- Department of Health
- » Department of Health, Environmental Planning Office
- » Department of Health, Maui District Health Office
- Department of Land and Natural Resources
- Department of Land and Natural Resources, State Historic Preservation Division
- » Department of Transportation
- » Office of Environmental Quality Control
- Office of Hawaiian Affairs

County of Maui Agencies

- The Honorable Alan M. Arakawa, Mayor
- Department of Civil Defense
- Department of Fire
- » Department of Parks and Recreation
- Department of Planning
- » Department of Police
- Department of Public Works and Environmental Waste Management
- » Department of Transportation
- » Department of Water Supply

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- » Maui Electric Company
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- Honorable Senator Shan S. Tsutsui, 4th Senatorial District

- Honorable Senator Rosalyn H. Baker, 5th Senatorial District
- Honorable Representative Chris Halford, 11th Representative District
- Honorable Representative Bob Nakasone, 9th Representative District
- Alexander & Baldwin, Inc.
- Hawaiian Commercial & Sugar Company
- Hawai‘i State Go Karting Organization, Maui
- Maui Stock Car Assosiation
- Maui Motocross Association
- Maui R/C Modelers (MRCM)
- » Maui SCCA (Sports Car Club of America)
- Valley Isle Timing Association

CHAPTER 9

FINDINGS AND DETERMINATION

To determine whether a proposed action may have a significant effect on the environment, the State Approving Agency needs to consider every phase of the action, the expected primary and secondary consequences, cumulative effect, and the short- and long-term effects. The Approving Agency's review and evaluation of the proposed action's effect on the environment would result in a determination either: 1) the action would have a significant effect on the environment, and an Environmental Impact Statement Preparation Notice should be issued, or 2) the action would not have a significant effect warranting a Finding of No Significant Impact (FONSI).

This section discusses the results of the assessment conducted for the proposed Abandoned Vehicle Facility Project in relation to the 13 Significance Criteria prescribed under the State Department of Health's Administrative Rules Title 11, Chapter 200. The purpose of this assessment was to consider the "significance" of potential environmental effects which includes the sum of effects on the quality of the environment along with the overall and cumulative effects. The resulting findings are discussed below for each criterion.

9.1 PRELIMINARY FINDINGS

1. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource.*

The proposed improvements would not result in the irrevocable commitment to loss or destruction of any natural or cultural resource. As discussed in Chapter 2 of this Final EA, the project is needed to provide the County with a permanent established facility in place to process abandoned and derelict vehicles, scrap metal, and white goods. This facility will not affect sensitive habitats for plants or animals and is not within natural wetlands. Thus, there would be no destruction or loss of any significant, endangered, or threatened botanical, faunal, geological, or other natural resources.

In terms of archaeological resources, there are no known significant sites within the project site that would be adversely affected. The existing military feature (now identified as Site #50-50-09-4164, Feature BB) located near the project site will have a 50-foot buffer zone around it to minimize any impacts. A portion of this buffer area will encroach into the project site. However, this buffer area will be incorporated in the project's design, and thus not impact this Site.

In the event subsurface human remains or other indications of human activity older than 50 years are encountered during construction activities, all work would stop immediately and the SHPD notified. The treatment of human remains encountered would be determined and conducted in accordance with the applicable requirements of Chapter 6E, HRS, and Chapter 13-300, Hawaii Administrative Rules.

The project would also not restrict access to surrounding areas that may be potentially used for traditional native Hawaiian cultural practices. This project would not prevent access to shoreline areas or surrounding mauka areas that may be used for traditional gathering or other cultural practices, as the project site is located within the a rural area intended for public uses. The cultural assessment conducted supports this finding that the project should not have a significant impact on cultural resources or practices.

2. *Curtails the range of beneficial uses of the environment.*

The project would not curtail the range of beneficial uses of the surrounding environment. The project site is currently undeveloped and unused by any public or private entities. Therefore, the improvements planned would not change the existing uses of such lands. Existing surrounding uses would remain unchanged as the new facility is within lands identified for PD-10 use by the Kihei-Mākena Community Plan. Thus, the proposed project will not limit or significantly impact existing uses of the surrounding environment.

3. *Conflicts with the State’s long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.*

The Abandoned Vehicle Facility project proposed would not conflict with the State’s long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS. This document addressed the probable environmental impacts associated with the project, which would be primarily associated with short-term construction activities. The project is consistent in conserving natural resources in the area, and enhancing the quality of life for residents on Maui.

4. *Substantially affects the economic or social welfare, cultural practices of the community or State.*

As discussed in Chapter 4, the project would not have any significant negative impacts on the local economy, or the social welfare of the Pu‘unēnē community or County of Maui. The project would create short-term and long-term, economic benefits by generating construction and operations jobs and personal income.

Improvements planned are limited to construction of the Abandoned Vehicle Facility buildings and facilities, necessary infrastructure such as electrical and water connections, and additional storage. All improvements will occur within the proposed property site. As a result, there should be no negative impact or change to the overall character of the community.

In terms of cultural practices, there are no known cultural resources at the project site or traditional native Hawaiian cultural practices occurring within the project area. Consequently, the proposed project is not expected to have an impact on cultural resources or traditional cultural practices.

5. *Substantially affects public health.*

The project is not expected to substantially affect public health. The proposed project would improve public health by reducing the amount of accumulated abandoned vehicles from Maui's roadways. Abandoned vehicles, scrap metal, and white goods which are improperly disposed of are safety hazards for the Maui residents and visitors, particularly hazardous for children.

6. *Involves substantial secondary impacts, such as population changes or effects on public facilities.*

The project should not have any secondary impacts on the social environment or infrastructure and public facilities. The project strictly involves only construction of a new abandoned vehicle, scrap metal, and white goods processing facility and accessory improvements. The project does not involve residential housing or visitor accommodations. Therefore, there would not be any elements of the project contributing to in-migration of residents or additional visitors to the island. The project would also not significantly impact other existing infrastructure facilities or public facilities in the immediate area due to the type of improvements being proposed as discussed in Chapter 2.

7. *Involves a substantial degradation of environmental quality.*

The proposed project would not involve a substantial degradation to the quality of the surrounding environment. Improvements are limited to construction of the new facility and accessory improvements, such as electrical and water infrastructure connections. As a result, construction activities would be performed on generally flat sloped areas (3 percent or lower) and necessary measures would be implemented during construction to minimize erosion and other short-term impacts.

8. *Is individually limited, but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.*

This project only involves the construction of the new facility and accessory infrastructure as described in Chapter 2. Impacts associated with these improvements were addressed in this document, and are mainly associated with construction activities. Thus, the cumulative impacts of these improvements were considered in assessing environmental impacts, and it was determined that the project would not have a significant effect on the environment. This project does not involve the commitment for larger actions on the proposed site or Pu'unēnē area.

9. *Substantially affects a rare, threatened, or endangered species, or its habitat.*

There are no known endangered, threatened, or rare botanical resources on the project site, or faunal and avifaunal species inhabiting the area which may be affected by construction activities or the operation of the new facility. Necessary control measures and best management practices would be implemented to minimize runoff and other potential short-term impacts associated with construction activity. Thus, the project is not expected to affect any rare, threatened, or endangered species or potential habitat for such species.

10. *Detrimentially affects air or water quality or ambient noise levels.*

The project should not have a detrimentally significant impact on air, water quality, or ambient noise levels. Impacts associated with these factors would be limited to short-term construction activities. However, such impacts are expected to be minor due to the relatively minor amount of grading and excavation proposed. To further minimize impacts, construction activities would be subject to applicable State regulations as discussed in Chapter 3.

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

The project site is not located within an environmentally sensitive area, nor is it situated within a tsunami inundation zone, or geologically hazardous area. Appropriate erosion control measures will be implemented during construction, and a discussion of potential measures is included in Chapter 3 of this document. Construction of the new facility would be done in conformance to County design standards and other agency requirements associated with this flood district.

12. *Substantially affects scenic vistas and viewplanes identified in county or state plans or studies.*

The proposed building would not affect scenic vistas or viewplanes. As discussed in Chapter 3, there are no significant scenic and open space viewing points for the public on the proposed project site. The property is currently undeveloped and not within any scenic or critical viewplanes. Construction of this project is thus expected to have minimal or no effect on visual resources or public viewing points. The building will not interrupt existing viewing areas or scenic points in the Pu‘unēnē or surrounding area.

13. Requires substantial energy consumption.

The project would create additional demands for electricity to be supplied by Maui Electric Company. However, this increased demand would not be significant or require substantial energy consumption, and electrical services for the proposed project will be coordinated with Maui Electric Company. The proposed project will be supplied through an extension of the existing line servicing the Hawaii National Guard's Pu'unēnē Armory.

9.2 ANTICIPATED DETERMINATION

A Finding of No Significant Impact (FONSI) determination is warranted for the Abandoned Vehicle, Scrap Metal, and White Goods Facility Project based upon the information provided in this Final EA document. The results of the assessments conducted have determined that the new Abandoned Vehicle, Scrap Metal, and White Goods Facility proposed should not have significant impact on the surrounding environment.

These assessment results are also based upon the agency and public review comments received on the Draft EA published and distributed for public review. The preliminary findings supporting this anticipated determination are based upon the previous discussion of the project's affect on the environment in relation to the 13 Significance Criteria.

CHAPTER 10 BIBLIOGRAPHY

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APPENDICES

APPENDIX A

PHOTOGRAPHS OF PROJECT SITE AND SURROUNDING AREAS



Photo 1 - Access Road to Project Site from Mokulele Highway



Photo 2 - Hawaii Army Air National Guard Entrance



Photo 3 - Historical Site Feature BB



Photo 4 - Historical Site Feature BB



Photo 5 - View East of the Project Site



Photo 6 - View Northeast of the Project Site



Photo 7 - View of an Old Water Tank



Photo 8 - Concrete Debris



Photo 9 - Car in Tree



Photo 10 - Sugar Cane Road (East Border)



Photo 11 - Sugar Cane Road (South Border)



Photo 12 - Boundary (South Border)



Photo 13 - Valley Isle Timing Association Drag Strip



Photo 14 - Valley Isle Timing Association Drag Strip



Photo 15 - R/C Flying Field



Photo 16 - R/C Flying Field



Photo 17 - Maui Motorcycle Association Motor Cross Track



Photo 18 - Maui Motorcycle Association Motor Cross Track



Photo 19 - Maui Go-Karters Association



Photo 20 - Maui Go-Karters Association



Photo 21 - Open Area (Reserved for County Use)



Photo 22 - Open Area (Reserved for County Use)



Photo 22 - Adjacent Property to Project Site



Photo 24 - Adjacent Property to Project Site

APPENDIX B

CONSULTATION EFFORTS

APPENDIX B1

***PRE-ASSESSMENT CONSULTATION
COMMENTS & RESPONSE LETTERS***



Natural Resources Conservation Service
 P.O. Box 50004
 Honolulu, HI 96850
 808-541-2600

United States Department of Agriculture

SSFM INTERNATIONAL, INC.
 RECEIVED

MAR 27 2006

RAS

FILE

Our People...Our Islands...In Harmony

March 24, 2006

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Site; TMK 2-3-3-008:001

Mr. Ronald A. Sato, AICP
 Senior Project Planner
 SSFM International, Inc.
 501 Sumner Street, Suite 820
 Honolulu, Hawaii 96817

FILE COPY

Dear Mr. Sato,

We have reviewed the above mentioned document and have no comment to at this time.

Thank you for the opportunity to comment.

Sincerely,

Lawrence T. Yamamoto, acting for
 LAWRENCE T. YAMAMOTO
 Director
 Pacific Islands Area



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Lawrence T. Yamamoto, State Conservationist
Natural Resource Conservation Service
U.S. Department of Agriculture
P.O. Box 50004
Honolulu, Hawaii 96850

Dear Mr. Yamamoto:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated March 24, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We note that your department has no comments to offer at this time.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

April 25, 2006

SSFM INTERNATIONAL, INC.
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~~APR 26 2006~~
RAS
FILE

Regulatory Branch

File No. **POH-2006-140**

Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

FILE COPY

Dear Mr. Sato:

This responds to your notice , submitted on behalf of the County of Maui, concerning preparation of an Environmental Assessment (EA) for proposed development of a the Abandoned Vehicle, Scrap Metal, and White Goods Facility in Pu'unene, Maui (TMK 2-3-8-008: 001). We have reviewed the materials submitted with respect to the Corps' authority to issue Department of the Army (DA) permits pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

Based on the information you provided, it appears that the project site consists entirely of uplands and that the proposed activity would not involve the discharge of dredged or fill material into waters of the United States, including adjacent wetlands. Based on this understanding, a DA permit will not be required.

Should you have questions concerning this determination, please contact Mr. Peter Galloway via e-mail (peter.c.galloway@usace.army.mil); by telephone at 438-8416; or by fax at 438-4060. Written inquiries should cite the file number above and can be sent to: Regulatory Branch (CEPOH-EC-R/P. Galloway); U.S. Army Engineer District, Honolulu; Building 230; Fort Shafter, Hawaii 96858-5440.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. George P. Young, P.E.
Chief, Regulatory Branch
Department of Army
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawai'i 96858-5440

Dear Mr. Young:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated April 25, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We confirm your assessment that the project site consists entirely of uplands and the proposed use would not involve the discharge of dredged or fill material into waters of the United States, including adjacent wetlands. Consequently, a Department of Army Permit will not be required.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner



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Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Anthony J.H. Ching, Executive Officer
State Land Use Commission
Department of Business, Economic Development & Tourism
State of Hawaii
P.O. Box 2359
Honolulu, Hawai'i 96804-2359

Dear Mr. Ching:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated March 30, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We confirm that the project site is located entirely within the State Land Use Agricultural District. The project site will consist of less than 15 acres which is a portion of that larger un-subdivided Tax Map Key parcel, and its description will be more accurately described as such. A metes and bounds map and description will be prepared for this site as part of the entitlement application filed with the County.

The Draft EA will identify the soil classification and overall productivity rating. The County will be applying for a State Land Use District Boundary Amendment in accordance with the procedures and requirements for parcels of 15 acres or less. This will be identified in the Draft EA.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

SSFM INTERNATIONAL, INC.
RECEIVED

APR 04 2006

ras

FILE _____

OFFICE OF THE SUPERINTENDENT

April 4, 2006

Mr. Ronald A. Sato, AICP
SSFM International
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

FILE COPY

Dear Mr. Sato:

Subject: Early Consultation for Processing Site, Pu'unene, Maui

The Department of Education has no comment to offer as early consultation for the proposed abandoned vehicle, scrap metal, and white goods processing facility at the Old Pu'unene Airport.

If you have any questions, please call Heidi Meeker of the Facilities Development Branch at 733-4862.

Very truly yours,

Patricia Hamamoto
Superintendent

PH:jmb

cc: Randolph Moore Acting Assistant Superintendent, OBS
Duane Kashiwai, Public Works Manager, FDB
Kenneth Nomura, CAS, Baldwin/King Kekaulike/Maui High Complex Area



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Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Ms. Patricia Hamamoto, Superintendent
Department of Education
State of Hawai'i
P.O. Box 2360
Honolulu, Hawai'i 96804

Dear Ms. Hamamoto:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated April 4, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We note that your department has no comments to offer at this time.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner

LINDA LINGLE
GOVERNOR



RUSS K. SAITO
COMPTROLLER

KATHERINE H. THOMASON
DEPUTY COMPTROLLER

STATE OF HAWAII

DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

P.O. BOX 119, HONOLULU, HAWAII 96810

APR 6 2006

SSFM INTERNATIONAL, INC.
RECEIVED

APR 10 2006

(P)1086.6

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FILE _____

Mr. Ronald A. Sato, Senior Project Planner
SSFM International, Inc.
501 Summer Street Suite 620
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Site
Pre-Assessment Consultation for Draft Environmental Assessment
Puunene, Maui, Hawaii, TMK (2) 3-8-008:001

FILE COPY

Thank you for the opportunity to review the subject project. The Department of Accounting and General Services managed the planning, design and construction of the Maui Army National Guard Facility on behalf of the National Guard. During the course of the project, the following issues arose which could similarly impact the planning, design and construction of the Abandoned Vehicle, Scrap Metal and White Goods Facility:

1. Availability of potable water: We recommend that you contact the County of Maui, Department of Water Supply for suitable source of potable water.
2. Historic bunkers and remnants from Puunene Naval Air Station were discovered on the National Guard site. There may be historic structures on the Abandoned Vehicle, Scrap Metal and White Goods Facility site, as well.
3. Traffic control at the Mokulele Highway/Maui Raceway Park intersection was an issue which was complicated by the Mokulele Highway widening project. We recommend that you contact the State Department of Transportation and County of Maui, Departments of Planning and Transportation to see if there are any traffic issues that will affect your project.

Sincerely,

RUSS K. SAITO
State Comptroller

c: Ms. Genevieve Salmonson, OEQC



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

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Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Russ K. Saito, Comptroller & Director
Department of Accounting and General Services
State of Hawai'i
1151 Punchbowl Street
Honolulu, Hawai'i 96813

Dear Mr. Saito:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated April 4, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project. We greatly appreciate your input on some of the issues arising with the planning, design, and construction of your National Guard Facility for our information.

We have been coordinating with the County Department of Water Supply to address the availability of potable water to serve this project, and it will be addressed in the Draft EA.

An archaeological inventory survey will be conducted for this project site to identify and address any historic structures that may be associated with the Pu'unēnē Naval Air Station.

The intersection of Mokulele Highway with the driveway leading to Maui Raceway Park will be analyzed under a traffic study, and any traffic issues will be coordinated with the State Department of Transportation and County of Maui. We are also aware of the Mokulele Highway widening project and have obtained copies of their design plans for our use.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Valeriano F. Martin, Captain
Fire Prevention Bureau
Department of Fire and Public Safety
County of Maui
200 Dairy Road
Kahului, Maui, Hawai'i 96732

Dear Mr. Martin:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated April 6, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We appreciate your information on the Uniform Fire Code requirements for this type of project. This project will be designed and constructed in accordance with those requirements.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

SSFM INTERNATIONAL, INC
RECEIVED

APR 10 2006

RAS

FILE _____

HRD06/2320 A&B

April 6, 2006

Ronald Sato
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, HI 96817

FILE COPY

RE: Cultural Impact Evaluation (CIE) and Draft Environmental Assessment (DEA) Pre-Consultation for an Abandoned Vehicle Storage and Processing Facility within the lands of the former Naval Air Station Pu'unēnē, TMK (2) 3-8-008:001

Dear Mr. Hill,

The Office of Hawaiian Affairs (OHA) is in receipt of your March 21 and March 24, 2006 request for comments on the above listed proposed projects, TMK (2) 3-8-008:001. Our staff asks that the applicant contact Lui Hokoana, President of the Central Maui chapter of the Association of Hawaiian Civic Clubs, and Thelma Shimaoka of OHA's Maui office. Both individuals will be able to assist you in your consultation effort and will likely be able to recommend other individuals to confer with in the central Maui area.

OHA has no further comment on the CIE at this time, but looks forward to the receipt of and opportunity to comment on the final report completed by your office. On a general note, however, OHA requests that future correspondence include the relevant TMK number(s) in the subject line of the letter, as well as an indication, where appropriate, that only a portion of the lot is under consideration (i.e., TMK (2) 3-8-008:001 (por.)). OHA also requests a 30-day standard response time, and that all future correspondence be addressed to me at the above O'ahu address.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Koa Kaulukukui at (808) 594-0244 or koalanik@oha.org.

'O wau iho nō,

Clyde W. Nāmu'o
Administrator

cc: Robert R. Hill
Cultural Surveys Hawai'i
P.O. Box 1114
Kailua, HI 96734

Thelma Shimaoka
OHA Community Affairs Coordinator (Maui)
140 Hoohana St., Ste. 206
Kahului, HI 96732



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Clyde Namu'o, Administrator
Office of the Administrator
Office of Hawaiian Affairs
711 Kapi'olani Boulevard, Suite 500
Honolulu, Hawai'i 96813

Dear Mr. Namu'o:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated April 6, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

Thank you for the referrals of individuals to contact regarding consultation efforts for the preparation of the cultural assessment for this project. These individuals identified will be contacted by our subconsultant as part of their work preparing the cultural assessment.

We will provide OHA with a copy of the Draft Environmental Assessment, which will include the cultural assessment study, for your review as part of the normal public review comment period process.

All future correspondences will be addressed to you at the identified O'ahu address. We also greatly appreciate your cooperation in providing us comments less than 30 days.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner

LINDA LINGLE
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

April 10, 2006

RODNEY K. HARAGA
DIRECTOR

Deputy Directors
BARRY FUKUNAGA
BRENNON T. MORIOKA
BRIAN H. SEKIGUCHI

SSFM INTERNATIONAL, INC.
RECEIVED

APR 17 2006

RAS

IN REPLY REFER TO:

STP 8.2104

FILE

FILE COPY

Mr. Ronald A. Sato, AICP
Senior Project Planner
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Pre-Assessment Consultation
Abandoned Vehicle, Scrap Metal and White Goods Site
Puunene, Maui
TMK: 2-3-8-008: 001

Thank you for your early notification of the proposed subject disposal facility.

We are interested in the volume and type of vehicles projected to use the facility, especially if the facility will be the only one on the island. A traffic assessment should be conducted and included in the draft environmental assessment.

The subject facility adds to the number of existing users on the site of the old Puunene airfield. We require information on the impact to our highway from this new use, including its collective effect with the other existing and future users of the area. A master development plan of the area showing existing uses and future uses should be part of your environmental assessment.

We request four (4) copies of the draft environmental assessment report when you complete the report.

We appreciate the opportunity to provide our comments.

Very truly yours,

RODNEY K. HARAGA
Director of Transportation



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Rodney K. Haraga, Director
Department of Transportation
State of Hawai'i
869 Punchbowl Street
Honolulu, Hawai'i 96813

Dear Mr. Haraga:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated April 6, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

Available information on the type of vehicles and projected volumes entering and exiting the project site will be included in the Draft EA. This facility would not be the only one on the island of Maui because there are two other privately-owned facilities operating. A traffic assessment will be conducted and included in the Draft EA document.

Information on the project's effect on Mokulele Highway will be addressed. This will include the cumulative effect of other existing and future uses occurring within our study year. Available information of other uses planned within the former Pu'unēnē airfield area will be included.

We will also provide your department with four copies of the Draft EA as requested.

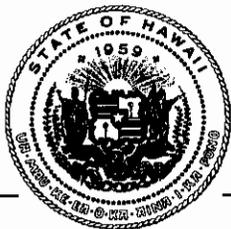
If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner



**DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM**

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
MARK K. ANDERSON
DEPUTY DIRECTOR
LAURA H. THIELEN
DIRECTOR
OFFICE OF PLANNING

OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-11316

April 5, 2006

Mr. Ronald A. Sato, AICP
Senior Project Planner
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, HI 96817

SSFM INTERNATIONAL, INC
RECEIVED
APR 07 2006

KAS

FILE

FILE COPY

Dear Mr. Sato:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment
Project: Abandoned Vehicle, Scrap Metal and White Goods Site
Applicant: County of Maui, Department of Public Works
and Environmental Management
Land Owner: County of Maui
Location: Old Pu'unene Airport Site
TMK: 2-3-8-008: 001

We received your letter requesting comments prior to issuing a draft Environmental Assessment (DEA) on a proposed vehicle and metal recycling facility at the Old Pu'unene Airport Site, including a one-page project summary and aerial photo of the site. We offer the following comments.

The County of Maui Department of Public Works and Environmental Management is proposing an abandoned vehicle, scrap metal, and white goods storage and recycling facility on a portion of the property known as the Old Pu'unene Airport, which is no longer in operation.

The proposed facility is compatible with the State Department of Health's Hawai'i 2000 Plan for Integrated Solid Waste Management. The need for such a facility was clearly demonstrated in the State Land Use Commission hearing regarding a, Proposed Metal Recycling Facility at Central Maui Baseyard in Pu'unene, Maui. In June 2005, the Land Use Commission agreed with the recommendation by the County of Maui Department of Public Works and Environmental Management to approve the application for a Special Use Permit (SUP) by S&F Land Company represented by Earl Stoner, Jr. Thus, it appears to be the position of the County of Maui that two Vehicle and Scrap Metal Recycling Facilities are needed.

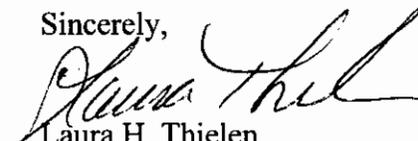
Mr. Ronald A. Sato, AICP
Page 2
April 5, 2006

The Old Pu'unene Airport site would be adjacent to the Maui Community Correctional Center. The DEA should disclose the noise levels expected of a mechanical vehicle baler powered by a diesel generator on the corrections staff and inmates, especially if the facility is expected to operate around the clock to accelerate the removal of the current surplus of derelict and abandoned vehicles on the island of Maui.

The DEA should also disclose any impacts on the Air National Guard Armory facility which would be close by. In addition, the DEA should disclose plans to comply with DOH requirements to assure protection from, and safe disposal of, hazardous materials and toxic fluids generated by removal of non-metal parts of vehicles before baling and shipping.

Thank you for the opportunity to comment on the proposed DEA. If you have any questions, please call Mary Alice Evans at (808) 587-2802.

Sincerely,



Laura H. Thielen
Director

c: Anthony Ching, Land Use Commission



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Ms. Laura H. Thielen, Director
Office of Planning
Department of Business, Economic Development & Tourism
P.O. Box 2359
Honolulu, Hawai'i 96804

Dear Ms. Thielen:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated April 5, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We confirm that this project is compatible with the State Department of Health's *Hawai'i 2000 Plan for Integrated Solid Waste Management*, and it is clearly needed for the island of Maui.

Available information on the anticipated noise levels expected from a mechanical baler will be included in the Draft EA to address its impacts. This facility is not expected to operate 24-hours a day, and would thus not affect the future correctional center during evening hours. Existing operations on the island have been addressing the removal of the surplus of abandoned vehicles.

Applicable impacts on the Army National Guard facility will also be addressed. The project will comply with State Department of Health regulatory requirements for the removal and disposal of all hazardous materials and fluids from operations.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner

ALAN M. ARAKAWA
MAYOR



KYLE K. GINOZA
Director
DON A. MEDEIROS
Deputy Director
Telephone (808) 270-7511
Facsimile (808) 270-7505

DEPARTMENT OF TRANSPORTATION

COUNTY OF MAUI
200 South High Street
Wailuku, Hawaii, USA 96793-2155

SSFM INTERNATIONAL, INC.
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APR 13 2006

YAS

FILE _____

April 10, 2006

SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, HI 96817

FILE COPY

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Site
Pre-Assessment Consultation for Draft Environmental Assessment
Pu'unene, Maui, Hawaii

Dear Mr. Sato:

Thank you for the opportunity to comment on this project during this early consultation period. The Maui County Department of Transportation has no comment at this time with regards to the proposed project as outlined in your letter to me dated March 21, 2006.

Please feel free to contact me at (808) 270-7511 should you have any questions.

Sincerely,

Kyle K. Ginoza
Director

/dcy



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Kyle K. Ginoza, Director
Department of Transportation
County of Maui
200 South High Street
Wailuku, Maui, Hawai'i 96793

Dear Mr. Ginoza:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated April 10, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We note that your department has no comments to offer at this time.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink that reads 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner

Council Chair
G. Riki Hokama

Vice-Chair
Robert Carroll

Council Members
Michelle Anderson
Jo Anne Johnson
Dain P. Kane
Danny A. Mateo
Michael J. Molina
Joseph Pontanilla
Charmaine Tavares



Director of Council Services
Ken Fukuoka

COUNTY COUNCIL
COUNTY OF MAUI
200 S. HIGH STREET
WAILUKU, MAUI, HAWAII 96793
www.co.maui.hi.us/council/

SSFM INTERNATIONAL, INC.
RECEIVED

MAR 27 2006

fas

FILE _____

March 23, 2006

FILE COPY

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Ste 620
Honolulu, HI. 96817

Dear Mr. Sato:

**SUBJECT: Abandoned Vehicle, Scrap Metal, and White Goods Site
Pre-Assessment Consultation for Draft Environmental Assessment
Pu'unene, Maui Hawai'i**

Thank you for the opportunity to review the Project Summary for the proposed Abandoned Vehicle, Scrap Metal, and White Goods Site at Pu'unene, Maui, HI. After review of the document, I offer the following comments and concerns for address in the Draft EA:

1. Address to issues of security for proposed site and facility operations.
2. Procedural details insuring practice of safe handling, storage, and shipping surrounding tires, fluids, batteries, mercury switches, and any other materials that may be deemed hazardous.
3. Landscape and buffering measures to property boundary.

Thank You for the opportunity to comment on this project.

Sincerely,

Joseph Pontanilla
JOSEPH PONTANILLA,
COUNCILMEMBER



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

The Honorable Joseph Pontanilla
Councilmember
County Council
County of Maui
200 South High Street
Wailuku, Hawai'i 96793

Dear Mr. Pontanilla:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated March 23, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

The issue of security for the proposed project will be addressed in the Draft EA. The project will comply with State Department of Health regulatory requirements for the removal, storage, and disposal of all hazardous materials and fluids from operations. Landscaping and other pertinent buffers applicable to this project will also be addressed.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner

SSFM INTERNATIONAL, INC.
RECEIVED
MAR 29 2006

FILE _____

Hawaiian Telcom ●

March 27, 2006

FILE COPY

SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Attn: Mr. Ronald A. Sato

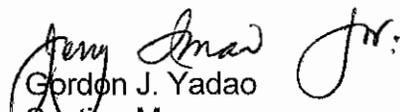
SUBJECT: Abandoned Vehicle, Scrap Metal and White Goods Site
Pre-Assessment Consultation for Draft Environmental Assessment
Puunene, Maui, Hawaii

Thank you for providing Hawaiian Telcom Incorporated, the opportunity to comment on the Pre-Assessment Consultation for Draft Environmental Assessment for the Abandoned Vehicle, Scrap Metal, and White Goods Site.

Hawaiian Telecom does not have any distribution telecommunication poles and cables within this rural area. In order to provide telecommunication services for this project, Hawaiian Telecom will be required to obtain construction permits and easements to construct a pole line to the project site.

If there are any questions, please call Sheri Tihada at (808) 242-5258 or Jerry Imai at (808) 242-5110.

Sincerely,


Gordon J. Yadao
Section Manager –
Network Engineering & Planning

C: File (3030-KLUI)
S. Tihada



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Gordon J. Yadao, Section Manager
Network Engineering & Planning
Hawaiian Telecom
1177 Bishop Street
Honolulu, Hawai'i 96813

Dear Mr. Yadao:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated March 27, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We confirm that your utility company does not have any distribution telecommunication poles and cables presently serving the project site. Appropriate coordination will be conducted with your company during the project's design phase to ensure necessary telecommunication improvements are provided to serve this project.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink that reads 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Neal Shinyama, Manager
Engineering
Maui Electric Company, Ltd.
210 West Kamehameha Avenue
Kahului, Maui, Hawai'i 96733-6898

Dear Mr. Shinyama:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated March 29, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We note that Maui Electric Company, Ltd. has no objection to the project at this time. Necessary electrical requirements and project scheduling will be coordinated with your company in a timely manner during the project's design phase. This will include coordination with your Demand Side Management group to review potential conservation and efficiency opportunities.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink that reads 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner

COPY

Recommend that
Sgt. Vickers' comments be
forwarded to SSFM Inst. I
attn. Mr. Sato —
Acty. Meyers
3/3/14

TO : THOMAS PHILLIPS, CHIEF OF POLICE, COUNTY OF MAUI

VIA : CHANNELS

**FROM : MARK M.K. VICKERS, ADMINISTRATIVE SERGEANT,
WAILUKU PATROL**

**SUBJECT : ABANDONED VEHICLE, SCRAP METAL, AND WHITE
GOODS SITE
PRE-ASSESSMENT CONSULTATION FOR DRAFT
ENVIRONMENTAL ASSESSMENT
PU'UNENE, MAUI, HAWAII**

Sir,

This TO-FROM is being sent as requested for comments regarding the above mentioned subject matter.

As with any Draft Environmental Assessment, concerns that are normally brought up include those related to public safety and traffic movement. In this case, these concerns include the public access points which are the intersection of Mokulele Highway with the access road to the site as well as the intersection of the access road with the entrance to the site itself.

Although the access road is currently not a major thoroughfare the construction of a roadway capable of handling the increased traffic as well as allowing through traffic would be of concern. At the two intersections noted, a proper turning radius for larger vehicles (such as flatbeds or haulers) would be required in order to alleviate the possibility of collisions with oncoming traffic. Noting that the standard roadway width allows, but is not conducive to, the normal turning radius of these vehicles, a wider than normal roadway would be suggested. The proper construction of this roadway would also be of concern as this roadway would be largely used for vehicles that are heavier than the average passenger vehicle. Proper construction could reduce the possibility of road damage such as "pot holes" which would lead to vehicles weaving on the roadway to avoid these "pot holes".

Regarding the intersection of Mokulele Highway with the site access road, it is also suggested that this intersection be signalized to reduce the possibility of motor vehicle collisions. For southbound traffic on Mokulele Highway, a dedicated left-turn lane is suggested for vehicles entering the access road. For northbound traffic on Mokulele Highway, a dedicated deceleration/right-turn lane is suggested for vehicles entering the access road. For traffic exiting the access road heading northbound, an acceleration/merge lane is suggested on Mokulele Highway.

For safety and security purposes, proper lighting should also be in place to discourage illegal activities at the site area including but not limited to unauthorized dumping of vehicles/materials.

As this is a "Pre-Assessment" consultation, only notable concerns are brought up at this time. It is possible to have further concerns regarding this site once all information is presented in the final Draft Environmental Assessment.

Submitted for your information,

Mark MK Vickers
Sgt. Mark MK VICKERS 10046
Administrative Sergeant
Wailuku Patrol
03/28/06 @ 1445 Hours

NO FURTHER COMMENTS UNTIL ENVIRONMENTAL
ASSESSMENT COMPLETED.

CATL C L Q 10046
03/18/06



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Glenn Miyahira, Acting Assistant Chief
Police Department
County of Maui
55 Mahalani Street
Wailuku, Maui, Hawai'i 96733

Dear Mr. Miyahira:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated March 31, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

Your comments regarding vehicle access and operations associated with the access road and project site are noted. During the project's design, the project driveway entrance at this access road will include proper turning radius to accommodate larger vehicles likely utilizing this facility. Other necessary improvements to this access road leading up to the project site will be considered and implemented as required.

Your concerns with the Mokulele Highway with access road intersection are also noted. The State Department of Transportation has design plans to widen this highway to four thru lanes, and construction is starting this summer. This intersection is currently designed to have a left-turn storage lane and right-turn deceleration lane into this access road which would address your concerns. An acceleration lane is not included at this time.

Proper lighting will be considered for the project site as part of the design phase for it along with other security measures such as fencing.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner

ALAN M. ARAKAWA
Mayor
MICHAEL W. FOLEY
Director
WAYNE A. BOTEILHO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PLANNING

April 26, 2006

SSFM INTERNATIONAL, INC.
RECEIVED

APR 28 2006

ras

FILE _____

FILE COPY

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Mr. Sato:

RE: Pre-consultation Comments in Preparation of a Draft Environmental Assessment for the Proposed Abandoned Vehicle, Scrap Metal, and White Goods Site located at TMK: 3-8-008:001, Old Puunene Airport, Puunene, Maui, Hawaii (EAC 2006/0008)

The Maui Planning Department (Department) is in receipt of your request for comments in preparation of a Draft Environmental Assessment (EA) for the above-referenced project. The Department understands that the proposed action includes the following:

- Develop an abandoned vehicle, scrap metal, and white goods facility site within a 14.5 acre portion of an un-subdivided parcel of the former Old Puunene Airport (owned by the County);
- The proposed facility will store unprocessed vehicles and process unsold abandoned vehicles for baling and shipping to market. The facility will receive, store, process, bale, and ship white goods from the County Appliance pick up program. Utility improvements will be necessary for water, electricity, and telephone connection to the property. Onsite improvements include grading, construction of an interior roadway, on-grade concrete slabs, drainage basins, pollutant control devices, a processing building, and unloading dock. A mechanical vehicle bailer powered by diesel generator will also be stationed near the loading dock; and

- The facility will include a building to remove the tires, fluids, batteries and mercury switches. Outside of this building, there will be a loading dock, sufficient areas for maneuvering of trucks and shipping containers, and an automobile bailer to crush scrap materials into dense uniform shapes that will facilitate efficient shipping. An automobile auction yard will also be included within the site but separate from the processing facility.

Based on the foregoing, the Department provides the following comments as pre-consultation in preparation of the Draft EA:

1. The land use designations for the project area are as follows (see attached):
 - State Land Use – Agricultural District
 - Kihei-Makena Community Plan – Project District 10
 - County Zoning – Agricultural District
 - Other – not located within the Special Management Area
- a. The language within the community plan specifies that “approximately 125 acres, including and adjacent to the Hawaiian Cement site, should be utilized for heavy industrial use. The remaining 189 acres, between Mokulele Highway and Hemahema Loop, are almost all in sugar cane cultivation and shall remain as such until sugar production no longer remains a viable commodity within the state.”
 - i. Discuss how the proposed action complies with the language of the community plan. Please note that this discussion is necessary to determine whether a Community Plan Amendment is required.
 - ii. Further discuss how the proposed action is consistent with the objectives and policies of the State Plan, General Plan, and Kihei-Makena Community Plan.

- iii. In accordance with the Kihei-Makena Community Plan, the Draft EA shall be reviewed for comments by the Cultural Resources Commission (CRC).
- b. The proposed action requires a State District Boundary Amendment (DBA) from the Agricultural District to the Urban District and a County Change in Zoning (CIZ) from the Agricultural District to Project District 10.

The CIZ is processed in accordance with Maui County Code (MCC), Chapter 19.45, Project District Processing Regulations. The Project District process involves three (3) phases. Phase I establishes the County Ordinance which defines the project district zoning standards including permitted land uses, accessory uses, densities, heights, setbacks, and lot dimensions. Phase II establishes the preliminary site plan for the project district development. Phase III is the final site plan of development. Although the project site is limited to a portion of the total area designated as Project District 10 in the Kihei-Makena Community Plan, this process should be applied to the total area as defined in the community plan. Include a discussion within the Draft EA.

However, assuming the proposed action complies with the Community Plan language and as an alternative to the foregoing, the proposed action requires a State Special Use Permit and a County Conditional Permit. If this is the preferred alternative, provide a discussion relative to how the proposed action meets the criteria of a State Special Use Permit and County Conditional Permit.

- 2. Provide a discussion of the proposed pollutant control devices;
- 3. Discuss any potential impact operations that the facility may have on neighboring users including but not limited to, Hawaii State Armory, Hawaiian Cement, MEO Transportation and Maintenance Facility, and recreation users of the area; and

Mr. Ronald A. Sato, AICP
April 26, 2006
Page 4

4. Provide a site plan identifying all structures, processing/holding areas, and neighboring property users.

Thank you for the opportunity to comment. Please include the Department on the distribution list for the Draft EA. Should you require further clarification, please contact Ms. Kivette Caigoy, Environmental Planner, at 270-7811.

Sincerely,

A handwritten signature in black ink, appearing to read "M. W. Foley". The signature is stylized and cursive.

MICHAEL W. FOLEY
Planning Director

Enclosure

MWF:KAC:bv

c: Kivette A. Caigoy, Environmental Planner
DPWEM
Project File
General File

K:\WP_DOCS\PLANNING\EAC\2006\0008_Cty_Abandoned_Vehicle_Facility\preconsultation.wpd

COUNTY OF MAUI
DEPARTMENT OF PLANNING
ZONING AND FLOOD CONFIRMATION REQUEST FORM

APPLICANT: COUNTY DPWEM TELEPHONE: _____

ADDRESS: _____

PROJECT NAME: OLD PUUNENE AIRPORT - PROPOSE SITE FOR ABANDONED

ADDRESS AND/OR LOCATION: VEHICLE, SCRAP METAL, & WHITE GOODS SITE

TMK: NUMBER(S): 3-8-008:001

↳ (SEE ATTACHED MAP)

ZONING INFORMATION

STATE LAND USE AGRICULTURAL COMMUNITY PLAN PROJECT DISTRICT 10
COUNTY ZONING AGRICULTURAL

OTHER SPECIAL DISTRICTS

- ___ Special Management Area
- ___ Shoreline Setback Area
- ___ Country Town Design District
- ___ Lahaina National Historic Landmark District
- ___ Maui Redevelopment Area
- ___ Other _____

FLOOD INFORMATION

FLOOD HAZARD AREA* ZONE C

BASE FLOOD ELEVATION N.A. MEAN SEA LEVEL, 1929 NATIONAL GEODETIC
VERTICAL DATUM OR FOR FLOOD ZONE A0, FLOOD DEPTH N.A.

FLOODWAY [] Yes [X] No

FLOOD DEVELOPMENT PERMIT IS REQUIRED [] Yes [X] No

* For FLOOD HAZARD AREA ZONES B OR C; A FLOOD DEVELOPMENT PERMIT would be required if any work is done in any drainage facility or stream area that would reduce the capacity of the drainage facility, river, or stream, or adversely affect downstream property.

FOR COUNTY USE ONLY

REMARKS/COMMENTS: _____

- Additional information required.
- Information submitted is correct.
- Correction has been made and initialed.

REVIEWED AND CONFIRMED BY:

Aaron Shinmoto FOR _____

4/19/06 DATE

SIGNATURE
Zoning Administration and Enforcement Division

AARON SHINMOTO
Planning Program Administrator



SSFM INTERNATIONAL, INC.

501 Sumner Street, Suite 620

Honolulu, Hawaii 96817

Phone: (808) 531-1308

Fax: (808) 521-7348

Project Managers, Planners, & Engineers
American Council of Engineering Companies, Member

June 9, 2006

2005_133.000

Mr. Michael W. Foley, Planning Director
Department of Planning
County of Maui
250 South High Street
Wailuku, Maui, Hawai'i 96733

Dear Mr. Foley:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility
Pre-Assessment Comments, Draft Environmental Assessment
Pu'unēnē, Maui
TMK: (2) 3-08-008: portion of 001

Thank you for your letter dated April 26, 2006 regarding the pre-assessment consultation efforts for preparation of the Draft Environmental Assessment for the subject project.

We confirm the land use designation information provided for the project site. The Draft EA will include discussion of this project in relation to the Kihei-Mākena Community Plan. It will also address the project's consistency with the State Plan and General Plan. We also confirm that the Draft EA will be reviewed for comments by the Cultural Resources Commission.

The Draft EA will include discussion of the project's change in zone processing to the Project District 10. A State Special Use Permit is not being pursued for this project.

Discussion of potential pollutant control devices will be provided in the Draft EA. The project's impact on pertinent adjacent surrounding uses will also be addressed. A site plan showing proposed uses for the site and neighboring properties will be provided.

If you have any questions on this matter, please contact me at 531-1308. Thank you.

Sincerely,

SSFM INTERNATIONAL, INC.

A handwritten signature in black ink, appearing to read 'Ronald A. Sato'.

Ronald A. Sato, AICP
Senior Project Planner

APPENDIX B2

***DRAFT ENVIRONMENTAL ASSESSMENT
COMMENTS & RESPONSE LETTERS***

~~AUG 09 2006~~



Natural Resources Conservation Service
P.O. Box 50004 Rm. 4-118
Honolulu, HI 96850
808-541-2600

FILE COPY

ras

FILE _____

July 31, 2006

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Subject: Comments on DEA for the Abandoned Vehicle, Scrap Metal, and White Goods Facility

Dear Mr. Sato,

We appreciate your request for comment. With regards to the Draft Environmental Assessment for the Abandoned Vehicle, Scrap Metal, and White Goods Facility. We would like to recommend that all work conducted during construction should be in phases to avoid erosion and drainage problems.

Thank you for the opportunity to comment.

Sincerely,

LAWRENCE T. YAMAMOTO
Director
Pacific Islands Area

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

**COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT**

200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

September 20, 2006

Mr. Lawrence T. Yamamoto, Director
Natural Resource Conservation Service
U.S. Department of Agriculture
P.O. Box 50004, Room 4-118
Honolulu, Hawai'i 96850

Dear Mr. Yamamoto:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated July 31, 2006 regarding the Draft Environmental Assessment for the subject project.

If appropriate, construction of the project will be implemented in phases to minimize erosion concerns. The project's design will determine the appropriate size of such phases. Furthermore, best management practices will be incorporated in the project's design for implementation by the contractor.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton Arakawa".

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

United States Department of Agriculture

SSFM INTERNATIONAL
RECEIVED

JUN 26 20

ras



Natural Resources Conservation Service
210 Ima Kala Street, Suite 209
Wailuku, HI 96793-2100
(808) 244-3100

Our People...Our Islands...In Harmony

June 22, 2006

FILE

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

FILE COPY

Regarding: Draft Environmental Assessment for the Abandoned Vehicle, Scrap
Metal, and White Goods Facility, Puunene, Maui, HI
TMK: (2) 3-8-008: portion of 001

Dear Ms. Callentine,

I have received a copy of the aforementioned document. I appreciate the opportunity to comment. However, I do not have any comments regarding the draft environmental assessment at this time. If there are any questions, please feel free to call me at the above listed number.

Sincerely,

Diana L. Perry
Civil Engineer

Cc: Ranae Ganske-Cerizo, NRCS
Mr. Tracy Takamine, Solid Waste Division Chief, Department of Public
Works and Environmental Management
Mr. Michael W. Foley, Planning Director, Department of Planning

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Ms. Diana L. Perry, Civil Engineer
Natural Resource Conservation Service
U.S. Department of Agriculture
210 Imi Kala Street, Suite 209
Wailuku, Hawai'i 96793-2100

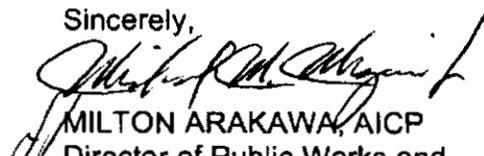
Dear Ms. Perry:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated June 22, 2006 regarding the Draft Environmental Assessment for the subject project.

We note you had no comments on the Draft Environmental Assessment at this time.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management



United States Department of the Interior

U.S. GEOLOGICAL SURVEY

Pacific Islands Water Science Center
677 Ala Moana Blvd., Suite 415
Honolulu, HI 96813
Phone: (808) 587-2400/Fax: (808) 587-2401

July 5, 2006

SSFM INTERNATIONAL, INC.
RECEIVED

JUL 07 2006

VAS

FILE COPY

FILE

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Draft Environmental Assessment
Abandoned Vehicle, Scrap Metal and White Goods Facility Project
TMK: (2) 3-08-008: portion of 001
Puunene, Maui, Hawaii

Thank you for forwarding the subject Draft Environment Assessment for review and comment by the staff of the U.S. Geological Survey, Pacific Islands Water Science Center. We regret however, that due to prior commitments and lack of available staff, we are unable to review this document and are returning it for your future use.

We appreciate the opportunity to participate in the review process.

Sincerely,

Gordon Tribble
Director

Enclosure

cc: Mr. Tracy Takamine, Solid Waste Division Chief w/o enclosure
Department of Public Works and Environmental Management
County of Maui
200 South High Street
Wailuku, Hawaii 96793

Mr. Michael W. Foley, Planning Director w/o enclosure
Department of Planning
County of Maui
250 South High Street
Wailuku, Hawaii 96793

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Mr. Gordon Tribble, Director
Pacific Islands Water Science Center
U.S. Geological Survey
United States Department of the Interior
677 Ala Moana Boulevard, Suite 415
Honolulu, Hawai'i 96813

Dear Mr. Tribble:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated July 5, 2006 regarding the Draft Environmental Assessment for the subject project.

We note that you were unable to review the Draft Environmental Assessment due to lack of available staff and prior commitments.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton Arakawa".

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

LINDA LINGLE
GOVERNOR



RUSS K. SAITO
COMPTROLLER

KATHERINE H. THOMASON
DEPUTY COMPTROLLER

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

(P)1142.6

JUL 12 2006

SSFM INTERNATIONAL, Inc
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JUL 14 2006

RAS

Mr. Ronald A. Sato, Senior Project Planner
SSFM International, Inc.
501 Summer Street, Suite 620
Honolulu, Hawaii 96817

FILE COPY

FILE

Dear Mr. Sato:

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility Project
Draft Environmental Assessment (DEA)
Puunene, Maui, Hawaii
TMK: (2) 3-8-008:portion of 001

Thank you for the opportunity to review the subject project. This project does not impact any of the Department of Accounting and General Services' projects or existing facilities and we have no comments to offer. However, it is recommended that the Army National Guard and the Department of Public Safety be given an opportunity to review the DEA for possible impacts to their facilities.

Sincerely,

ERNEST Y. W. LAU
Public Works Administrator

AY:mo

- c: Ms. Genevieve Salmonson, DOH OEQC
- Mr. Tracy Takamine, Department of Public Works and Environmental Management
- Mr. Michael Foley, Department of Planning County of Maui

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

**COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT**

200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

September 20, 2006

Mr. Ernest Y. W. Lau, Public Works Administrator
Department of Accounting and General Services
State of Hawai'i
P.O. Box 119
Honolulu, Hawai'i 96810

Dear Mr. Lau:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated July 12, 2006 providing comments on the Draft Environmental Assessment for the subject project.

We note your determination that this project does not impact any of your departments' projects or existing facilities, and you have no further comments to offer at this time.

Copies of the Draft Environmental Assessment were also distributed to the Army National Guard and the State Department of Public Safety for their review.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton Arakawa".

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management



STATE OF HAWAII
DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM
LAND USE COMMISSION
P.O. Box 2359
Honolulu, Hawaii 96804-2359
Telephone: 808-587-3822
Fax: 808-587-3827

SSFM INTERNATIONAL, INC
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JUL 11 2006

cas
FILE

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July 7, 2006

Mr. Ronald A. Sato
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Mr. Sato:

Subject: Abandoned Vehicle, Scrap Metal and White Goods Facility Project
TMK No.: [2] 3-8-008: 001 (por.)
Pu`unēnē, Maui, Hawai`i
Draft Environmental Assessment ("DEA")

We have reviewed the DEA forwarded by your correspondence dated June 15, 2006, and confirm that the subject parcel is within the State Land Use Agricultural District.

Pursuant to §205-3.1(c), Hawai`i Revised Statutes, the State Land Use Commission defers to the judgment of the County of Maui regarding other matters in the DEA given the location, scope, and nature of the proposed activity. We have no further comments to offer at this time.

Thank you for the opportunity to comment on the subject application. Please feel free to contact Max Rogers of my office at 587-3822 if you have any questions or need clarification.

Sincerely,

ANTHONY J. H. CHING
Executive Officer

c: Tracy Takamine, Solid Waste Division Chief, DPWEM
Michael W. Foley, Planning Director

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Mr. Anthony J.H. Ching, Executive Officer
Land Use Commission
Department of Business, Economic Development & Tourism
State of Hawai'i
P.O. Box 2359
Honolulu, Hawai'i 96804-2359

Dear Mr. Ching:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated July 7, 2006 providing comments on the Draft Environmental Assessment for the subject project.

We note your department is deferring to the County of Maui judgment regarding matters associated with the Draft Environmental Assessment, and you have no further comments to offer at this time.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton Arakawa".

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management



DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

LINDA LINGLE
GOVERNOR
THEODORE E. LIU
DIRECTOR
MARK K. ANDERSON
DEPUTY DIRECTOR
LAURA H. THIELEN
DIRECTOR
OFFICE OF PLANNING

OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-11453

August 1, 2006

Mr. Ronald A. Sato, AICP
Senior Project Planner
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

FILE COPY

SSFM INTERNATIONAL, INC.
RECEIVED

AUG 02 2006

ras

FILE _____

Dear Mr. Sato:

Subject: Draft Environmental Assessment
Project: Abandoned Vehicle, Scrap Metal and White Goods Site
Applicant: County of Maui, Department of Public Works and Environmental Management
Land Owner: State of Hawaii, Set aside to the County of Maui for Public Use under Executive Order No. 4024
Location: Old Puunene Airport Site
TMK: 2-3-8-008: 001

We have received the Draft Environmental Assessment for the proposed abandoned vehicle, scrap metal and white goods recycling facility at the Old Puunene Airport site. We offer the following comments.

The County of Maui is proposing to build a new metal recycling facility which will receive, store, auction and process abandoned and derelict vehicles. The facility will also process scrap metal and white goods for baling and shipping to market off-island.

The property is in the State Agricultural District, the County Agricultural District, the Kihei-Makena Community Plan and Project District with 10-acre minimum lot size. The site is outside of the County Special Management Area (SMA). The Department of Public Works and Environmental Management and the Department of Planning will consolidate the review of the Draft Environmental Assessment (DEA) and applications for a State Land Use District Boundary Amendment (less than 15 acres), a Community Plan Amendment, and a Zone Change.

Mr. Ronald A. Sato, AICP
Page 2
August 1, 2006

Although the proposed facility is in the State Agricultural District, the adjacent land uses include non-agricultural uses such as the Hawaii National Guard Armory and the future Maui Community Correctional Center. Other nearby uses include the go-cart racing track (old runway) and the Maui Motorcycle Association. The site is located just off the Mokulele Highway.

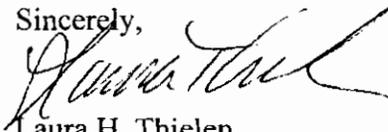
The proposed facility requires a Solid Waste Management Facility Permit and a National Pollutant Discharge Elimination (NPDES) Permit from the State Department of Health in addition to the land use permits.

As we commented in the Pre-Consultation on the Draft Environmental Assessment, the proposed facility is compatible with the State Department of Health's Hawaii 2000 Plan for Integrated Solid Waste Management. The need for such a facility is clearly demonstrated in the DEA and hearings before the Land Use Commission.

The DEA addresses our concern that the location next to other uses could create harmful levels of noise during hours of operation. The DEA states that no noise-sensitive activities are situated in the immediate vicinity such as residences and schools and the design of the facility will incorporate measures to minimize noise from the on-site equipment.

We believe the DEA discloses the mitigations planned to address our issues of concern. Thank you for the opportunity to review and comment on the DEA. If you have any questions, please call Mary Alice Evans at (808) 587-2802.

Sincerely,



Laura H. Thielen
Director

c: Anthony Ching, Land Use Commission

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Ms. Laura H. Thielen, Director
Office of Planning
Department of Business, Economic Development & Tourism
State of Hawai'i
P.O. Box 2359
Honolulu, Hawai'i 96804

Dear Ms. Thielen:

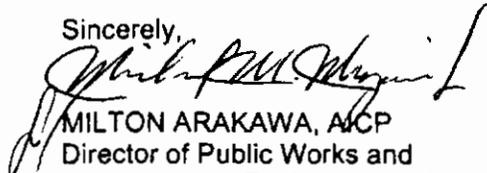
Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated August 1, 2006 providing comments on the Draft Environmental Assessment for the subject project.

We confirm the information provided associated with the existing land use designations, proposed improvements, and other surrounding land uses. In addition, the project will obtain the Solid Waste Management Facility Permit and applicable NPDES permit.

We concur that this project is compatible with the State Department of Health's plan for solid waste management, and is a needed facility for the County. We are glad to see the Draft Environmental Assessment addressed your concern with possible noise impacts, and disclosed pertinent mitigative measures to address them.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

LINDA LINGLE
GOVERNOR
STATE OF HAWAII



MICAH A. KANE
CHAIRMAN
HAWAIIAN HOMES COMMISSION

BEN HENDERSON
DEPUTY TO THE CHAIRMAN

KAULANA H. PARK
EXECUTIVE ASSISTANT

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS

P.O. BOX 1879
HONOLULU, HAWAII 96805

August 7, 2006

SSFM INTERNATIONAL, INC.
RECEIVED
~~AUG 09 2006~~

ras

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

FILE COPY

FILE _____

Dear Mr. Sato:

Subject: Draft Environmental Assessment for Proposed County of
Maui Abandoned Vehicle and Scrap Metal Project,
Puunene, Wailuku, Maui

The Department of Hawaiian Home Lands (DHHL) is the owner of two parcels of land located in close proximity to the proposed project. The first, TMK: 3-8-08:36, is an 80-acre parcel across Mokulele Highway from the proposed project, south of the Humane Society, between the Highway and Mehemehe Loop. The second parcel, TMK: 3-8-08:34, is a 649 acre parcel located south of the proposed facility.

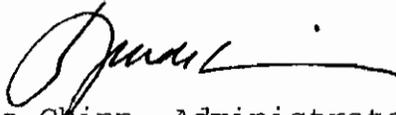
DHHL's parcels are currently in sugar cane cultivation. However, we plan to develop the 80-acre parcel for light industrial use, in the near future. This use is in keeping with the Kihei-Makena Community Plan for the area that calls for ". . . moderate expansion of light industrial use in the Central Maui Baseyard, along Mokulele Highway."

The daily water demand for the first phase of our Puunene development project is estimated to be 196,000 - 240,000 gpd. Our initial effort to obtain a water reservation for this phase was denied by the Maui Department of Water Supply, pending the development of a water source outside of the Iao aquifer. With this in mind, we are interested in opening up discussions to explore water source and storage development that may be of benefit to both DHHL and the County of Maui.

Mr. Ronald A. Sato, AICP
August 7, 2006
Page 2

Please feel free to contact us at anytime to discuss our mutual projects. Should you have any questions or wish to set up a meeting, please call me or Carolyn Darr, Land Agent of our Land Management Division at 586-3823.

Aloha and mahalo,

A handwritten signature in black ink, appearing to read "Linda Chinn", with a long horizontal flourish extending to the right.

Linda Chinn, Administrator
Land Management Division

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



**COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT**

200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

September 20, 2006

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

Ms. Linda Chinn, Administrator
Land Management Division
Department of Hawaiian Home Lands
State of Hawai'i
P.O. Box 1879
Honolulu, HI 96805

Dear Ms. Chinn:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated August 7, 2006 providing comments on the Draft Environmental Assessment for the subject project. We have taken note of your Department of Hawaiian Home Lands parcels located within the vicinity of our proposed facility.

We are currently working with Department of Water Supply to address the water needs for the proposed Abandoned Vehicle Facility project. We welcome your interest in discussions to explore water source and storage development, and will appropriately coordinate with your department regarding this.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton Arakawa".

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

LINDA LINGLE
GOVERNOR OF HAWAII



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

July 26, 2006

SSFM INTERNATIONAL, INC.
RECEIVED

JUL 31 2006

tas

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:

EPO-06-107

FILE

FILE COPY

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

Dear Mr. Sato:

SUBJECT: Draft Environmental Assessment
Abandoned Vehicle, Scrap Metal and White Goods Facility
Puunene, Maui, Hawaii
TMK: (2) 3-8-008: 001 (portion)

Thank you for allowing us to review and comment on the subject document. The document was routed to the various branches of the Environmental Health Administration. We have the following Solid and Hazardous Waste Branch comments.

Solid and Hazardous Waste Branch (SHWB)

The Department of Health (DOH) SHWB Solid Waste Section would like to provide the following comments:

1. Section 2.3, Project Need and Objectives. The first sentence of paragraph 2 states that, "Before March 2005, no company on the Island of Maui had proper State Department of Health permits for the disposal of abandoned and derelict vehicles along with scrap metal and white goods."

The DOH, SHWB would like to note that a solid waste salvage permit was held by at least one entity on Maui since 1996:

- Maui Scrap Metal: March 31, 1996 – March 31, 2001
- Maui Foreign Auto Wrecking/Maui Auto Wrecking: November 15, 2000- November 15, 2005
- Kitagawa's Towing: April 25, 2005 – April 24, 2010
- SOS Metals Island Recycling: November 21, 2005 – September 30, 2007

2. Section 2.3, Project Need and Objectives. Paragraph 3 indicates that, "Maui Scrap Metal Company was barred by the State DOH in March 2005 from accepting any junk vehicles or old appliances because it was operating without a permit or proper zoning. A solid

waste permit for the handling of these materials could not be obtained because of ongoing violations.” These statements are incorrect.

In April 2004, the DOH issued a Notice of Violation/Order to Maui Scrap for operating a solid waste management facility without a permit. The DOH does not regulate zoning or land use, and therefore did not enforce on any potential zoning violations. DOH's order required Maui Scrap Metal to cease and desist from accepting additional waste and to close the site. Maui Scrap Metal is contesting the order, and a final decision on the case has not been issued, pending a hearing.

A solid waste permit could not be obtained because of the lack of a complete application, not because of ongoing violations. Maui Scrap's salvage permit expired on March 31, 2001. Maui Scrap did not submit a complete renewal application for their operation and has been operating without a valid permit since April 2001. Information missing from the application includes, but is not limited to, a site map, operations plan, closure plan, county zoning approval, property owner approval and an application filing fee. No additional application information has been received to date. Maui Scrap Metal has indicated that they are unable to obtain necessary approvals to complete an application and therefore will not apply for a solid waste permit.

3. Section 2.3, Paragraph 7. This paragraph states that SOS Metals Recycling, "...are presently in the process of obtaining all necessary land use approvals and State DOH permits for the construction of their facility." The DOH, SHWB would like to note that a salvage permit was issued to SOS Metals Island Recycling on November 21, 2005. This permit has an expiration date of September 30, 2007, which coincides with the expiration date of their Special Use Permit (CUP2005/004), issued by the County Planning Commission.
4. Section 2.4, Facility Operation and Equipment. The first portion of this section specifies the DOH permit requirements that will control the type of structures provided at the facility, including a concrete slab for the baler and a roof for vehicle processing and storage of processed vehicles. The DOH offers the following clarification on this matter.

DOH salvage permit requirements typically reflect operational procedures and environmental controls proposed by the applicant. Additional controls may be required depending on the applicant's proposal, facility location, and other environmental considerations. The use of a concrete slab is a commonly employed technique to control subsurface contamination and, therefore, is included in salvage permits.

While the DOH supports and encourages vehicle processing to be performed in an enclosed building, it is not a regulatory requirement. Proper processing of vehicles in an enclosed building, in conjunction with good management practices, is a preferred method

Mr. Sato
July 26, 2006
Page 3

of reducing contaminant releases to the environment. This consideration may affect other permit conditions and sampling requirements upon site closure.

5. The Solid Waste Section notes that the facility is subject to solid waste management permitting requirements. We will address specific issues concerning the subject facility through the solid waste permit process.

If you have any questions about these comments, please contact Janice Fujimoto at (808) 586-4226.

We strongly recommend that you review all of the Standard Comments on our website: www.state.hi.us/health/environmental/env-planning/landuse/landuse.html. Any comments specifically applicable to this project should be adhered to.

If there are any questions about these comments please contact Jiakai Liu with the Environmental Planning Office at 586-4346.

Sincerely,



KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
SHWB, Solid Waste Section
EH- Maui

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

September 20, 2006

Mr. Kelvin H. Sunada, Manager
Environmental Planning Office
Department of Health
State of Hawai'i
P.O. Box 3378
Honolulu, Hawai'i 96801-3378

Dear Mr. Sunada:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated July 26, 2006 providing comments on the Draft Environmental Assessment for the subject project. Our responses are numbered to correspond to your comments.

1. Your information on the permits held by companies is appreciated and will be included in the Final Environmental Assessment (Final EA).
2. The statements referenced will be revised based upon the information provided on the solid waste permit status for Maui Scrap Metal.
3. Your input on the status of SOS Metals Island Recycling will be included in the Final EA.
4. Your clarification on the State Department of Health's permit requirements is appreciated. This information will be incorporated into the Final EA.
5. We confirm the proposed facility will be subject to solid waste management permitting requirements, and that specific facility issues will be addressed during the permit process. Appropriate coordination will be conducted with your department during the project's design phase.

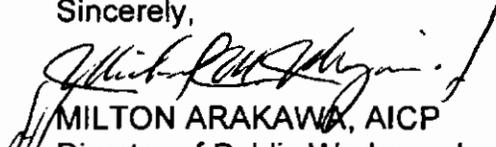
Mr. Kelvin Sunada, Manager
September 20, 2006

Regarding the Standard Comments from your website referred to in your letter, we provide the following responses.

1. Clean Air Branch.
 - The project would not involve the renovation or demolition activities which may involve asbestos.
 - Project impacts associated with fugitive dust were addressed in the Draft EA and potential mitigative measures identified that could be implemented by the contractor. Such construction related effects should be minimal since there are no sensitive land uses adjacent to the project site such as residences.
 - Construction activities conducted by the contractor will be in compliance with your Administrative Rules on fugitive dust, and adequate measures implemented to control dust.
2. Clean Water Branch.
 - Consultation with the Department of Army was conducted to identify and address project impacts to waters under their jurisdiction. The results were included in the Draft EA. A Section 401 Water Quality Certification will not be required for this project.
 - The project will not require an Individual Permit, but will require a Notice of Intent for general permit coverage under NPDES. This was addressed in the Draft EA.
 - A copy of the applicable NPDES permit application will be submitted to the State Historic Preservation Division for their review.
 - Discharges associated with the project will comply with the applicable State Water Quality Standards under your Administrative Rules and requirements of Subsection 342D-50(1), HRS.
3. Environmental Planning Office.
 - Any waterbodies affected by the project have been identified as indicated in the Final EA.
 - NPDES permits and related permits required for this project were identified in the Draft EA.
 - There are no known specific prescriptions for water quality management identified at the project site and in affected waterbodies.
 - There are no known water bodies affected by the project which appear on the current List of Impaired Waters in Hawai'i. The Final EA has been revised to address this information.
 - The project would not affect water bodies on the list of impaired waters, therefore, information the site and watershed conditions and characteristics are not applicable.
 - The information requested on TMDLs would not be applicable to this project based upon the prior responses.
 - The Draft EA assessed the project impacts on hydrology, water quality, aquatic and riparian ecosystems at a reasonable and practicable scale given the nature of the project being proposed.

4. Health Evaluation and Emergency Response Office.
 - A Phase 1 Environmental Site Assessment was conducted for this project site, and the results were discussed in Section 3.6 of the Draft EA.
 - The project site is not expected to contain arsenic contamination.
 - The Phase 1 Environmental Site Assessment determined the site had no history of previous releases of hazardous materials. Thus, a "no further action" letter should not be required.
5. Noise, Radiation, and Indoor Air Quality Branch.
 - The project will comply with the pertinent Administrative Rules identified.
6. Safe Drinking Water Branch.
 - Coordination with the County Department of Water is being conducted to address necessary water system improvements.
 - New potable water sources are not included as part of this project, thus, the engineering report and other requirements identified would not be applicable.
 - Injection wells for wastewater disposal or surface runoff will not be needed for this project.
 - This project does not involve a golf course, thus, the groundwater guidelines identified are not applicable.
7. Solid and Hazardous Waste Branch.
 - A solid waste management plan will be developed during the project's design phase.
 - Solid waste generated during project construction will be directed to a permitted disposal or recycling facility.
 - This project consists of a metal recycling facility to serve the island and is thus supporting the County's efforts in recycling activities.
 - Roadway improvements implemented by this project will utilize the crushed glass aggregate discussed to the extent reasonable and practicable.
8. Wastewater Branch.
 - All wastewater improvements associated with this project will conform to the applicable provisions of your Department's Administrative Rules.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2102

July 11, 2006

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CHIYOME L. FUKINO, M. D.
DIRECTOR OF HEALTH

LORRIN W. PANG, M. D., M. P. H.
DISTRICT HEALTH OFFICER

FILE COPY

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawai'i 96817

Dear Mr. Sato:

Subject: **Abandoned Vehicle, Scrap Metal and White Goods Facility
Project, TMK: (2) 3-08-008: portion of 001**

Thank you for the opportunity to comment on the proposed Abandoned Vehicle, Scrap Metal and White Goods Facility Project. The following comments are offered:

1. National Pollutant Discharge Elimination System (NPDES) permit coverage is required for this project. The Clean Water Branch should be contacted at 808 586-4309.
2. The noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules (HAR), Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work.
3. HAR, Chapter 11-46 sets maximum allowable sound levels from stationary equipment such as compressors and HVAC equipment. The attenuation of noise from these sources may depend on the location and placement of these types of equipment. This should be taken into consideration during the planning, design, and construction of the building and installation of these types of equipment.

Mr. Ronald A. Sato
July 11, 2006
Page 2

4. Plan review and approval of all new wastewater disposal systems is required prior to construction of the systems.

Should you have any questions, please call me at 808 984-8230.

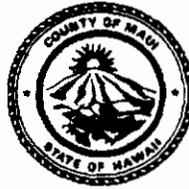
Sincerely,

A handwritten signature in black ink, appearing to read 'H. Matsubayashi', enclosed within a large, loopy oval shape.

Herbert S. Matsubayashi
District Environmental Health Program Chief

c: Tracy Takemine
Michael W. Foley
OEQC
EPO

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
**DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT**

200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

September 20, 2006

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

Mr. Herbert S. Matsubayashi, Chief
District Environmental Health Program
Maui District Health Office
Department of Health
State of Hawai'i
54 High Street
Wailuku, Hawai'i 96793-2102

Dear Mr. Matsubayashi:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS FACILITY
PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated July 11, 2006 providing comments on the Draft Environmental Assessment for the subject project.

NPDES permits and related permits required for this project were identified in the Draft EA. The appropriate Notice of Intent for coverage under the NPDES will be obtained during the project's design phase.

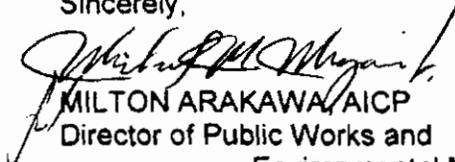
If necessary, a noise permit will be obtained before commencement of construction activities.

The appropriate siting of stationary equipment such as compressors and HVAC equipment will be taken into consideration during the project's design to attenuate noise from these sources.

Plans for the wastewater disposal system will be submitted for review and approval to the applicable agencies prior to construction of the system.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,


MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management



RODNEY K. HARAGA
DIRECTOR

Deputy Directors
FRANCIS PAUL KEENO
BARRY FUKUNAGA
BRENNON T. MORIOKA
BRIAN H. SEKIGUCHI

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:

STP 8.2261

September 8, 2006

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, Hawaii 96817

SSFM INTERNATIONAL, INC.
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FILE COPY

Dear Mr. Sato:

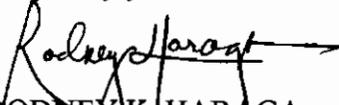
Subject: Draft Environmental Assessment (DEA)
Abandoned Vehicle, Scrap Metal and White Goods Facility
Maui County Department of Public Works and Environmental Management
TMK: (2) 3-08-008: portion of 001

We apologize for this late response. We have the following comments on the proposal to establish the subject facility:

1. The facility is being located within the site of the old Puunene airfield and will be contributing its portion of traffic to the cumulative impact on our highway (Mokulele Highway), particularly around the access entrance to the site.
2. With each new county facility being established at the site of the old Puunene airfield, the need for access improvements and related traffic controls, along the highway and at the entrance intersection in response to the accompanying new traffic, also increases. Although Mokulele Highway is involved in a widening project, the county agencies responsible for this new facility should coordinate the development of the facility with our Highways Division, Maui District Office and Highways Planning Branch and plan to provide traffic improvements and/or controls that may be needed, as determined by our Highways staff.

We appreciate the opportunity to provide our comments.

Very truly yours,


RODNEY K. HARAGA
Director of Transportation

- c: Genevieve Salmonson, Office of Environmental Quality Control
Tracy Takamine, Maui Department of Public Works & Environmental Management
Michael Foley, Maui Department of Planning

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Mr. Rodney K. Haraga, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Mr. Haraga:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawaii
Draft Environmental Assessment Comments

Thank you for your letter dated September 8, 2006 providing comments on the Draft Environmental Assessment for the subject project.

The project located at the old Pu'unēnē airfield will contribute some traffic to Mokulele Highway as discussed in the Draft Environmental Assessment. Our department will appropriately coordinate with your Highways Division, Maui District Office and Highways Planning Branch during the project's design phase.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton Arakawa".

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

LINDA LINGLE
GOVERNOR OF HAWAII



GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186
E-mail: oeqc@health.state.hi.us

July 21, 2006

Milton Arakawa
Department of Public Works & Environmental Management
200 South High Street
Wailuku, HI 96793

Attn: Tracy Takamine

Dear Mr. Arawaka:

Subject: **Draft Environmental Assessment (EA), Abandoned Vehicle, Scrap Metal & White Goods Facility**

We have the following comments:

Segmentation: The EA notes a number of proposed projects for the Puunene region. Some have been submitted previously to OEQC as individual EAs. The environmental impact statement law prohibits segmentation of larger activity areas and requires full disclosure of impacts in their entirety. A master plan for the Puunene region needs to be developed and submitted as an EA or EIS.

Recycling: We recommend establishment of a solid waste recycling plan for this project.

Terminology: Section 1.1 lists DPWEM as the accepting authority for the Mayor. "Accepting authority" only refers to EISs. For EAs the applicant (or proposing) agency is the same as the approving or permitting agency, in this case DPWEM.

If you have any questions, please call Nancy Heinrich at 586-4185.

Sincerely,

A handwritten signature in cursive script that reads "Genevieve Salmonson".

GENEVIEVE SALMONSON
Director

c: Ron Sato

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawai'i
235 South Beretania Street, Suite 702
Honolulu, Hawai'i 96813

Dear Ms. Salmonson:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawaii
Draft Environmental Assessment Comments

Thank you for your letter dated July 21, 2006 providing comments on the Draft Environmental Assessment for the subject project.

The Draft Environmental Assessment did identify and include available information on other developments planned in the immediate vicinity of the project, and appropriately addressed those under the cumulative impacts section. Those identified were the future correctional center, and future areas to be used by the police and fire departments.

However, as discussed, there are no available plans or future timeframes established for those uses which can reasonably and practicably be used in assessing impacts under this document. Therefore, a master plan for the Pu'unēnē region does not need to be developed or included under an environmental document associated with this project.

This project already consists of the development of a new recycling facility to serve the County in disposing and processing abandoned vehicles, scrap metal, and white goods. Thus, a solid waste recycling plan is not necessary for this facility. However, a solid waste management plan will be implemented as part of the project's construction activities.

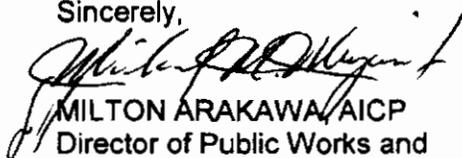
Ms. Genevieve Salmonson, Director
September 20, 2006

Page 2

The Final Environmental Assessment will show the County Department of Public Works and Environmental Management as the proposing agency and approving agency.

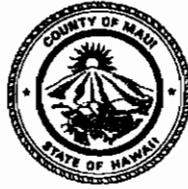
If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton Arakawa". The signature is written in a cursive style with a large, sweeping initial "M".

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

ALAN M. ARAKAWA
Mayor



GLENN T. CORREA
Director

JOHN L. BUCK III
Deputy Director

(808) 270-7230
Fax (808) 270-7934

DEPARTMENT OF PARKS & RECREATION

700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

July 12, 2006

SSFM INTERNATIONAL, INC
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FILE

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, HI 96817

FILE COPY

Dear Mr. Sato:

**SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR
ABANDONED VEHICLE, SCRAP METAL AND WHITE
GOODS FACILITY PROJECT, TMK: (2) 3-08-008: PORTION
OF 001, PUUNENE, MAUI HAWAII**

We have reviewed the Draft EA for the above referenced project and submit the following comments:

1. Adequate buffer and landscape screening be provided to mitigate the impacts to the surrounding uses.
2. In general, we are in support of the proposed project.
3. We reserve further comments until more detailed plans are developed.

Thank you for the opportunity to review and comment on this matter. Please feel free to contact me should you have any other questions.

Sincerely,

Glenn T. Correa
Director of Parks and Recreation

GTC:do

c: Milton Arakawa, DPWEM
Michael W. Foley, Director of Planning

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Mr. Glenn T. Correa, Director
Department of Parks and Recreation
County of Maui
700 Hali'a Nakoa Street, Unit 2
Wailuku, Hawai'i 96793

Dear Mr. Correa:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

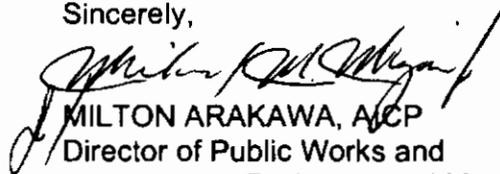
Thank you for your letter dated July 12, 2006 providing comments on the Draft Environmental Assessment for the subject project.

As appropriate, adequate buffer areas and landscape screening will be considered for incorporation onto the project site during the design phase. Some potential landscaping features that could be incorporated into the design were discussed in Section 3.4 of the Draft Environmental Assessment.

We appreciate your support of the project and note that you reserve further comments on the proposed project until more detailed plans are developed.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,


MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management



POLICE DEPARTMENT COUNTY OF MAUI



ALAN M. ARAKAWA
MAYOR

OUR REFERENCE
tj
YOUR REFERENCE

**55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411**

July 26, 2006

THOMAS M. PHILLIPS
CHIEF OF POLICE

GARY YABUTA
DEPUTY CHIEF OF POLICE

SSFM INTERNATIONAL, INC.
RECEIVED

JUL 31 2006

ras

FILE

FILE COPY

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 502
Honolulu, Hi 96817

Dear Mr. Sato:

**SUBJECT: ABANDONED VEHICLE, SCRAP METAL AND WHTIE GOODS
FACILITY PROJECT TMK: (2) 3-08-008: portion of 001, PUUNENE,
MAUI, HAWAII**

This is in response to your letter dated June 15, 2006, requesting comments on the above subject.

Please refer to the enclosed copy of the To/From submitted by Sergeant Scott Migita for our comments. Thank you for giving us the opportunity to comment on this project.

Very truly yours,

Milton Matsuoka
Acting Assistant Chief Milton Matsuoka
for: Thomas M. Phillips
Chief of Police

Enclosure

c: Milton Arakawa, Public Works and Environmental Management
Michael W. Foley, Planning Department
Tracy Takamine, Solid Waste Division Chief

COPY

TO : THOMAS PHILLIPS, CHIEF OF POLICE, COUNTY OF MAUI

VIA : CHANNELS

FROM : SCOTT Y. MIGITA, ADMINISTRATIVE SERGEANT, WAILUKU PATROL

SUBJECT : DRAFT ENVIRONMENTAL ASSESSMENT FOR ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS FACILITY, PUUNENE, MAUI, HAWAII

Sir, this transmittal is being submitted regarding a new metal recycling facility which will receive, store, auction, and process abandoned and derelict vehicles for the County of Maui. This facility also proposes to process scrap metal, and white goods for baling and shipping to market. The proposing agency is the County of Maui, Department of Public Works and Environmental Management.

The project site is located on an approximately 14.5 acre site on a currently undeveloped area situated on the east side of Mokulele Highway at the former old Pu'unene Airport on State of Hawaii property zoned as an agricultural district.

On the issue of traffic and safety from a police standpoint, the concern is directed at the public access point of this proposed development and Mokulele Highway and also the intersection at the access road and the entrance to the proposed development.

Proper lane configuration would be essential which would impact the issue of both traffic and safety where police statistical reports were obtained on motor vehicle crashes occurring in similar configured four lane intersections between 01/01/00 and 06/30/06. A four lane highway (two lanes in each direction) is anticipated to be developed on Mokulele Highway which may be pertinent to this statistical information. The following information had been obtained at or near the following intersections:

- 1) 42 crashes at or near Haleakala Highway and Makani Road (no traffic signal).**
- 2) 25 crashes at or near Haleakala Highway and North Firebreak Road (signalized).**

Wide turn lanes to accommodate large and oversized vehicles turning into and out of these intersections are recommended to reduce potential motor vehicle collisions in both directions on Mokulele Highway. An increase in vehicular traffic is also anticipated as a result of this proposed development, where in order to increase safety and reduce traffic slow down and backup, adequate lighting and roadway

infrastructure to include acceleration/deceleration and turn in/out lanes are recommended.

Regarding southbound traffic on Mokulele Highway, a left turn lane is suggested for vehicles entering the access road and an acceleration lane for vehicles on Mokulele Highway merging right into traffic, heading southbound. Northbound traffic on Mokulele Highway recommends a deceleration/right turn lane into the access road and an acceleration lane for vehicles merging left, heading north on this highway. Traffic signals are also recommended for intersection safety, however one must consider the importance of signal timing in order to decrease the potential for traffic buildup on Mokulele Highway at a red traffic signal.

Adequate street lighting and fencing are also recommended for intersection safety and security in order to prevent illicit activities such as unauthorized dumping of vehicles and other material. Additional comments may be offered upon review of the final Draft Environmental Assessment.

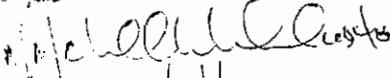
Submitted for your information and perusal.

Covered by SGT. MIGITA
RECOMMENDATION/ASSESSMENT.



Scott Y. MIGITA, E-1122
Administrative Sergeant, Wailuku Patrol
07/21/2006 at 1400 hours

A/Capt. 
7.23.06

NO OTHER ISSUES

07/24/06

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



**COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT**
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Mr. Milton Matsuoka, Acting Assistant Chief
Police Department
County of Maui
55 Mahalani Street
Wailuku, Hawai'i 96793

Dear Mr. Matsuoka:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: PORTION OF 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated July 26, 2006 providing comments on the Draft Environmental Assessment for the subject project. We have reviewed the comments provided by Scott Y. Migita, and have the following responses.

We share the concern for traffic and safety associated with the intersection of Mokulele Highway with the existing access road, and appreciate the accident information provided. The State Department of Transportation (DOT) is already constructing the next phase of the widening of this highway which will include several improvements to the Pu'unēnē Airport Access Road intersection.

These improvements were discussed in Section 5.5 of the Draft Environmental Assessment, and will already address many of the suggestions made for this intersection.

1. Acceleration and deceleration lanes are being provided at this intersection. These storage lanes will thus accommodate larger vehicles turning into or out from the Access Road without delaying traffic along the highway.
2. Left-turn storage lanes are also being provided along the highway for vehicles traveling in both directions.

Mr. Milton Matsuoka, Acting Assistant Chief
September 20, 2006

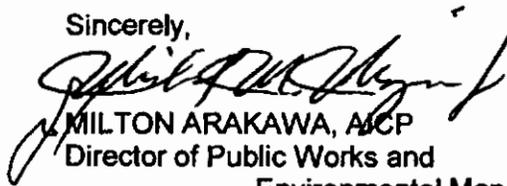
3. The infrastructure to accommodate a future traffic signal is also being constructed as part of the highway widening. Thus, the State DOT will be able to add the future traffic signal when warranted.

Fencing is also being provided along the highway at this intersection. Street lighting along the highway is not planned near the Access Road intersection. However, the proposed facility will only be operating during daylight hours.

Finally, this project is intended to support the County's recycling efforts to reduce the unauthorized dumping of vehicles and white goods. We appreciate your concern for improving traffic safety at this intersection.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

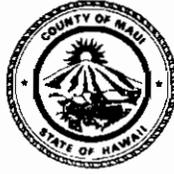
Sincerely,



MILTON ARAKAWA, AICP
Director of Public Works and

Environmental Management

ALAN M. ARAKAWA
MAYOR



KYLE K. GINOZA
Director
DON A. MEDEIROS
Deputy Director
Telephone (808) 270-7511
Facsimile (808) 270-7505

DEPARTMENT OF TRANSPORTATION

COUNTY OF MAUI
200 South High Street
Wailuku, Hawaii, USA 96793-2155

SSFM INTERNATIONAL, INC.
RECEIVED

JUL 27 2006

KAS

FILE _____

July 24, 2006

FILE COPY

Mr. Ronald A. Sato, AICP
Senior Project Planner
SSFM International, Inc.
501 Summer Street, Suite 620
Honolulu, HI 96817

SUBJECT: Abandoned Vehicle, Scrap Metal and White Goods Facility Project
TMK: (2) 3-080-008: portion of 001
Puunene, Maui, Hawaii
Draft Environmental Assessment

Dear Mr. Sato,

In response to your letter regarding the above subject matter, we have reviewed the project summary and location maps and have no comments to add at this time.

Should you have any questions, or require additional information, please feel free to contact our office at (808) 270-7511.

Sincerely,

Don Medeiros,
Deputy Director

/dcy

xc: Tracy Takamine, Department of Public Works and Environmental Management
Michael Foley, Department of Planning

ALAN M. ARAKAWA
Mayor

MILTON M. ARAKAWA, A.I.C.P.
Director

MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration

DAVID TAYLOR, P.E.
Wastewater Reclamation Division

CARY YAMASHITA, P.E.
Engineering Division

TRACY TAKAMINE, P.E.
Solid Waste Division

BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Mr. Don Medeiros, Deputy Director
Department of Transportation
County of Maui
200 South High Street
Wailuku, Hawai'i 96793-2155

Dear Mr. Medeiros:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawai'i
Draft Environmental Assessment Comments

Thank you for your letter dated July 24, 2006 providing comments on the Draft Environmental Assessment for the subject project.

We note you have no comments to offer at this time regarding the subject project.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton Arakawa".

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

ALAN M. ARAKAWA
Mayor



GEORGE Y. TENGAN
Director

ERIC H. YAMASHIGE, P.E., L.S.
Deputy Director

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
www.mauewater.org

INTERNATIONAL, INC.
RECEIVED

AUG 10 2006

ras

FILE

FILE COPY

July 28, 2006

Mr. Milton Arakawa, AICP, Director
Department of Public Works & Environmental Management
200 South High Street
Wailuku, HI 96793

SUBJECT: Abandoned Vehicle, Scrap Metal and White Goods Facility Project
TMK - (2) 3-8-008: portion of 001
Puunene, Maui, Hawaii
Draft Environmental Assessment

Dear Mr. Arakawa:

Thank you for the opportunity to provide comments on this project proposal

Source Availability and Consumption

The project site is served by the Central Maui System. The main sources of water for this system are the designated Iao aquifer, Waihee aquifer, the Iao tunnel and the Iao-Waikapu Ditch. DWS will not issue reservations for future meters or temporary construction meters for Central Maui projects until new sources are brought on-line. Remaining capacity of the Central System can not currently meet demand of this project. New source development projects include Kupaa well and expansion of the Iao Water Treatment Plant. Water for new projects may not be available until these sources are on-line.

Demand for the proposed 14.5 acre development would be 87,000 based on system standards. The application material indicates estimated average daily use at 27,000 gallons.

System Infrastructure

There is a 12-inch waterline on the subject parcel which serves the Hawaii Army National Guard facility. The applicant will be required to provide water and irrigation services as well as fire protection to standards. Currently, there is no storage available in the area to serve this development. Installation of reduced pressure back flow preventer will also be required. The applicant is encouraged to contact our Engineering Division at 270-7835 to discuss system improvements.

Conservation

In order to reduce demand in the Central System, we encourage the applicant to include the following water conservation measures in the project design and construction:

"By Water All Things Find Life"



Abandoned Vehicle, Scrap Metal & White Goods Facility_DEA
Mr. Milton Arakawa
July 28, 2006

Use brackish and/or reclaimed water sources for all non-potable water uses, including irrigation and dust control during construction.

Utilize Low-Flow Fixtures and Devices: Maui County Code Subsection 16.20A.680 requires the use of low-flow water fixtures and devices in faucets, showerheads, urinals, water closets, and hose bibs. Water conserving washing machines, ice-makers and other units are also available.

Pollution Prevention

The project overlies the Kahului aquifer. DWS strives to protect the integrity of surface and groundwater resources by encouraging the applicant to utilize Best Management Practices (BMPs) relevant to potentially polluting activities. We have attached sample BMPs for construction and uses that involve potential groundwater contamination and prevention for preventive measures. Additional mitigation measures are enumerated below and should be implemented during construction:

1. Prevent cement products, oil, fuel and other toxic substances from falling or leaching into the water.
2. Properly and promptly dispose of all loosened and excavated soil and debris material from drainage structure work.
3. Retain ground cover until the last possible date.
4. Stabilize denuded areas by sodding or planting as soon as possible. Replanting should include soil amendments, fertilizers and temporary irrigation. Use high seeding rates to ensure rapid stand establishment.
5. Avoid fertilizers and biocides, or apply only during periods of low rainfall to minimize chemical run-off.
6. Keep run-off on site.

Should you have any questions, please contact our Water Resources and Planning Division at 244-8550.

Sincerely,


George Y. Tengan, Director

eam

c: engineering division

applicant, with attachments:

The Costly Drip

Selected BMP's from "Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters"-EPA

Ordinance No. 2108 - A Bill for an Ordinance Amending Chapter 16.20 of the Maui County Code, Pertaining to the Plumbing Code

BMPs for Auto Wrecking

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
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Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Mr. George Y. Tengan, Director
Department of Water Supply
County of Maui
200 South High Street
Wailuku, HI 96793-2155

Dear Mr. Tengan:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawaii
Draft Environmental Assessment Comments

Thank you for your letter dated July 28, 2006 providing comments on the Draft Environmental Assessment for the subject project.

We appreciate the information updating us on the status of your department issuing reservations for future meters or temporary construction meters along with the source development projects identified. Water for new projects thus may not be available until these sources are brought on-line. Our department will continue to coordinate with the Department of Water Supply to help address and prioritize improvements so sources can be made available.

The 87,000 gallons estimated by your department is greater than our initial estimates, and appears to be based upon the site's acreage using your system standards for planning purposes. We believe the actual resulting demand should be closer to our estimates, but appropriate coordination will be conducted with your department during the project's design phase to address demand in greater detail.

Mr. George Y. Tengan, Director
September 20, 2006

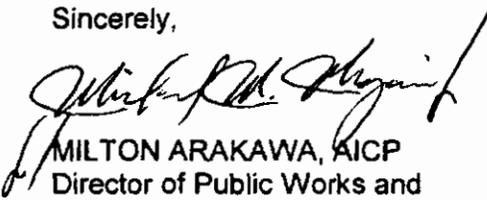
Page 2

Necessary system infrastructure will be provided to serve the project site which includes fire protection and irrigation. We will continue to coordinate with your Department to help address and prioritize improvements so storage can be made available in the area.

The water conservation measures identified will be incorporated into the project's design to the extent reasonable and practicable. In addition, best management practices will be utilized to address potential polluting activities.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Milton Arakawa". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management



SSFM INTERNATIONAL, INC
RECEIVED

RAS

FILE _____

June 21, 2006

Mr. Ronald A. Sato, AICP
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, HI 96817

Dear Mr. Sato,

Subject: Abandoned Vehicle, Scrap Metal, and White Goods Facility Project
Draft Environmental Assessment
Pu'unēnē, Maui, Hawaii
TMK: (2) 3-8-008: portion of 001

Thank you for allowing us to comment on the subject project, which was received on June 20, 2006.

In reviewing our records and the information received, Maui Electric Company (MECO) has no objection to the project at this time. As noted in our previous letter dated March 29, 2006 to Mr. Ronald Sato of SSFM International, we highly encourage the developer's electrical consultant to submit the electrical demand requirements and project time schedule as soon as practical so that service can be provided on a timely basis.

Again, may we reiterate that the developer and/or their consultant make contact with Walter Enomoto of our Demand Side Management (DSM) group at 872-3283 to review potential energy conservation and efficiency opportunities for their project.

Should you have any other questions or concerns, please call Kim Kawahara at 871-2345.

Sincerely,

Neal Shinyama
Manager, Engineering

NS/kk:lh

c: Walter Enomoto – MECO DSM

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
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BRIAN HASHIRO, P.E.
Highways Division

**COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT**

200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

September 20, 2006

Mr. Neal Shinyama, Manager
Engineering
Maui Electric Company, Ltd.
P.O Box 398
Kahului, Hawai'i 96733-6898

Dear Mr. Shinyama:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS
FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawaii
Draft Environmental Assessment Comments

Thank you for your letter dated June 21, 2006 providing comments on the Draft Environmental Assessment for the subject project.

We note that your department has no objection to the proposed project at this time.

Appropriate coordination will be conducted with your department during the project's design to address electrical demand requirements so that service can be provided on a timely manner.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

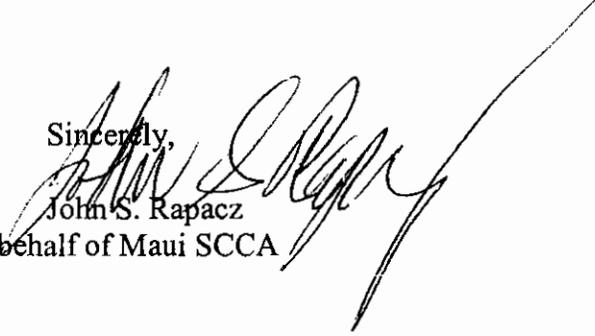
A handwritten signature in black ink, appearing to read "Milton Arakawa".

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

3). Since you are going through all that is necessary to seek (and hopefully obtain) a CPA, CIZ and LU District Boundary Amendment, please include the entire motorsports park area in the applications. Currently, there is some uncertainty about the appropriate uses. Inclusion of the park in your process would remove any uncertainty and establish clear and permanent recreational use.

I look forward to your response.

Sincerely,


John S. Rapacz

On behalf of Maui SCCA

ALAN M. ARAKAWA
Mayor
MILTON M. ARAKAWA, A.I.C.P.
Director
MICHAEL M. MIYAMOTO
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Developmental Services Administration
DAVID TAYLOR, P.E.
Wastewater Reclamation Division
CARY YAMASHITA, P.E.
Engineering Division
TRACY TAKAMINE, P.E.
Solid Waste Division
BRIAN HASHIRO, P.E.
Highways Division

September 20, 2006

Mr. John S. Rapacz, Attorney at Law
P.O. Box 2776
Wailuku, HI 96793

Dear Mr. Rapacz:

Subject: **ABANDONED VEHICLE, SCRAP METAL, AND WHITE GOODS FACILITY PROJECT**
TMK: (2) 3-08-008: portion of 001
Pu'unēnē, Maui, Hawaii
Draft Environmental Assessment Comments

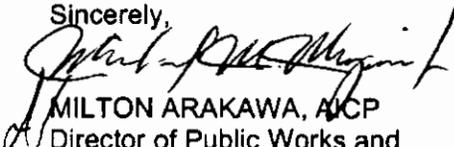
Thank you for your letter dated August 10, 2006 providing comments on the Draft Environmental Assessment for the subject project. We have the following response to your comments.

The Final Environmental Assessment will be revised to include the Maui Chapter Sports Car Club of America (SCCA) as a current, permitted user of the former Pu'unēnē Airport area.

We would like to clarify that the proposed abandoned vehicle project site will encompass about 14.5 acres. That is the current acreage assigned to this site as indicated in the Pu'unēnē Airport Area Plan figure you reference. Therefore, the acreage shown for the future use by Maui Police Department, Maui Fire Department, and your SCCA organization will not be significantly reduced or affected.

We regret to inform you that we cannot include the entire motor sports park area in the entitlement applications to be processed for the Abandoned Vehicle project.

If you have any questions on this matter, please contact Mr. Tracy Takamine, Solid Waste Division Chief at (808) 270-7881. Thank you.

Sincerely,

MILTON ARAKAWA, AICP
Director of Public Works and
Environmental Management

APPENDIX C

PHASE 1 - ENVIRONMENTAL SITE ASSESSMENT REPORT

**PHASE I
ENVIRONMENTAL SITE ASSESSMENT REPORT
FOR
PROPOSED ABANDONED VEHICLE FACILITY
PUUNENE AIRPORT AREA
PULEHUNUI, ISLAND OF MAUI**

TMK (2) 3-8-008:001

APRIL 2006



Environmental Studies and Consulting Services

99-1046 Iwaena St. #210A, Aiea, Hawaii, USA 96701 • 808.484.9214

This Phase I ESA report is prepared for:

SSFMI International, Inc.
501 Sumner Street, Suite 620
Honolulu, HI 96817

**PHASE I
ENVIRONMENTAL SITE ASSESSMENT
FOR
PROPOSED ABANDONED VEHICLE FACILITY
PUUNENE AIRPORT AREA
PULEHUNUI, ISLAND OF MAUI
TMK (2) 3-8-008:001**

398 acres (proposed project area - 14.5 acres)

MNA Job No. 30541

April 21, 2006



Melissa Farris
Environmental Scientist



Myounghee Noh
Principal

Myounghee Noh & Associates, L.L.C.
Environmental Studies & Consulting Services
99-1046 Iwaena Street, Suite 210A
Aiea, Hawaii 96701
Tel (808) 484-9214
Fax (808) 484-4660
Toll free (888) 747-8448
www.noh-associates.com

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APPENDICES

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LIST OF ABBREVIATIONS

ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation & Liability Information System
CFR	Code of Federal Regulations
CORRACTS	RCRA Facilities that are undergoing “corrective action”
EDR	Environmental Data Resources, Inc.
EPA	Environmental Protection Agency
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
HDOH	Hawaii Department of Health
HEER	Hazard Evaluation and Emergency Response
LUST	Leaking Underground Storage Tank
MNA	Myounghee Noh & Associates, L.L.C.
MSL	Mean Sea Level
NPL	National Priorities List
PCB	Polychlorinated Biphenyls
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
TMK	Tax Map Key
TSD	Treatment, Storage, and Disposal
UIC	Underground Injection Control
UST	Underground Storage Tank

1.0 EXECUTIVE SUMMARY

Myounghee Noh & Associates, L.L.C. (MNA), was retained to conduct a Phase I Environmental Site Assessment (ESA) for the proposed Abandoned Vehicle Facility site located in the former Puunene Airport area on the Island of Maui. The subject site is part of Tax Map Key, TMK (2) 3-8-008:001, which encompasses approximately 398 acres of land. The planned Abandoned Vehicle Facility is located in the central portion of the parcel and encompasses approximately 14.5 acres. This work was completed for the County of Maui and SSFM International, Inc., at 501 Sumner Street, Suite 620, Honolulu, Hawaii 96817. The subject site was owned by the State of Hawaii and was not in use at the time of the site visit.

1.1 FINDINGS SUMMARY

Based on the information obtained during the site assessment performed in March-April 2006, MNA provides the following summary:

- **Database Search for Subject and Adjoining Sites:** The subject and adjoining properties were not listed in any of the federal or state databases searched by EDR (Appendix B). The findings are summarized in the following table:

Search Type	Distance Searched	Findings
Federal NPL Site List	1 mile	None
Federal RCRA CORRACTS TSD Facilities List	1 mile	None
State Hazardous Waste Sites	1 mile	None
Federal CERCLIS List	1/2 mile	None
Federal RCRA Non-CORRACTS TSD Facilities List	1/2 mile	None
State-Equivalent CERCLIS	1/2 mile	None
State Landfill and/or Solid Waste Disposal Site List	1/2 mile	None
State Registered UST List	1/4 mile	None
State Leaking UST List	1/2 mile	None
Federal RCRA Generators List	1/2 mile	None
Federal ERNS List	Subject site	None
State Spill List	Subject site	None

- **Site Check:** During a site check conducted on March 6 and March 29, 2006, MNA observed the proposed project site and surrounding areas. MNA's findings are as follows:

Proposed Project Area – Future Abandoned Vehicle Facility

The proposed project area is located east of Mokulele Highway between Kihei and Kahului in central Maui. It is bordered to the north by the paved Maui Raceway Park access road. The proposed project area is bordered by sugarcane fields along its southern boundary, which are marked by a winding dirt roadway. A vacant lot borders the project area along its northeast side. The project vicinity was part of the former Naval Air Station Puunene during World War II; however, the proposed Abandoned Vehicle Facility site remained unused during wartime operations. Furthermore, the areas surrounding the proposed project site were largely used for sugarcane cultivation, although the land within the proposed Abandoned Vehicle Facility site itself was never cultivated due to the rocky/stony conditions at the site.

A few discarded materials, such as old tires, furniture, and rusted automobile parts, were scattered across the proposed project area. A bulldoze pile in the southeastern portion of the project area

contained remnants of the Naval Air Station housing units, including concrete walls, rebar, and boulders which were discarded on the proposed Abandoned Vehicle Facility site from adjoining areas.

Adjoining Properties (Remaining portions of TMK (2) 3-8-008:001)

Beyond the Maui Raceway Park access road lies the proposed site for the Maui Community Correctional Center, which was being used as a temporary storage area at the time of this assessment. The Hawaii Army National Guard Puunene Armory is located northwest of the project site, adjacent to the proposed correctional center location. Recreational facilities for drag strip racing, go-karts, moto-cross, radio controlled planes, and other motorized recreational activities are located east, northeast, and southeast of the proposed project area. Land south of the project area is used for sugarcane cultivation.

- **Hazardous Materials and Regulated Wastes:** A civilian dump site, in use after World War II, was formerly located approximately 1000 ft. southwest of the proposed project area. The dump site has since been closed and is no longer in use.
- **Storage Tanks:** No state-registered underground storage tanks (USTs) were found within the proposed project site or the surrounding areas. Information obtained through an interview revealed the former existence of underground aviation fuel tanks located along Mokulele Highway southwest of the proposed project area. These tanks were properly closed between 1999 and 2000.
- **Potential Asbestos-, Polychlorinated Biphenyl- or Lead-Containing Material:** MNA found no evidence of materials that could contain asbestos, lead, and polychlorinated biphenyls (PCBs) in the proposed project area. A records review revealed the former existence of a small transformer (removed in 2001) in a self-enclosed building, located approximately 300 ft. east of the proposed project site. After the removal, sampling & analysis of the area revealed the presence of PCB-contaminated soil around the transformer building. Consequently, the transformer building was demolished, and some contaminated soil was removed in November 2002 and January 2003. The U.S. Army Corps of Engineers (Honolulu District) contracted Wil Chee-Planning, Inc., to remove the remaining PCB-contaminated soil in 2006.
- **Offsite Contamination Source:** MNA does not identify the former presence of the aviation fuel tanks, the civilian dump, or the transformer & PCB-contaminated soil as *recognized environmental conditions* for the following reasons:
 - These facilities were not located within the boundaries of the project site
 - They have all been properly closed and/or removed
 - The PCB-contaminated soil near the former transformer building has been removed
 - The vegetation within and surrounding the project area provides a natural barrier against the migration of contaminants

1.2 RECOGNIZED ENVIRONMENTAL CONDITIONS

Based on the information obtained during this ESA, MNA observed no *recognized environmental conditions* in connection with the subject property.

2.0 INTRODUCTION

This report presents the results of a Phase I Environmental Site Assessment (ESA) of the proposed Abandoned Vehicle Facility located in the former Puunene Airport area on the Island of Maui (Figure 1). The subject site is part of Tax Map Key, TMK (2) 2-8-008:001, which encompasses approximately 398 acres of land. The planned Abandoned Vehicle Facility, herein referred to as the proposed project area, is located in the central portion of the parcel and encompasses approximately 14.5 acres (Figure 2). This ESA was conducted by Myounghee Noh & Associates, L.L.C., herein referred to as MNA, for the County of Maui and SSFM International, Inc., at 501 Sumner Street, Suite 620, Honolulu, Hawaii 96817. The subject site was owned by the State of Hawaii at the time of the site visit.

2.1 PURPOSE

The purpose of this Phase I ESA is to identify any *recognized environmental conditions* (REC) at the proposed project area, with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and petroleum products. This practice is intended to permit a user to satisfy one of the requirements to qualify for the *innocent landowner defense* to CERCLA liability, “all appropriate inquiry into the previous ownership and uses of the site consistent with good commercial or customary practice.” The term *recognized environmental conditions* denotes the presence, or likely presence, of any hazardous substances or petroleum products on the site under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the site or into the ground, ground water, or surface water of the site [American Society for Testing and Materials (ASTM), 2000].

The assessment was performed in accordance with the prescribed practice in designations *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM, 2000).

2.2 DETAILED SCOPE OF SERVICES

A Phase I ESA has four components: Records Review; Site Reconnaissance; Interview; Report. MNA conducted the ESA using information sources with the potential to identify past or current releases of hazardous materials at the site. MNA performed the following:

2.2.1 Site History

MNA examined documents consisting of topographic maps, tax maps, and aerial photographs. The purpose of this basic research was to identify previous and current uses of the site, adjoining properties, and the surrounding area.

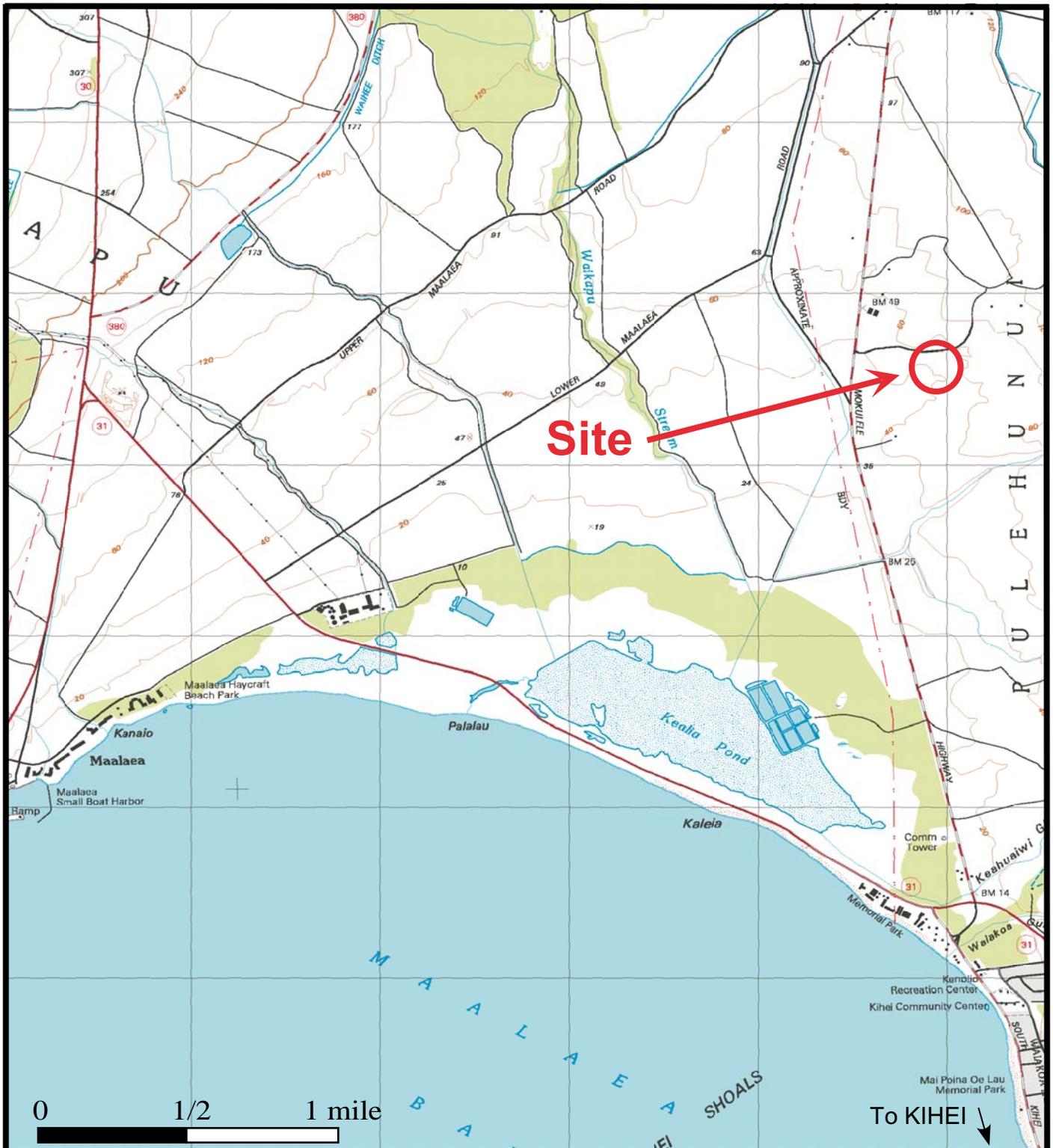
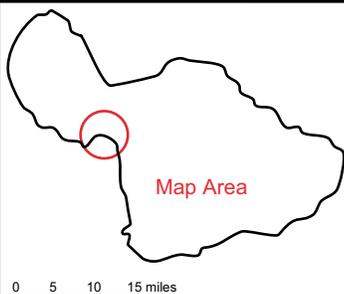


Figure 1. Site Location



**Phase I ESA
Proposed Abandoned Vehicle Facility
Puunene Airport Area, Maui
TMK (2) 3-8-008:001**

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Associates, L.L.C.**

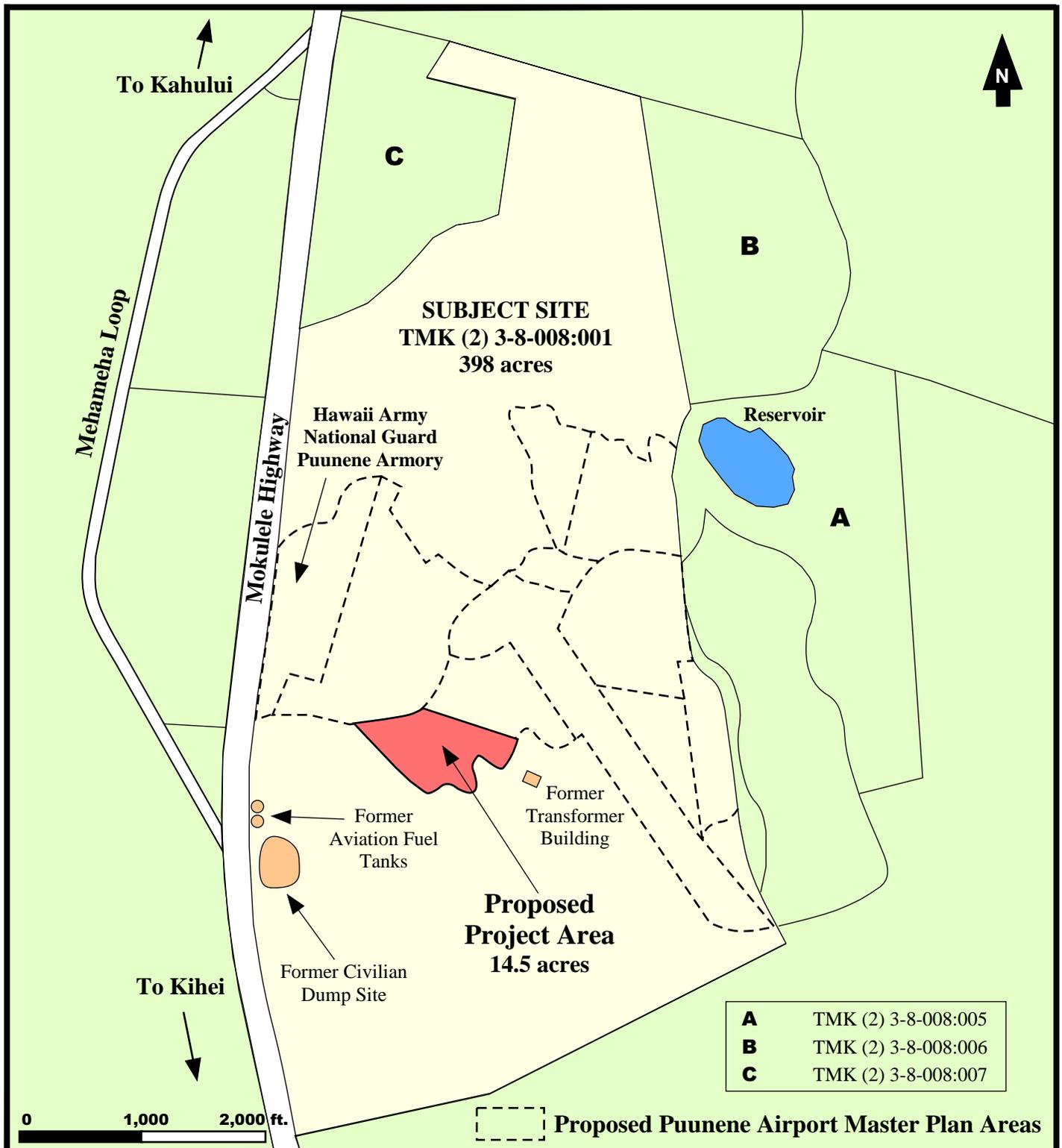


Figure 2. Site Map



Phase I ESA
Proposed Abandoned Vehicle Facility
Puunene Airport Area, Maui
TMK (2) 3-8-008:001

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2.2.2 Regulatory Records

MNA examined government records with respect to environmental conditions, citations, complaints, and permits at the subject site, at adjoining properties, and the surrounding area. MNA reviewed records from the following federal or state programs:

- National Priorities List (NPL)
- Resource Conservation and Recovery Act (RCRA) facilities that are undergoing “corrective action” (CORRACTS)
- RCRA-Treatment, Storage, & Disposal (TSD)
- Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS) List
- Solid Waste & Landfill
- Leaking Underground Storage Tank (LUST)
- Water Wells
- RCRA-Violators/Enforcement
- Underground Storage Tank (UST) list
- Toxic Release Inventory System (TRIS)
- Emergency Response Notification System (ERNS)
- RCRA-Large Generator
- RCRA-Small Generator
- Spills

2.2.3 Site Reconnaissance

MNA performed a site reconnaissance to obtain information indicating the likelihood of contamination, to interview available site personnel, if any, and conduct a brief assessment of the adjoining properties. During the site reconnaissance, MNA looked for stained surface soil, dead or stressed vegetation, hazardous materials, aboveground and underground storage tanks, disposal areas, groundwater wells, sumps, and storm drains. Sampling and testing of soil and groundwater were not part of this scope of work.

2.2.4 Site Geology and Hydrogeology

MNA reviewed published information on surface and subsurface conditions at the site and surrounding area. MNA used this information to assess topography, drainage, surface water bodies, subsurface geology, and groundwater occurrence in the area to assess the impact of migration of any potentially hazardous materials in connection with the site.

2.2.5 Data Evaluation and Reporting

MNA evaluated the information collected and prepared this report documenting the assessment. Section 2 presents the introduction, Section 3 contains the site description, Section 4 contains information obtained from the user, Section 5 records review, Section 6 site reconnaissance, Section 7 personal interview, Section 8 summary of findings, Section 9 opinion, and Section 10

conclusions.

2.3 SIGNIFICANT ASSUMPTIONS

The conclusions presented in this report are based upon the assumption that reasonably ascertainable and relevant information pertaining to the environmental condition of the subject site was made available to MNA during the assessment. Information obtained from government agencies and other resources is presumed to be accurate and updated.

2.4 LIMITATIONS AND EXCEPTIONS

The Phase I ESA provides a “snap shot” of the site conditions and is, by its nature, limited. The summary and conclusion apply to site conditions existing at the time of our investigation and those reasonably foreseeable. They cannot apply to site changes of which MNA is not aware and has not had the opportunity to evaluate.

This report is based upon visual observations of the site and vicinity, and interpretation of the available historical and regulatory information and documents reviewed. MNA cannot ensure the accuracy of the historical or regulatory information. This report is intended exclusively for the purpose outlined, and applies only to the proposed project area.

This ESA does not include investigations regarding asbestos, lead paint, or geotechnical concerns. No surface or subsurface sampling was involved.

2.5 SPECIAL TERMS AND CONDITIONS

This Phase I ESA was conducted and prepared by MNA for the exclusive use of the County of Maui and SSFM International, Inc., and their representatives. This report shall not be relied upon or transferred to any other party without written authorization from the County of Maui and SSFM International, Inc.

2.6 USER RELIANCE

This report is an instrument of service of MNA, which summarizes its findings and opinions with respect to the subject site history and *recognized environmental conditions* at the subject site. Note that said findings and opinions are predicated on information that MNA obtained on the dates and from individuals stated herein, from public records review, a site reconnaissance, and ancillary Phase I ESA assignments. This assessment relies upon the accuracy and completeness of the information provided. The information obtained for this assessment is used without extraordinary verification. It is possible that other information exists and is discovered, or environmental conditions change subsequent to submittal of this Phase I ESA report to SSFM, International, Inc., to which MNA shall not be held responsible for exclusion there from.

3.0 SITE DESCRIPTION

3.1 LOCATION AND LEGAL DESCRIPTION

The proposed project area is located in the central portion of TMK Division 2, Zone 3, Section 8, Plat 008, and Parcel 001 on the Island of Maui (Figure 2). TMK (2) 3-8-008:001 is located along Mokulele Highway between Kihei and Kahului in the former Puunene Airport area. According to the County of Maui record, this TMK consists of 398 acres; the proposed project area consists of 14.5 acres. The site lies in Flood Zone X, an area determined to be outside the 500 year flood plain.

3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The proposed project area is located in the vicinity of the former Puunene Airport in Central Maui (Figure 1). It is approximately two miles north of Kihei and about six miles southeast of Kahului. Prior to development of the Puunene Airport, the site vicinity was used for sugarcane cultivation. The area was part of the Kihei Plantation beginning in 1900 and was purchased by the Hawaiian Commercial & Sugar Company (HC&S) in 1909 (R. Hill, Cultural Surveys Hawaii, Inc., personal communication, April 19, 2006). In 1937, the Maui Airport (later named Puunene Airport) was constructed to replace a smaller airfield located in Maalaea, southwest of the subject site. Inter-Island Airways began service at the Maui Airport in 1939, making it the major commercial airport on the island (Munekiyo & Hiraga, Inc., 2001).

The United States Navy's use of the airfield began in 1940, and it was commissioned as Naval Air Station Maui in 1942. In 1943, the airfield was renamed Naval Air Station Puunene after Naval Air Station Kahului opened approximately five miles northeast of the site (Freeman, 2005). Naval Air Station Puunene continued to develop and expand during World War II and included amenities such as personnel living quarters, training facilities, a chapel, a dispensary, a movie theater, and a miniature golf course. In 1948, it was transferred back to the Territory of Hawaii from the United States government and civil airport activities were reinstated. The Territory of Hawaii also regained Naval Air Station Kahului in 1950. Shortly afterward, Kahului became the focal point for commercial air travel on Maui due to its superior location and enhanced facilities. Consequently, the Puunene Airport ceased its operations and the air station facilities were abandoned and demolished. Since its closing, the site vicinity has been used for agricultural and recreational purposes (Munekiyo & Hiraga, Inc., 2001). In particular, facilities for drag strip racing, go-karts, moto-cross, radio controlled planes, and other motorized recreational activities were established in the east, northeast, and southeast portions of former airport area.

3.2.1 Geology

The Island of Maui is the second largest island in the Hawaiian Archipelago and encompasses 728 square miles. Maui is comprised of two volcanic mountains, the West Maui Volcano and the East Maui Volcano, or Haleakala. The island is generally categorized into three main geographic regions: West Maui, East Maui, and Central Maui, which refers to the isthmus that

connects the West and East regions. The subject site is located in the Central region of the island. The underlying structure of the isthmus formed when Haleakala lava flows banked against the pre-existing West Maui Volcano. Surface soils on the isthmus are part of the Pulehu-Ewa-Jaucas Association, characterized by nearly level to moderately sloping well-drained and excessively drained soils (Foote et al., 1972). Surface soils in this association consist of alluvial sediments weathered from basic igneous rocks deposited on the isthmus by streams flowing from West Maui canyons (Morgan, 1996).

Two U.S. Department of Agriculture soil types are found within the proposed project area:

- (1) WID2 – Waiakoa extremely stony silty clay loam, 3 to 25 percent slopes, eroded
- (2) WeB – Waiakoa silty clay loam, 3 to 7 percent slopes

The surface layers of both WID2 and WeB soils consist of dark reddish-brown silty clay loam and are approximately two inches thick. The subsoil is approximately 23 inches thick and consists of dark reddish-brown and very dark grayish-brown silty clay loam with a prismatic structure. Soil in the surface layers is neutral while the subsoil is slightly acidic to neutral. WID2 and WeB substratum consists of very dark brown silty clay loam and hard, basic igneous rock (Foote et al., 1972).

WID2 is the predominant soil type within the proposed project area. This soil type has a severe erosion hazard, as approximately 50 percent of the surface layer in most areas has been removed by erosion. In addition, stones cover about 3 to 15 percent of the surface, making it unsuitable for cultivation. WeB soil encompasses a much smaller area and is found in the southern portion of the proposed project site. This soil type has few stones and is used largely for sugarcane cultivation (Foote et al., 1972).

3.2.2 Hydrogeology

Maui is divided into six aquifer sectors: Lahaina, Wailuku, Central, Koolau, Hana, and Kahikinui. The subject site is located within the Central aquifer sector. Within the Central sector, there are four aquifer systems, which include Kahului, Paia, Makawao, and Kamaole. The subject site is located above the Kahului aquifer system, which stretches from Kahului Bay to the north and Maalaea Bay to the south. Aquifers in this system are volcanic in nature and groundwater in the area is not potable (Mink & Lau, 1990).

The Hawaii State Department of Health (HDOH) has established an Underground Injection Control (UIC) line to serve as a boundary between drinking and non-drinking water portions of underlying aquifers. Areas above (mauka side of) the UIC line are within drinking-water portions of the aquifer, while areas below (makai side of) the UIC are within non-drinking water portions of the underlying aquifer. The proposed project area is located below the UIC, indicating that the underlying aquifer is not considered a drinking water source. A wider variety of wells are allowed in the region, but injection wells still require a UIC Permit or Permit Exemption from HDOH. According to the Mink & Lau Technical Report #185, published by the University of Hawaii, Water Resources Research Center, the proposed project area is located above two aquifers (upper and lower) as indicated in Table 1.

Table 1. Aquifer Classification System

Aquifer Code	60301214 - Upper Aquifer
Island Code	6 – Maui
Aquifer Sector	03 – Central
Aquifer System	01 – Kahului
Aquifer Type, hydrogeology	2 – High Level
Aquifer Condition	1 – Unconfined
Aquifer Type, geology	4 – Perched
Status Code	33221
Development Stage	3 – No potential use
Utility	3 – Neither drinking or ecologically important
Salinity (in mg/L Cl ⁻)	2 – Low (250-1,000)
Uniqueness	2 – Replaceable
Vulnerability to Contamination	1 – High
Aquifer Code	60301111 - Lower Aquifer
Island Code	6 – Maui
Aquifer Sector	03 – Central
Aquifer System	01 – Kahului
Aquifer Type, hydrogeology	1 – Basal
Aquifer Condition	1 – Unconfined
Aquifer Type, geology	1 – Flank
Status Code	12212
Development Stage	1 – Currently used
Utility	2 – Ecologically important
Salinity (in mg/L Cl ⁻)	2 – Low (250-1,000)
Uniqueness	1 – Irreplaceable
Vulnerability to Contamination	2 – Moderate

3.3 CURRENT USE OF THE SITE

Currently, the subject site is owned by the State of Hawaii. The County of Maui plans to redevelop the former airport area and has identified the proposed project area as the future site for the Abandoned Vehicle Facility.

3.4 STRUCTURES, ROADS, AND OTHER IMPROVEMENTS

The proposed project area is located east of Mokulele Highway between Kihei and Kahului in central Maui (Figure 1). It is bordered to the north by the paved Maui Raceway Park access road (Appendix C, Photograph 3). Beyond the paved road lies the proposed site for the Maui Community Correctional Center, which was being used as a temporary storage area at the time of this assessment. The Hawaii Army National Guard Puunene Armory is located northwest of the project site, adjacent to the proposed correctional center location. The project area is bordered by sugarcane fields along its southern boundary, which are marked by a winding dirt roadway (Photographs 5-6). A vacant lot borders the project area along its northeast side. A

small paved roadway runs through the middle of the proposed project area (Photograph 4). Both paved roadways were established during Naval Air Station Puunene operations.

A few discarded materials, such as old tires, furniture, and rusted automobile parts, were scattered across the proposed project area (Photographs 7-10). A bulldoze pile in the southeastern portion of the proposed project area contained remnants of the Naval Air Station housing units, including concrete walls, rebar, and boulders which were dumped on the proposed Abandoned Vehicle Facility site from adjoining areas (R. Hill, personal communication, April 19, 200; Photographs 13-16). In the northern corner of the proposed project site, a World War II generator mount, consisting of an earthen ramp with a protruding concrete feature, was observed (Photograph 12). Furthermore, a rusted water tank was also observed in the southeast portion of the project area. Most of the site was covered with shrubs, bushes, and tall grasses (Photographs 1-2).

3.5 PAST USES OF THE SITE

Information regarding past uses of the subject site was obtained from interview, review of tax records, topographic maps, and aerial photographs. In 1937, the Maui Airport (later named the Puunene Airport) was established for commercial air travel. The U.S. Navy acquired the airport (renaming it Naval Air Station Puunene) in 1940 and continued to develop and expand the airfield during World War II. The air station's facilities were largely located in the central portion of TMK (2) 3-8-008:001, although the proposed Abandoned Vehicle Facility site remained unused during wartime operations. The current owner, the State of Hawaii (formerly the Territory of Hawaii), has owned the site since 1948.

Although County of Maui tax records indicated that some areas of TMK (2) 3-8-008:001 (unspecified) were used for sugarcane cultivation prior to and after the operation of Puunene Airport, the proposed Abandoned Vehicle Facility site itself was never cultivated, due to the rocky/stony conditions at the site. Table 2 lists the users and property uses of the subject site.

Table 2. Users and Primary Uses of the Subject Site [TMK (2) 3-8-008:001]

Period (approx.)	Property User	Area (acres)	Primary Use
1999-2006	State of Hawaii	398	Multi-purpose
1959-1999	State of Hawaii, Alexander & Baldwin, Inc.	1,616	Agricultural
1948-1959	Territory of Hawaii	962	Agricultural
1945-1948	United States of America	962	Military

3.6 CURRENT AND PAST USES OF ADJOINING PROPERTIES

Information regarding past uses of the adjoining properties was obtained from County of Maui tax records and review of aerial photographs. The property use information is summarized in Table 3, and the site location is depicted in Figure 2.

Table 3. Users and Primary Uses of Adjoining Properties

Period (approx.)	Property User	Area (acres)	Primary Use
TMK (2) 3-8-008:005			
1962-2006	Alexander & Baldwin, Inc.	161	Agricultural
1950-1962	Hawaiian Commercial & Sugar Company	252	Agricultural
TMK (2) 3-8-008:006			
1961-2006	Alexander & Baldwin, Inc.	101	Agricultural
TMK (2) 3-8-008:007			
1961-2006	Alexander & Baldwin, Inc.	81	Agricultural

4.0 USER PROVIDED INFORMATION

4.1 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

No environmental liens or activity and use limitations are known for the proposed project area. The project area was assessed by MNA for *recognized environmental conditions* including petroleum and other hazardous material releases.

4.2 SPECIALIZED KNOWLEDGE

Robert Hill of Cultural Surveys Hawaii, Inc., informed MNA that the generator mount observed in the northern corner of the proposed project site was built during World War II. He also stated that no USTs were used for the generator (personal communication, March 6, 2006). During an interview, Mr. Hill also mentioned the former existence of underground aviation fuel tanks that were located along Mokulele Highway southwest of the proposed project area (Figure 2). These tanks were closed by HC&S between 1999 and 2000. Furthermore, Mr. Hill mentioned the existence of a former civilian dump site approximately 1000 ft. southwest of the proposed project area (Figure 2). During Naval Air Station Puunene operations, this plot of land was used as a supply area. After World War II, the cannery in Kahului began using the plot for disposing of its waste; the disposal of medical and civil wastes from the surrounding areas later followed. The dump site has since been closed in accordance with environmental regulations and is no longer in use (R. Hill, personal communication, April 19, 2006).

4.3 VALUATION REDUCTION

MNA found no information pertaining to the valuation reduction of the site.

4.4 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The State of Hawaii is the legal fee owner of the subject site, and the County of Maui is in charge of the area's redevelopment efforts. The proposed project area was vacant at the time of this assessment.

4.5 REASON FOR PERFORMING A PHASE I

The purpose of this Phase I ESA is to identify any *recognized environmental conditions* at the planned Abandoned Vehicle Facility in the former Puunene Airport area on the Island of Maui [14.5 acre portion of TMK (2) 3-8-008:001], particularly CERCLA impacts (from hazardous substances releases or spills), which may affect the real estate ownership transaction of the subject site.

4.6 OTHER

No other sources of information regarding environmental risk were identified for the subject site.

5.0 RECORDS REVIEW

5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

5.1.1 General Overview

MNA used Environmental Data Resources, Inc., (EDR) (800-352-0050) for searching standard federal and state government databases of known or potential sources of hazardous materials or waste. The record sources are listed in Appendix A, and the EDR assessment report is provided in Appendix B. MNA conducted further local searches as needed.

ASTM E 1527-00 specifies a minimum search distance for specific environmental record sources. The following sources are specified for incidents or sites within one mile of the proposed project area:

- Federal NPL site list
- Federal RCRA CORRACTS TSD facilities list
- State hazardous waste sites (State-equivalent NPL)

The following sources are specified for incidents or sites within one-half mile of the proposed project area:

- Federal CERCLIS list
- Federal RCRA non-CORRACTS TSD facilities list
- State-equivalent CERCLIS
- State landfill and/or solid waste disposal site list
- State leaking UST list

The following sources are for incidents on the subject and adjoining properties:

- Federal RCRA generators list
- State registered UST list

Finally, the following is for incidents for the proposed project area:

- Federal ERNS list

5.1.2 Federal National Priorities List

The NPL, compiled by the Environmental Protection Agency (EPA), is a list of sites with the highest priority for cleanup under the EPA's Hazard Ranking System [40 Code of Federal Regulations (CFR) Part 300]. EDR found no NPL sites within one mile of the proposed project area (EDR, 2006).

5.1.3 Federal RCRA CORRACTS TSD Facilities List

The RCRA CORRACTS TSD facilities list is compiled by the EPA. The list contains those RCRA regulated facilities, which are undergoing "corrective action" due to a release of hazardous substance. EDR revealed no RCRA CORRACTS TSD facilities within one mile of the proposed project area (EDR, 2006).

5.1.4 State Hazardous Waste Sites (State-equivalent NPL)

The EDR search found no hazardous waste sites listed within one mile of the proposed project area (EDR, 2006).

5.1.5 Federal CERCLIS List

The CERCLIS list, compiled by the EPA, contains sites currently or formerly under review by EPA for potential hazardous substance contamination for possible inclusion on the NPL. EDR found no CERCLIS sites listed within 1/2 mile of the proposed project area (EDR, 2006).

5.1.6 Federal RCRA non-CORRACTS TSD facilities list

The RCRA non-CORRACTS TSD facilities list, compiled by the EPA, contains RCRA permitted treatment, storage, and disposal facilities. EDR found no RCRA non-CORRACTS TSD sites listed within 1/2 mile of the proposed project area (EDR, 2006).

5.1.7 State Landfill / Solid Waste Disposal Sites

The Hawaii Department of Health (HDOH) records contain an inventory of permitted landfills in the State of Hawaii. EDR found no permitted solid waste landfills, incinerators, or transfer stations within 1/2 mile of the proposed project area (EDR, 2006).

5.1.8 State Registered UST List

This database is compiled by the HDOH Solid and Hazardous Waste Branch, UST section. EDR's search revealed no USTs within 1/4 mile of the proposed project area (EDR, 2006).

5.1.9 State Leaking UST (LUST) List

This database is compiled by the HDOH Hazardous Waste Branch, UST section. EDR and HDOH's database searches found no LUST sites within 1/2 mile of the proposed project area (EDR, 2006).

5.1.10 Federal RCRA Generators List

This database, compiled by the EPA, contains RCRA registered small or large quantity generators of hazardous waste. RCRA Large Quantity Generators are facilities which generate at least 1,000 kg/month of non-acutely hazardous waste (or 1 kg/month of acutely hazardous waste). RCRA Small and Very Small Quantity Generators are facilities which generate less than 1,000 kg/month of non-acutely hazardous waste. EDR's search found no generators within 1/2 mile of the proposed project area (EDR, 2006).

5.1.11 Federal ERNS List

The ERNS list, compiled by the EPA, contains CERCLA hazardous substance releases or spills, as maintained at the National Response Center. EDR's search revealed no reported incident on the proposed project area (EDR, 2006).

5.1.12 State Spill List

This database is compiled by the HDOH Hazard Evaluation and Emergency Response (HEER) office. EDR and MNA's search revealed no previous spill incidents on the proposed project area (EDR, 2005; HEER, 2006).

5.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

A review of the report *Fire on the Land: Archaeology, Architecture, and Oral History of the Former Naval Air Station Puunene* by M. J. Tomonari-Tuggle et al. (2001), revealed the former existence of a small transformer located in a self-enclosed building approximately 300 ft. east of the proposed project site (Figure 2). The report states that the transformer building was constructed during World War II and functioned in the wartime operations of the base; the transformer was removed prior to 2001. After the removal, sampling & analysis of the area revealed the presence of PCB-contaminated soil around the transformer building. Consequently, the transformer building was demolished, and some contaminated soil was removed in November 2002 and January 2003. The U.S. Army Corps of Engineers (Honolulu District) contracted Wil Chee-Planning, Inc., to remove the remaining PCB-contaminated soil in 2006 (U.S. Army Corps of Engineers, 2005).

5.3 HISTORICAL USE INFORMATION ON THE SUBJECT SITE

5.3.1 Subject Site

Prior to 1937, land within TMK (2) 3-8-008-001 was largely used for sugarcane cultivation. However, land within the proposed Abandoned Vehicle Facility site itself was never cultivated due to the rocky/stony conditions of the site. In 1937, the Maui Airport (later named the Puunene Airport) was established for commercial air travel. The U.S. Navy acquired the airport (renaming it Naval Air Station Puunene) in 1940 and continued to develop and expand the airfield during World War II. The air station's facilities were largely located in the central portion of TMK (2) 3-8-008:001, although the proposed Abandoned Vehicle Facility site remained unused during wartime operations. Aerial photographs and topographic maps indicated that navy air station facilities were demolished sometime after 1964. Military housing units were located in the area adjoining the proposed Abandoned Vehicle Facility to the south. These units were also demolished, and some of the demolition rubble was piled in the southeast portion of the proposed project area.

5.3.2 Aerial Photographs

Aerial photographs of the subject and adjoining properties were reviewed at the R.M. Towill Corporation in Honolulu. Photographs reviewed are summarized as follows:

1950: Facilities of Naval Air Station Puunene were observed, including two intersecting runways, several buildings with long rectangular wings, and various streets and roadways centrally located within the subject site [TMK (2) 3-8-008:001]. These clusters of buildings were located north of the proposed Abandoned Vehicle Facility site. South to southeast of the proposed project site, a small group of housing units was observed. Mokulele Highway and Mehameha Loop are identifiable west of the subject site in the photograph. Buildings were visible inside Mehameha Loop (west of Mokulele Highway). Development in the town of Kihei was observed south of the

subject site. Agricultural lands surrounded the airport to the north, east, south, and west. The proposed project area appeared to be vacant.

- 1964: The project vicinity appeared very similar to the 1950 photograph. The runways were still visible, as were the housing units south of the proposed project area. Continued commercial and residential development in Kihei was observed, and the areas immediately surrounding the subject site remained agricultural. The proposed project area still appeared to be vacant.
- 1987: The buildings located inside Mehameha loop were no longer present, and the area had been replaced with agricultural land. Also, portions of the runway were gone, but the southern part remained in place. The northern portion of the subject site had been cleared. A paved road bordering the proposed project area to the north and a smaller paved road running through the middle of the project area were seen in the photograph. The proposed project area still appeared to be unused. Substantial commercial and residential development in Kihei was also noted.
- 1988: No significant changes were depicted in the 1988 photograph.
- 1996: The southern portion of the airport runway was still in place, but the Naval Air Station buildings, including those south of the proposed project area, were no longer present. The proposed project area still appeared to be vacant.

No readily apparent evidence of *recognized environmental conditions* at the subject or adjoining properties was noted on any of the aerial photographs reviewed.

5.3.3 Historical Topographic Maps

Historical United States Geological Survey (USGS) topographic maps for the subject site and vicinity were reviewed for the years 1954, 1983, 1996. The maps depicted the following:

Quadrangle: Maalaea, Maui Scale: 1:24,000 Series 7.5 Minute

- 1954: Maui Airport (Puunene Airport) facilities were observed on the map. Mokulele Highway was located west of the airport area and was named Maui Airport Road. The town of Kihei was observed south of the subject site. A small rectangular building was seen east of the proposed project area. No significant structures were observed in the areas surrounding the proposed project site.
- 1983: The Puunene Airport structures were no longer identified on the map. A paved roadway along the northern boundary of the proposed project area, and the Maui Drag Strip were identified east of the project area. The highway west of the subject site was renamed Mokulele Highway. No significant structures were observed in the areas surrounding the proposed project site.
- 1996: No significant changes were depicted in the 1996 map.

No readily apparent evidence of *recognized environmental conditions* at the subject or adjoining properties was noted on any of the topographic maps reviewed.

5.3.4 Sanborn Fire Insurance Maps

No Sanborn Fire Insurance maps were available for the subject site.

6.0 SITE RECONNAISSANCE

6.1 METHODOLOGY AND LIMITING CONDITIONS

On March 6 and March 29, 2006, Melissa Farris and Joanna Boyette conducted a site reconnaissance. The reconnaissance focused on identifying historical, current, and potential CERCLA impacts, which may affect ownership transfer of the proposed project area. This includes identifying the presence, or likely presence, of any hazardous substances or petroleum products on the site under conditions that indicate an existing release, a past release, or a material threat of a release into structures on the site or into the ground, ground water, or surface water of the site (ASTM, 2000).

A survey of potential environmental hazards and conditions within the subject and adjoining sites was conducted in March 2006. Current and previous uses of the site and information regarding the hazardous materials used at the site were obtained through a review of available records and interview a researcher familiar with proposed project site and its surrounding areas.

6.2 GENERAL SITE SETTING

The proposed project area is located east of Mokulele Highway between Kihei and Kahului in central Maui. It is bordered to the north by the paved Maui Raceway Park access road (Photograph 3). Beyond the paved road lies the proposed site for the Maui Community Correctional Center, which was being used as a temporary storage area by the County at the time of this assessment. The project area is bordered by sugarcane fields along its southern boundary, which are marked by a winding dirt roadway (Photographs 5-6). A vacant lot borders the project area along its northeast side. A small paved roadway runs through the middle of the proposed project area (Photograph 4). The site location is depicted in Figure 2.

6.3 HAZARDOUS MATERIALS AND REGULATED WASTES

MNA observed no evidence of hazardous materials or regulated wastes at the subject property.

6.4 UNDERGROUND STORAGE TANKS

MNA observed no signs of underground storage tanks, such as dispenser pumps, fill pipes, or vent pipes. HDOH does not have any registered USTs for the subject site (EDR, 2006).

6.5 ASBESTOS, LEAD, & PCB INDICATIONS

MNA found no evidence of materials that could contain asbestos, lead, and polychlorinated biphenyls (PCBs) in the proposed project area during the site reconnaissance. Sampling & analysis of material or other potential hazardous substances was not part of this ESA.

6.6 SOLID WASTE DISPOSAL

MNA observed no signs of disposal on the site. A bulldoze pile in the southeastern portion of the proposed project area contained remnants of the Naval Air Station housing units, including concrete walls, rebar, and boulders which were discarded on the proposed Abandoned Vehicle Facility site from adjoining areas.

6.7 PHYSICAL SETTING ANALYSIS AGAINST POTENTIAL MIGRATION

MNA found no potential offsite contamination sources that may migrate to the proposed project area.

7.0 INTERVIEW

7.1 ROBERT HILL

MNA interviewed Robert Hill of Cultural Surveys Hawaii, Inc. (Maui), an archeologist familiar with the history of the project vicinity. Mr. Hill stated that prior to development of the Maui/Puunene Airport, the site vicinity was used for sugarcane cultivation. The site vicinity was part of the Kihei Plantation beginning in 1900 and was purchased by the Hawaiian Commercial & Sugar Company (HC&S) in 1909. He mentioned that the Maui Airport (later named the Puunene Airport) was constructed in 1937 as a commercial airport and that Navy use of the airfield began in 1940. The military expanded the airfield for its own use throughout World War II, during which a generator mount was constructed in the northern corner of the proposed project area. He also stated that no USTs were used for the generator. During a site visit, Mr. Hill pointed out the building debris across the proposed project area and said that it originated from former Navy housing that had been demolished offsite and bulldozed onto the project area. He was not aware of any hazardous materials or regulated wastes on the proposed project area.

Mr. Hill also mentioned the former existence of underground aviation fuel tanks that were located along Mokulele Highway southwest of the proposed project area. He stated that the tanks were closed by HC&S between 1999 and 2000. Furthermore, Mr. Hill mentioned the existence of a former civilian dump site approximately 1000 ft. southwest of the proposed project area. During Naval Air Station Puunene operations, this plot of land was used as a supply area. After World War II, the cannery in Kahului began using the plot for disposing of its waste; the disposal of medical and civil wastes from the surrounding areas later followed. He said the dump site has since been closed and is no longer in use (R. Hill, personal communication, April 19, 2006).

8.0 SUMMARY OF FINDINGS

Based on the information obtained during the site assessment performed in March-April 2006, MNA provides the following summary:

- **Database Search for Subject and Adjoining Sites:** The subject and adjoining properties were not listed in any of the federal or state databases searched by EDR (Appendix B). The findings are summarized in the following table:

Search Type	Distance Searched	Findings
Federal NPL Site List	1 mile	None
Federal RCRA CORRACTS TSD Facilities List	1 mile	None
State Hazardous Waste Sites	1 mile	None
Federal CERCLIS List	1/2 mile	None
Federal RCRA Non-CORRACTS TSD Facilities List	1/2 mile	None
State-Equivalent CERCLIS	1/2 mile	None
State Landfill and/or Solid Waste Disposal Site List	1/2 mile	None
State Registered UST List	1/4 mile	None
State Leaking UST List	1/2 mile	None
Federal RCRA Generators List	1/2 mile	None
Federal ERNS List	Subject site	None
State Spill List	Subject site	None

- **Site Check:** During a site check conducted on March 6 and March 29, 2006, MNA observed the proposed project site and surrounding areas. MNA's findings are as follows:

Proposed Project Area – Future Abandoned Vehicle Facility

The proposed project area is located east of Mokulele Highway between Kihei and Kahului in central Maui. It is bordered to the north by the paved Maui Raceway Park access road. The proposed project area is bordered by sugarcane fields along its southern boundary, which are marked by a winding dirt roadway. A vacant lot borders the project area along its northeast side. A small paved roadway runs through the middle of the proposed project area. Both paved roadways were original roads from the Naval Air Station.

A few discarded materials, such as old tires, furniture, and rusted automobile parts, were scattered across the proposed project area. A bulldoze pile in the southeastern portion of the project area contained remnants of the Naval Air Station housing units, including concrete walls, rebar, and boulders which were discarded on the proposed Abandoned Vehicle Facility site from adjoining areas (R. Hill, personal communication, April 19, 2006). In the northern corner of the proposed project site, a World War II generator mount, consisting of an earthen ramp with a protruding concrete feature, was observed. Furthermore, a rusted water tank was also observed in the southeast portion of the project area. Most of the site was covered with shrubs, bushes, and tall grasses.

Adjoining Properties (Remaining portions of TMK (2) 3-8-008:001)

Beyond the Maui Raceway Park access road lies the proposed site for the Maui Community Correctional Center, which was being used as a temporary storage area at the time of this assessment. The Hawaii Army National Guard Puunene Armory is located northwest of the project site, adjacent to the proposed correctional center location. Recreational facilities for drag strip racing, go-karts, moto-cross, radio controlled planes, and other motorized recreational activities are located east, northeast, and southeast of the proposed project area. Land south of the project area is used for sugarcane cultivation.

- **Hazardous Materials and Regulated Wastes:** A civilian dump site was formerly located approximately 1000 ft. southwest of the proposed project area. During Naval Air Station Puunene operations, this plot of land was used as a supply area. After World War II, the cannery in Kahului began using the plot for disposing of its waste; the disposal of medical and civil wastes from the surrounding areas later followed. The dump site has since been closed and is no longer in use (R. Hill, personal communication, April 19, 2006).
- **Storage Tanks:** No state-registered USTs were found within the proposed project site or the surrounding areas. Information obtained through an interview revealed the former existence of underground aviation fuel tanks located along Mokulele Highway southwest of the proposed project area. These tanks were properly closed by HC&S between 1999 and 2000.
- **Potential Asbestos-, Polychlorinated Biphenyl- or Lead-Containing Material:** MNA found no evidence of materials that could contain asbestos, lead, and polychlorinated biphenyls (PCBs) in the proposed project area. A records review revealed the former existence of a small transformer (removed in 2001) in a self-enclosed building, located approximately 300 ft. east of the proposed project site. After the removal, sampling and analysis of the area revealed the presence of PCB-contaminated soil around the transformer building. Consequently, the transformer building was demolished, and some contaminated soil was removed in November 2002 and January 2003. The U.S. Army Corps of Engineers (Honolulu District) contracted Wil Chee-Planning, Inc., to remove the remaining PCB-contaminated soil in 2006 (U.S. Army Corps of Engineers, 2005). Sampling & analysis of material or other potential hazardous substances was not part of this ESA.
- **Offsite Contamination Source:** No potential offsite contamination sources were identified during the course of this Phase I site assessment.

9.0 OPINION

The proposed Abandoned Vehicle Facility site is part of TMK (2) 3-8-008:001.

- **Past Uses of the Project Area**

Prior to 1937, land within this TMK was largely used for sugarcane cultivation. However, land within the proposed Abandoned Vehicle Facility site itself was never cultivated due to the rocky/stony characteristics of the soil. In 1937, the Maui Airport (later named the Puunene Airport) was established for commercial air travel. The U.S. Navy acquired the airport (renaming it Naval Air Station Puunene) in 1940 and continued to develop and expand the airfield during World War II. The air station's facilities were largely located in the central portion of TMK (2) 3-8-008:001, although the proposed Abandoned Vehicle Facility site remained unused during wartime operations.

Since the proposed project area was not used during Naval Air Station Puunene operations, and because the project site was never cultivated for sugarcane production, past uses of the site do not suggest evidence of *recognized environmental conditions*.

- **Former Aviation Fuel Tanks**

Information obtained through an interview revealed the former existence of underground aviation fuel tanks located along Mokulele Highway southwest of the proposed project area. These tanks were properly closed by HC&S between 1999 and 2000.

Since these tanks were not located on the project site, and since they have been properly removed, MNA does not identify their former presence southwest of the site as a *recognized environmental condition*.

- **Former Dump Site Activities**

A civilian dump site was formerly located approximately 1000 ft. southwest of the proposed project area. During Naval Air Station Puunene operations, this plot of land was used as a supply area. After World War II, the cannery in Kahului began using the plot for disposing of its waste; the disposal of medical and civil wastes from the surrounding areas later followed. The dump site has since been closed and is no longer in use (R. Hill, personal communication, April 19, 2006).

Since the dump site was not located on the project site, and since it has been properly closed, MNA does not identify its former presence southwest of the site as a *recognized environmental condition*.

- **Transformer and PCB-Contaminated Soil**

MNA found no evidence of materials that could contain asbestos, lead, and polychlorinated biphenyls (PCBs) in the proposed project area. A records review revealed the former existence of a small transformer (removed in 2001) in a self-enclosed building, located approximately 300 ft. east of the proposed project site. After the removal, sampling & analysis of the area revealed the presence of PCB-contaminated soil around the transformer building. Consequently, the transformer building was demolished, and some contaminated soil was removed in November 2002 and January 2003. The U.S. Army Corps of Engineers (Honolulu District) contracted Wil Chee-Planning, Inc., to remove the remaining PCB-contaminated soil in 2006.

The PCB-contaminated soil is not located within the project boundaries, and vegetation in the area provides a natural barrier against migration of contaminants to the site. Furthermore, since PCB-contaminated soil has been removed, MNA does not identify the former presence of the transformer and PCB-contaminated soil as a *recognized environmental condition*.

MNA found no significant evidence of adverse environmental conditions in connection with the proposed project area. It is MNA's opinion that the subject property is free of any hazardous materials.

10.0 CONCLUSION

MNA performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM E 1527-00 of the property located at the proposed Abandoned Vehicle Facility site in the former Puunene Airport area on the island of Maui. Any exceptions to, or deletions from, this practice are described in Section "2.4 LIMITATIONS AND EXCEPTIONS." This assessment has revealed no evidence of *recognized environmental conditions* in connection with the property.

REFERENCES

- Aerial Photographs, **1950, 1964, 1987, 1988, and 1996**. Courtesy of R.M. Towill Corporation, Honolulu.
- ASTM E 1527-00. **2000**. "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process." ASTM, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania.
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- U.S. Army Corps of Engineers. **2005, September**. *Scope of work: Removal of contaminated soil at the former transformer building, former Maui Airport, Puunene, Island of Maui, Hawaii* (Project No. H09HI022501). Honolulu, HI: Author.
- U.S. Geological Survey. **1954, 1983, and 1996**. Topographic Maps. U.S. Department of Interior, U.S. Geological Survey, Washington.

APPENDIX A

Regulatory Record Sources

- National Priorities List (NPL) - The NPL is the U.S. Environmental Protection Agency's (EPA) database of uncontrolled or abandoned hazardous waste sites identified for priority remedial actions under the Superfund program. A site must meet or surpass a predetermined hazard ranking system score, be chosen as a state's top priority site, or meet three specific criteria set jointly by the U.S. Department of Health and Human Services and the EPA in order to become an NPL site.
- CORRACTS - The EPA maintains this database of Resource Conservation and Recovery Act (RCRA) facilities that are undergoing "corrective action." A "corrective action order" is issued pursuant to RCRA Section 3008(h) when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predates RCRA.
- RCRA-Treatment, Storage, & Disposal (TSD) CORRACTS - The EPA's RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities, which report generation, storage, transportation, treatment, or disposal of hazardous waste.
- Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS) List - The CERCLIS list contains sites, which are either proposed to or on the NPL and sites, which are in the screening and assessment phase for possible inclusion on the NPL. The information on each site includes a history of all pre-remedial, remedial, removal and community relations activities or events at the site, financial funding information for the events, and unrestricted enforcement activities.
- NFRAP - NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly, or the contamination was not serious enough to require Federal Superfund action or NPL consideration.
- RCRA-TSD - The RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. The RCRA Facilities database is a compilation by the EPA of facilities, which report generation, storage, transportation, treatment, or disposal of hazardous waste. RCRA TSDs are facilities, which treat, store and/or dispose of hazardous waste.
- Solid Waste & Landfill - The database can be obtained from the Hawaii Department of Health (HDOH), Solid and Hazardous Waste Branch (808.586.4240).
- Leaking Underground Storage Tank (LUST) - This database can be obtained from the HDOH Solid and Hazardous Waste Branch Underground Storage Tank (UST) Section (808.586.4226).
- Water Wells - The Ground Water Site Inventory (GWSI) database was provided by the U.S. Geological Survey (USGS, 702.648.6819). The database contains information for

over 1,000,000 wells and other sources of groundwater, which the USGS has studied, used, or otherwise had reason to document through the course of research.

- RCRA-Viol/Enf - The RCRA Program identifies and tracks hazardous waste from the point of generation to the point of disposal. RCRA Violators are facilities, which have been cited for RCRA Violations at least once since 1980. RCRA Enforcements are enforcement actions taken against RCRA violators.
- UST list - This database can be obtained by the HDOH UST Section (808.586.4226). The agency release date for UST Section Database was January 2002.
- Toxic Release Inventory System (TRIS) - Section 313 of the Emergency Planning and Community Right-to-Know Act (also known as SARA Title III) of 1986 requires the EPA to establish an inventory of Toxic Chemicals emissions from certain facilities. Facilities subject to this reporting are required to complete a Toxic Chemical Release Forms (Form R) for specified chemicals.
- Emergency Response Notification System (ERNS) - This is a national database containing records from October 1986 to the release date below and is used to collect information for reported releases of oil and hazardous substances (202.260.2342). The database contains information from spill reports made to federal authorities including the EPA, the U.S. Coast Guard, the National Response Center, and the Department of Transportation.
- RCRA-LgGen - RCRA Large Generators are facilities, which generate at least 1,000kg/month or non-acutely hazardous waste (or 1kg/month of acutely hazardous waste).
- RCRA-SmGen - RCRA Small and Very Small Generators are facilities, which generate less than 1,000kg/month or non-acutely hazardous waste.
- SPILL - This database can be obtained from the HDOH Hazard Evaluation Emergency Response office (HEER, 808.586.4249). The Spills list provides a short description of circumstances of each spill.

APPENDIX B

EDR Site Assessment Report



EDR® Environmental
Data Resources Inc

The EDR Radius Map with GeoCheck®

**Puunene Abandoned Vehicle Facility
Mokulele Highway
Puunene, HI 96753**

Inquiry Number: 1621597.10s

February 27, 2006

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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Thank you for your business.
 Please contact EDR at 1-800-352-0050
 with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

MOKULELE HIGHWAY
PUUNENE, HI 96753

COORDINATES

Latitude (North): 20.813800 - 20° 48' 49.7"
Longitude (West): 156.462400 - 156° 27' 44.6"
Universal Transverse Mercator: Zone 4
UTM X (Meters): 764124.6
UTM Y (Meters): 2303483.8
Elevation: 59 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: 20156-G4 WAILUKU, HI
Source: USGS 7.5 min quad index

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property 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
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned
CORRACTS..... Corrective Action Report
RCRA-TSDF..... Resource Conservation and Recovery Act Information
RCRA-LQG..... Resource Conservation and Recovery Act Information

EXECUTIVE SUMMARY

RCRA-SQG	Resource Conservation and Recovery Act Information
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
DOD	Department of Defense Sites
US BROWNFIELDS	A Listing of Brownfields Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
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)
SSTS	Section 7 Tracking Systems
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

SHWS	Sites List
SWF/LF	Permitted Landfills in the State of Hawaii
LUST	Leaking Underground Storage Tank Database
UST	Underground Storage Tank Database
SPILLS	Release Notifications
INST CONTROL	Sites with Institutional Controls
VCP	Voluntary Response Program Sites
BROWNFIELDS	Brownfields Sites

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations
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EDR PROPRIETARY RECORDS

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations	EDR Proprietary Historic Gas Stations
EDR Historical Cleaners	EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

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.

EXECUTIVE SUMMARY

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 12/05/2005 has revealed that there is 1 FUDS site within approximately 1.25 miles of the target property.

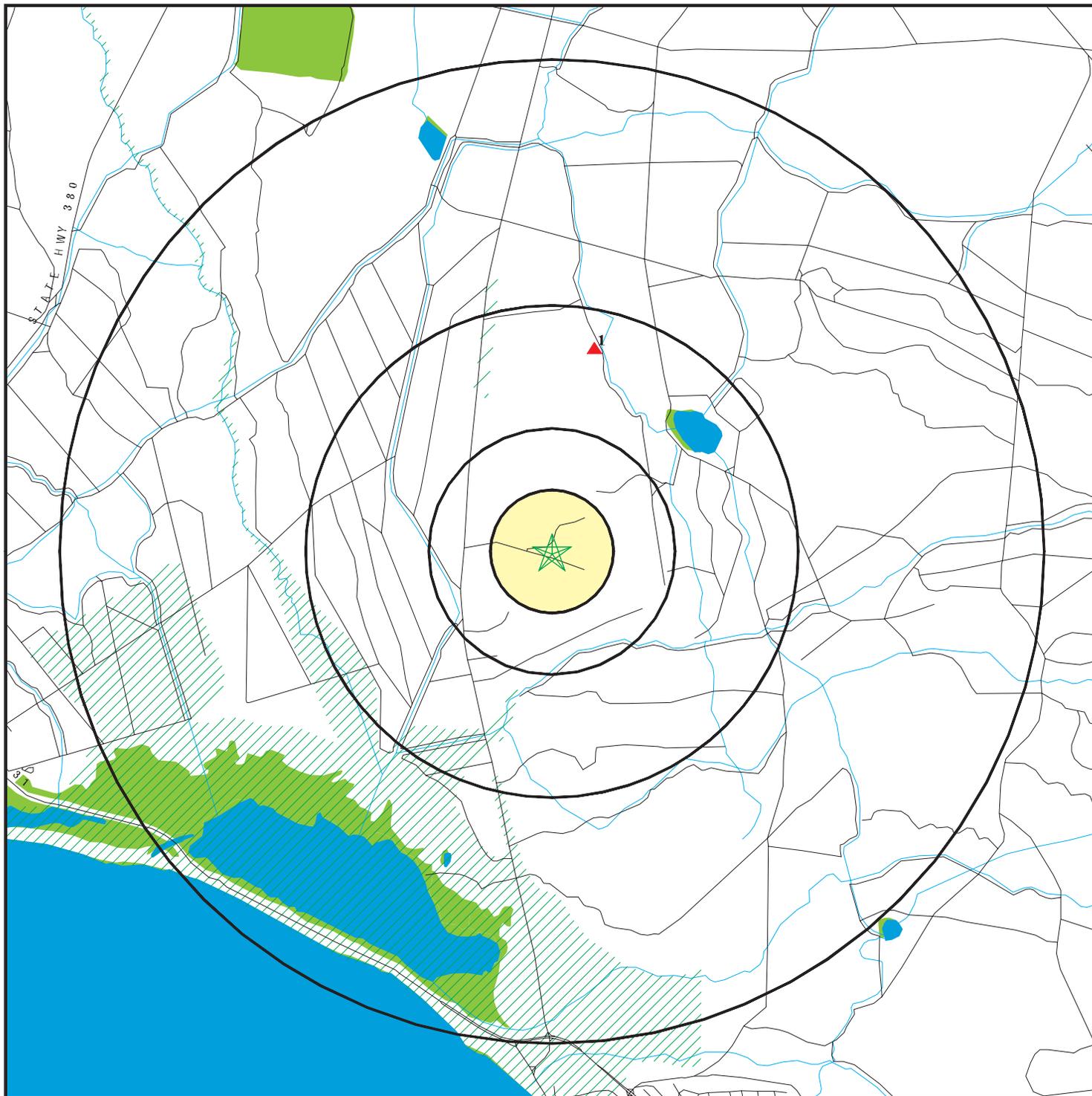
<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
MAUI AIRPORT MILITARY RES		1/2 - 1 NNE	1	6

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

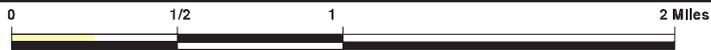
<u>Site Name</u>	<u>Database(s)</u>
KAMALII ELEM. SCHOOL	FTTS
MONSANTO COMPANY	FTTS
KOLOA ELEMENTARY SCHOOL	FTTS
MECO GENERATING STATION: MAALAEA	SHWS
KAHOOLAWE ISLAND	CERCLIS
KIHEI SPS #5 (EAST WELAKAHAO)	LUST, UST
KIHEI SPS #3 (MENEHUNE SHORES)	UST
KIHEI SPS #6 (KIHEI FIRE HOUSE)	UST
KIHEI SPS #4 (YE'S ORCHARD)	UST
GTE HAWAIIAN TEL NORTH KIHEI REMOTE EQUIP BLDG	UST
KIHEI MINIT STOP	UST
KIHEI WWTP	UST
ESTATE OF MARY HELELA	UST
US NAVY KAHO'OLAWA ISLAND RESERVE	FINDS, RCRA-LQG
PUUNENE MILL	ERNS
THE CALLER STATES THAT A ABANDONED DRUM WAS FOUND	ERNS
KIHEI WASTEWATER RECLAMATION FACILITY	FINDS
KIHEI WASTEWATER RECLAMATION FACILITY CHLORINE AL	SPILLS

OVERVIEW MAP - 1621597.10s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites

- Indian Reservations BIA
- ▲ Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Federal Wetlands

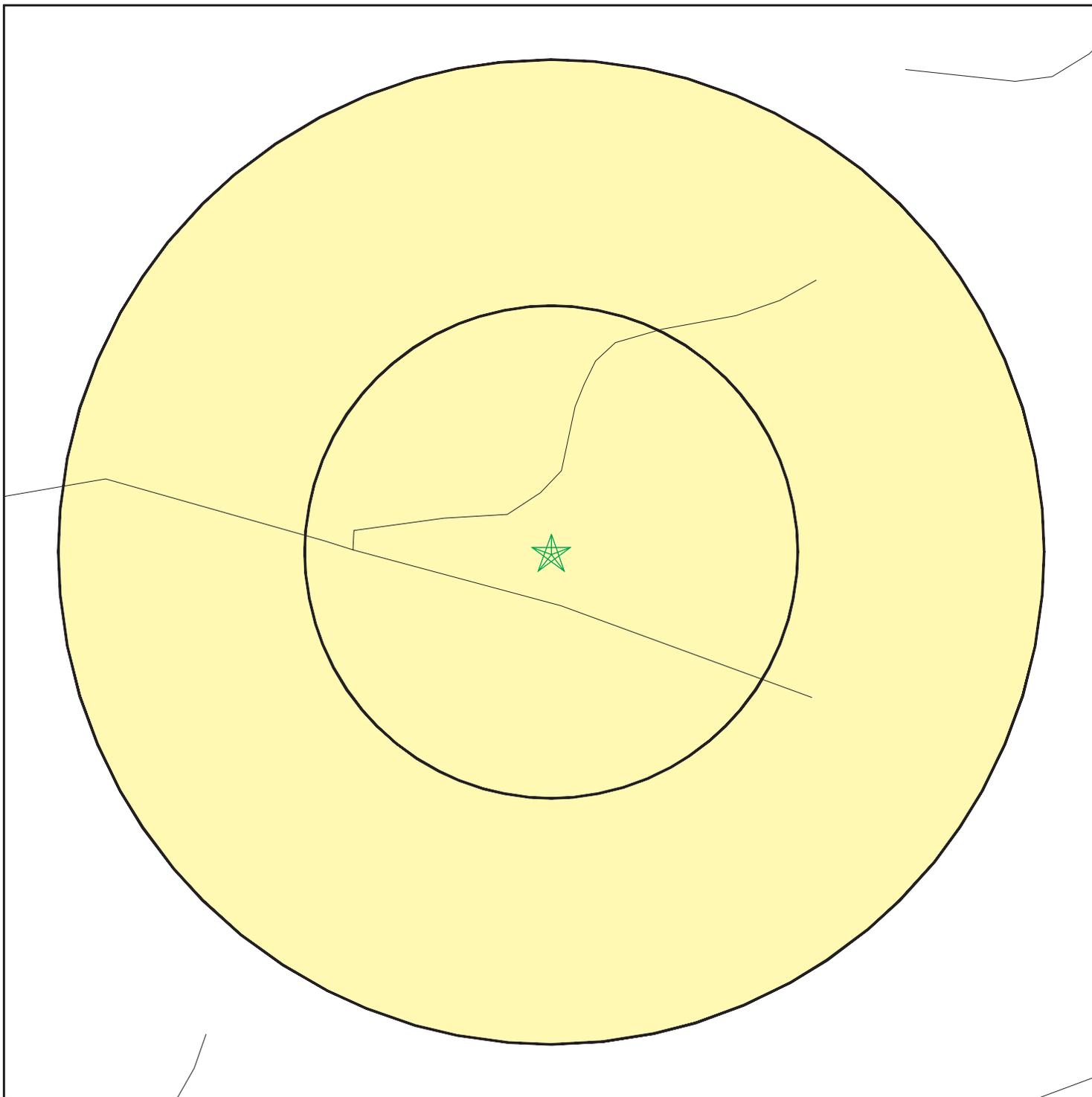


This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

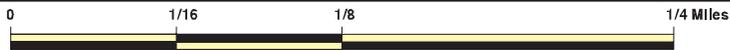
SITE NAME: Puunene Abandoned Vehicle Facility
 ADDRESS: Mokulele Highway
 Puunene HI 96753
 LAT/LONG: 20.8138 / 156.4624

CLIENT: Myounghee Noh and Associates
 CONTACT: Melissa Farris
 INQUIRY #: 1621597.10s
 DATE: February 27, 2006

DETAIL MAP - 1621597.10s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites



- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone



This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Puunene Abandoned Vehicle Facility
 ADDRESS: Mokulele Highway
 Puunene HI 96753
 LAT/LONG: 20.8138 / 156.4624

CLIENT: Myounghee Noh and Associates
 CONTACT: Melissa Farris
 INQUIRY #: 1621597.10s
 DATE: February 27, 2006

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<u>FEDERAL RECORDS</u>								
NPL		1.250	0	0	0	0	0	0
Proposed NPL		1.250	0	0	0	0	0	0
Delisted NPL		1.250	0	0	0	0	0	0
NPL Liens		0.250	0	0	NR	NR	NR	0
CERCLIS		0.750	0	0	0	0	NR	0
CERC-NFRAP		0.750	0	0	0	0	NR	0
CORRACTS		1.250	0	0	0	0	0	0
RCRA TSD		0.750	0	0	0	0	NR	0
RCRA Lg. Quan. Gen.		0.500	0	0	0	NR	NR	0
RCRA Sm. Quan. Gen.		0.500	0	0	0	NR	NR	0
ERNS		0.250	0	0	NR	NR	NR	0
HMIRS		0.250	0	0	NR	NR	NR	0
US ENG CONTROLS		0.750	0	0	0	0	NR	0
US INST CONTROL		0.750	0	0	0	0	NR	0
DOD		1.250	0	0	0	0	0	0
FUDS		1.250	0	0	0	1	0	1
US BROWNFIELDS		0.750	0	0	0	0	NR	0
CONSENT		1.250	0	0	0	0	0	0
ROD		1.250	0	0	0	0	0	0
UMTRA		0.750	0	0	0	0	NR	0
ODI		0.750	0	0	0	0	NR	0
TRIS		0.250	0	0	NR	NR	NR	0
TSCA		0.250	0	0	NR	NR	NR	0
FTTS		0.250	0	0	NR	NR	NR	0
SSTS		0.250	0	0	NR	NR	NR	0
PADS		0.250	0	0	NR	NR	NR	0
MLTS		0.250	0	0	NR	NR	NR	0
MINES		0.500	0	0	0	NR	NR	0
FINDS		0.250	0	0	NR	NR	NR	0
RAATS		0.250	0	0	NR	NR	NR	0
<u>STATE AND LOCAL RECORDS</u>								
SHWS		1.250	0	0	0	0	0	0
State Landfill		0.750	0	0	0	0	NR	0
LUST		0.750	0	0	0	0	NR	0
UST		0.500	0	0	0	NR	NR	0
SPILLS		0.250	0	0	NR	NR	NR	0
INST CONTROL		0.750	0	0	0	0	NR	0
VCP		0.750	0	0	0	0	NR	0
BROWNFIELDS		0.750	0	0	0	0	NR	0
<u>TRIBAL RECORDS</u>								
INDIAN RESERV		1.250	0	0	0	0	0	0
<u>EDR PROPRIETARY RECORDS</u>								
Manufactured Gas Plants		1.250	0	0	0	0	0	0

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Target Property</u>	<u>Search Distance (Miles)</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
EDR Historical Auto Stations		0.500	0	0	0	NR	NR	0
EDR Historical Cleaners		0.500	0	0	0	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

MAP FINDINGS

Map ID
 Direction
 Distance
 Distance (ft.)
 Elevation

Site

Database(s)

EDR ID Number
 EPA ID Number

1 MAUI AIRPORT MILITARY RES
NNE
1/2-1 PUUNENE, HI
4468 ft.

FUDS 1007212729
N/A

Relative:
Higher

FUDS:

Federal Facility ID: HI9799F3960
 Facility Name: MAUI AIRPORT MILITARY RES
 City: PUUNENE
 State: HI
 EPA Region: 9
 County: MAUI
 Congressional District: 02
 US Army District: Honolulu District (POH)
 Fiscal Year: 2004
 Phone: 808-438-9862
 Inst ID: Not reported
 CTC: Not reported
 RAB: Not reported

Actual:
120 ft.

FUDS History :

The site was used as a naval air station that also supported Army operations. Radio-controlled drones were used to aid in the development of accuracy among anti-aircraft gunners. The site consisted of nine underground fuel storage tanks, a transformer building with a PCB transformer, and a former landfill that may need to be removed or remediated. Current use of the site includes a heliport, crop dusting airplane runway, and a drag strip. The County of Maui is proposing the area to be a county fairground.

FUDS Description :

The former Maui Airport Military Reservation consists of 1,875 acres and is located midway to Kihei on Mokulele Highway. The airport was known as Puunene Naval Air Station and was built from 1936-1939. The airport was used by the Navy from 1940 to 1946 and was later returned for civilian uses. After the military left the site, the area was used for agriculture, ranging from sugar cultivation to animal husbandry. The current owner is the State of Hawaii.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
KIHEI	1001227536	US NAVY KAHO'OLAWE ISLAND RESERVE	KAHOOLAWE ISLAND RESERVE	96753	FINDS, RCRA-LQG
KIHEI	1008982223	KAMALII ELEM. SCHOOL	180 KEALII ALANUI RD.	96753	FTTS
KIHEI	U003222170	KIHEI SPS #3 (MENEHUNE SHORES)	N KIHEI RD	96753	UST
KIHEI	U003222168	KIHEI SPS #6 (KIHEI FIRE HOUSE)	N KIHEI RD	96753	UST
KIHEI	U003222167	KIHEI SPS #4 (YE'S ORCHARD)	N KIHEI RD	96753	UST
KIHEI	U003155105	KIHEI SPS #5 (EAST WELAKAHAO)	N KIHEI RD	96753	LUST, UST
KIHEI	1000486449	KAHOOLAWE ISLAND	LAT 20 32' 30', LONG 156 37' 30'	96753	CERCLIS
KIHEI	1007286922	MONSANTO COMPANY	P. O. BOX 645	96753	FTTS
KIHEI	U003732595	GTE HAWAIIAN TEL NORTH KIHEI REMOTE EQUIP BLDG	KA ONO ULU ESATE, LOT 15HALALAI PLACE	96753	UST
KIHEI	U003762157	KIHEI MINIT STOP	PIILANI VILLAGE SHOPPING CENTER233 PIIKEA AVE	96753	UST
KIHEI	1006819171	KIHEI WASTEWATER RECLAMATION FACILITY	480 WELAKAHAO STREET	96753	FINDS
KIHEI	S105263716	KIHEI WASTEWATER RECLAMATION FACILITY CHLORINE AL	480 WELAKAHOU RD	96753	SPILLS
KIHEI	U001236805	KIHEI WWTP	480 WELEKAHAO RD/PIILANI HWY	96753	UST
KOLOA	1007283607	KOLOA ELEMENTARY SCHOOL	RR1 BOX 57	96753	FTTS
MAALAEA	S106819074	MECO GENERATING STATION: MAALAEA	N KIHEI RD	96753	SHWS
PUUNENE	2000525715	PUUNENE MILL	PUUNENE MILL		ERNS
PUUNENE	96487440	THE CALLER STATES THAT A ABANDONED DRUM WAS FOUND	THE CALLER STATES THAT A ABANDONED DRUM WAS FOUND		ERNS
WALEA	U003222380	ESTATE OF MARY HELELA	OLD COUNTRY RD	96753	UST

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: 11/29/05	Source: EPA
Date Data Arrived at EDR: 01/31/06	Telephone: N/A
Date Made Active in Reports: 02/27/06	Last EDR Contact: 01/31/06
Number of Days to Update: 27	Next Scheduled EDR Contact: 05/01/06
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Date of Government Version: 11/29/05	Source: EPA
Date Data Arrived at EDR: 01/31/06	Telephone: N/A
Date Made Active in Reports: 02/27/06	Last EDR Contact: 01/31/06
Number of Days to Update: 27	Next Scheduled EDR Contact: 05/01/06
	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: 11/29/05	Source: EPA
Date Data Arrived at EDR: 01/31/06	Telephone: N/A
Date Made Active in Reports: 02/27/06	Last EDR Contact: 01/31/06
Number of Days to Update: 27	Next Scheduled EDR Contact: 05/01/06
	Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (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 receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/15/91
Date Data Arrived at EDR: 02/02/94
Date Made Active in Reports: 03/30/94
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 02/20/06
Next Scheduled EDR Contact: 05/22/06
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: 10/24/05
Date Data Arrived at EDR: 12/21/05
Date Made Active in Reports: 01/30/06
Number of Days to Update: 40

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 12/21/05
Next Scheduled EDR Contact: 03/20/06
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

Date of Government Version: 10/24/05
Date Data Arrived at EDR: 12/21/05
Date Made Active in Reports: 01/30/06
Number of Days to Update: 40

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 12/21/05
Next Scheduled EDR Contact: 03/20/06
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/29/05
Date Data Arrived at EDR: 01/11/06
Date Made Active in Reports: 02/21/06
Number of Days to Update: 41

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/06/05
Next Scheduled EDR Contact: 03/06/06
Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). 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. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 12/15/05	Source: EPA
Date Data Arrived at EDR: 12/28/05	Telephone: 800-424-9346
Date Made Active in Reports: 01/30/06	Last EDR Contact: 12/28/05
Number of Days to Update: 33	Next Scheduled EDR Contact: 02/27/06
	Data Release Frequency: Quarterly

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: 12/31/05	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 01/12/06	Telephone: 202-260-2342
Date Made Active in Reports: 02/21/06	Last EDR Contact: 01/12/06
Number of Days to Update: 40	Next Scheduled EDR Contact: 04/24/06
	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: 12/31/05	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 01/16/06	Telephone: 202-366-4555
Date Made Active in Reports: 02/21/06	Last EDR Contact: 01/16/06
Number of Days to Update: 36	Next Scheduled EDR Contact: 04/17/06
	Data Release Frequency: Annually

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: 08/02/05	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/12/05	Telephone: 703-603-8867
Date Made Active in Reports: 10/06/05	Last EDR Contact: 02/10/06
Number of Days to Update: 55	Next Scheduled EDR Contact: 04/03/06
	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: 01/10/05	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/11/05	Telephone: 703-603-8867
Date Made Active in Reports: 04/06/05	Last EDR Contact: 02/10/06
Number of Days to Update: 54	Next Scheduled EDR Contact: 04/03/06
	Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 12/31/04	Source: USGS
Date Data Arrived at EDR: 02/08/05	Telephone: 703-692-8801
Date Made Active in Reports: 08/04/05	Last EDR Contact: 02/06/06
Number of Days to Update: 177	Next Scheduled EDR Contact: 05/08/06
	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: 12/05/05	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 01/19/06	Telephone: 202-528-4285
Date Made Active in Reports: 02/21/06	Last EDR Contact: 01/19/06
Number of Days to Update: 33	Next Scheduled EDR Contact: 04/03/06
	Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients--States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 11/29/05	Source: Environmental Protection Agency
Date Data Arrived at EDR: 12/05/05	Telephone: 202-566-2777
Date Made Active in Reports: 01/30/06	Last EDR Contact: 11/30/05
Number of Days to Update: 56	Next Scheduled EDR Contact: 03/13/06
	Data Release Frequency: Semi-Annually

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: 12/14/04	Source: Department of Justice, Consent Decree Library
Date Data Arrived at EDR: 02/15/05	Telephone: Varies
Date Made Active in Reports: 04/25/05	Last EDR Contact: 01/26/06
Number of Days to Update: 69	Next Scheduled EDR Contact: 04/24/06
	Data Release Frequency: Varies

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: 12/07/05	Source: EPA
Date Data Arrived at EDR: 01/06/06	Telephone: 703-416-0223
Date Made Active in Reports: 02/21/06	Last EDR Contact: 01/04/06
Number of Days to Update: 46	Next Scheduled EDR Contact: 04/03/06
	Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 11/04/05	Source: Department of Energy
Date Data Arrived at EDR: 11/28/05	Telephone: 505-845-0011
Date Made Active in Reports: 01/30/06	Last EDR Contact: 10/28/05
Number of Days to Update: 63	Next Scheduled EDR Contact: 12/19/05
	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: 06/30/85	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/09/04	Telephone: 800-424-9346
Date Made Active in Reports: 09/17/04	Last EDR Contact: 06/09/04
Number of Days to Update: 39	Next Scheduled EDR Contact: N/A
	Data Release Frequency: No Update Planned

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: 12/31/03	Source: EPA
Date Data Arrived at EDR: 07/13/05	Telephone: 202-566-0250
Date Made Active in Reports: 08/17/05	Last EDR Contact: 12/21/05
Number of Days to Update: 35	Next Scheduled EDR Contact: 03/20/06
	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: 12/31/02	Source: EPA
Date Data Arrived at EDR: 04/27/04	Telephone: 202-260-5521
Date Made Active in Reports: 05/21/04	Last EDR Contact: 01/30/06
Number of Days to Update: 24	Next Scheduled EDR Contact: 04/17/06
	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: 01/17/06	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 01/24/06	Telephone: 202-566-1667
Date Made Active in Reports: 02/27/06	Last EDR Contact: 12/20/05
Number of Days to Update: 34	Next Scheduled EDR Contact: 03/20/06
	Data Release Frequency: Quarterly

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

Date of Government Version: 01/17/06	Source: EPA
Date Data Arrived at EDR: 01/24/06	Telephone: 202-566-1667
Date Made Active in Reports: 02/27/06	Last EDR Contact: 12/20/05
Number of Days to Update: 34	Next Scheduled EDR Contact: 03/20/06
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 12/31/03	Source: EPA
Date Data Arrived at EDR: 01/03/05	Telephone: 202-564-4203
Date Made Active in Reports: 01/25/05	Last EDR Contact: 01/16/06
Number of Days to Update: 22	Next Scheduled EDR Contact: 04/17/06
	Data Release Frequency: Annually

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: 12/27/05	Source: EPA
Date Data Arrived at EDR: 02/08/06	Telephone: 202-564-3887
Date Made Active in Reports: 02/27/06	Last EDR Contact: 02/08/06
Number of Days to Update: 19	Next Scheduled EDR Contact: 05/08/06
	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: 10/18/05	Source: Nuclear Regulatory Commission
Date Data Arrived at EDR: 10/31/05	Telephone: 301-415-7169
Date Made Active in Reports: 12/20/05	Last EDR Contact: 02/08/06
Number of Days to Update: 50	Next Scheduled EDR Contact: 04/03/06
	Data Release Frequency: Quarterly

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: 11/08/05	Source: Department of Labor, Mine Safety and Health Administration
Date Data Arrived at EDR: 12/27/05	Telephone: 303-231-5959
Date Made Active in Reports: 01/30/06	Last EDR Contact: 12/27/05
Number of Days to Update: 34	Next Scheduled EDR Contact: 03/27/06
	Data Release Frequency: Semi-Annually

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: 01/09/06	Source: EPA
Date Data Arrived at EDR: 01/16/06	Telephone: N/A
Date Made Active in Reports: 02/21/06	Last EDR Contact: 01/03/06
Number of Days to Update: 36	Next Scheduled EDR Contact: 04/03/06
	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.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 04/17/95
Date Data Arrived at EDR: 07/03/95
Date Made Active in Reports: 08/07/95
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 12/05/05
Next Scheduled EDR Contact: 03/06/06
Data Release Frequency: No Update Planned

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.

Date of Government Version: 12/31/03
Date Data Arrived at EDR: 06/17/05
Date Made Active in Reports: 08/04/05
Number of Days to Update: 48

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/12/05
Next Scheduled EDR Contact: 12/12/05
Data Release Frequency: Biennially

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: 08/24/05
Date Data Arrived at EDR: 08/29/05
Date Made Active in Reports: 09/28/05
Number of Days to Update: 30

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 01/26/06
Next Scheduled EDR Contact: 03/20/06
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.

Date of Government Version: 05/19/04
Date Data Arrived at EDR: 05/20/04
Date Made Active in Reports: 06/22/04
Number of Days to Update: 33

Source: Department of Health
Telephone: 808-586-4245
Last EDR Contact: 01/26/06
Next Scheduled EDR Contact: 04/24/06
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: 08/01/05
Date Data Arrived at EDR: 08/19/05
Date Made Active in Reports: 09/20/05
Number of Days to Update: 32

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 02/20/06
Next Scheduled EDR Contact: 03/27/06
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: 08/01/05
Date Data Arrived at EDR: 08/19/05
Date Made Active in Reports: 09/20/05
Number of Days to Update: 32

Source: Department of Health
Telephone: 808-586-4228
Last EDR Contact: 02/20/06
Next Scheduled EDR Contact: 03/27/06
Data Release Frequency: Semi-Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 08/24/05
Date Data Arrived at EDR: 08/29/05
Date Made Active in Reports: 09/28/05
Number of Days to Update: 30

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 01/26/06
Next Scheduled EDR Contact: 03/20/06
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: 08/24/05
Date Data Arrived at EDR: 10/12/05
Date Made Active in Reports: 10/26/05
Number of Days to Update: 14

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 01/26/06
Next Scheduled EDR Contact: 03/20/06
Data Release Frequency: Varies

VCP: Voluntary Response Program Sites

Date of Government Version: 08/24/05
Date Data Arrived at EDR: 10/31/05
Date Made Active in Reports: 12/14/05
Number of Days to Update: 44

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 01/26/06
Next Scheduled EDR Contact: 03/20/06
Data Release Frequency: Varies

BROWNFIELDS: Brownfields Sites

Date of Government Version: 08/24/05
Date Data Arrived at EDR: 10/12/05
Date Made Active in Reports: 10/26/05
Number of Days to Update: 14

Source: Department of Health
Telephone: 808-586-4249
Last EDR Contact: 01/26/06
Next Scheduled EDR Contact: 03/20/06
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: 12/31/04
Date Data Arrived at EDR: 02/08/05
Date Made Active in Reports: 08/04/05
Number of Days to Update: 177

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 02/06/06
Next Scheduled EDR Contact: 05/08/06
Data Release Frequency: Semi-Annually

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: 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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR Historical Auto Stations: EDR Proprietary 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.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	Next Scheduled EDR Contact: N/A
	Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary 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.

Date of Government Version: N/A	Source: EDR, Inc.
Date Data Arrived at EDR: N/A	Telephone: N/A
Date Made Active in Reports: N/A	Last EDR Contact: N/A
Number of Days to Update: N/A	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: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: PennWell Corporation

Telephone: (800) 823-6277

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: 312-280-5991

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: 410-786-3000

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: 301-594-6248

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: 202-502-7300

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: 202-502-7300

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 1999 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 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

PUUNENE ABANDONED VEHICLE FACILITY
MOKULELE HIGHWAY
PUUNENE, HI 96753

TARGET PROPERTY COORDINATES

Latitude (North):	20.81380 - 20° 48' 49.7"
Longitude (West):	156.4624 - 156° 27' 44.6"
Universal Tranverse Mercator:	Zone 4
UTM X (Meters):	764124.6
UTM Y (Meters):	2303483.8
Elevation:	59 ft. above sea level

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

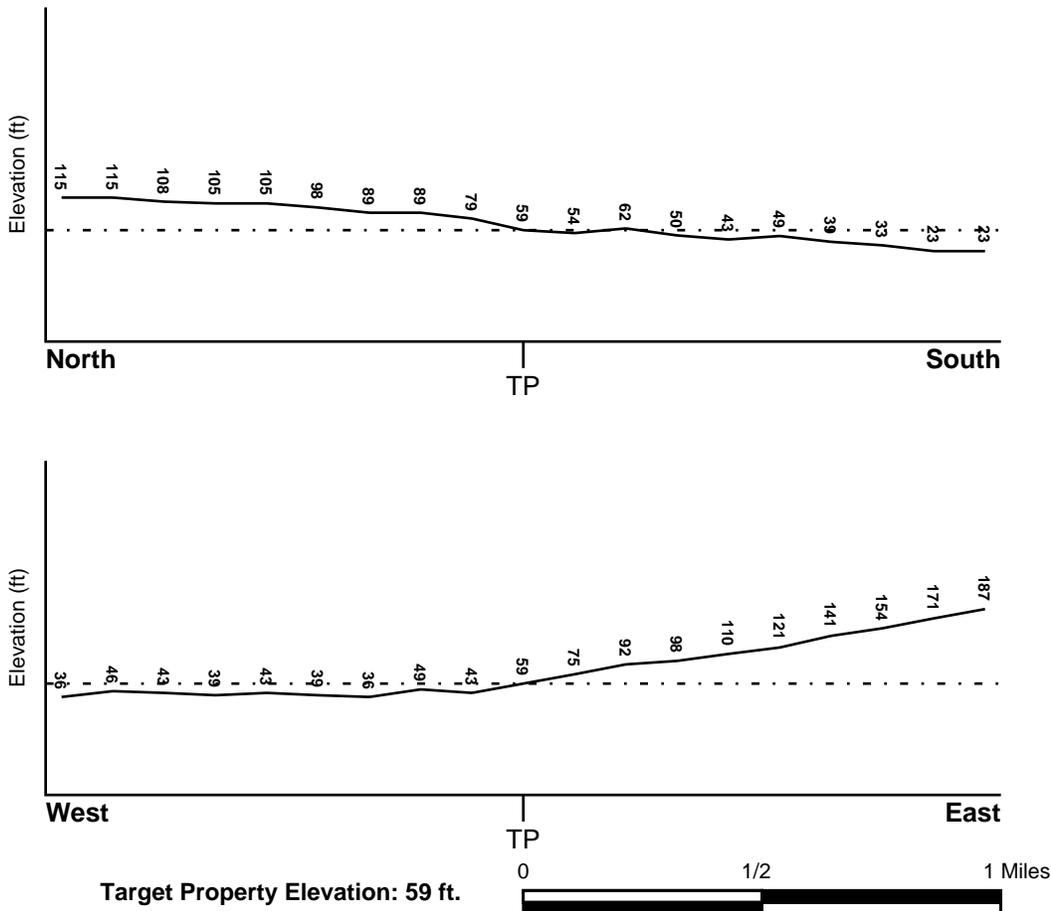
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

USGS Topographic Map: 20156-G4 WAILUKU, HI
 General Topographic Gradient: General WSW
 Source: USGS 7.5 min quad index

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Target Property County</u> MAUI, HI	<u>FEMA Flood Electronic Data</u> YES - refer to the Overview Map and Detail Map
Flood Plain Panel at Target Property:	1500030255B
Additional Panels in search area:	Not Reported

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u> NOT AVAILABLE	<u>NWI Electronic Data Coverage</u> YES - refer to the Overview Map and Detail Map
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HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

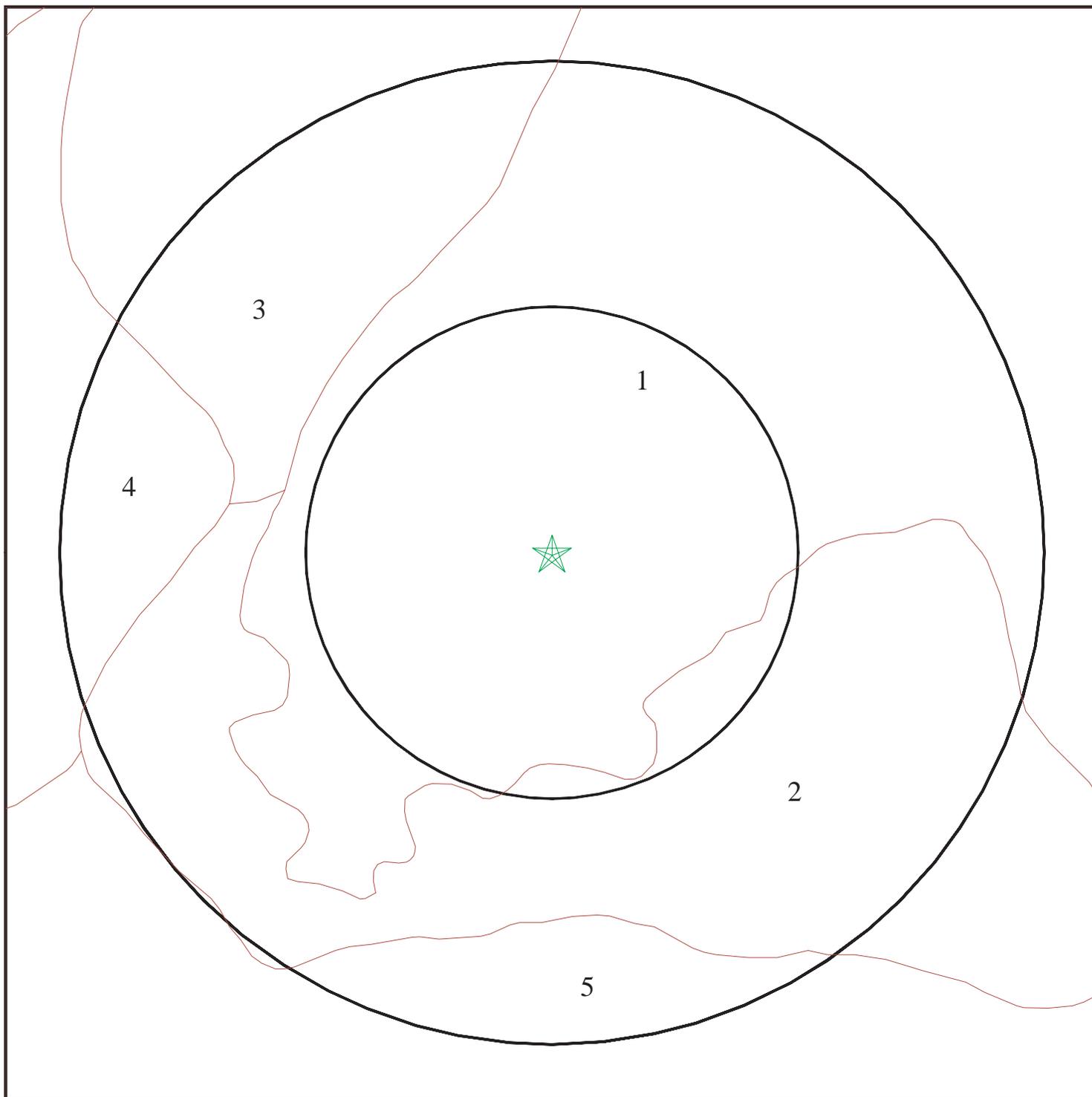
Era: -
System: -
Series: -
Code: N/A (*decoded above as Era, System & Series*)

GEOLOGIC AGE IDENTIFICATION

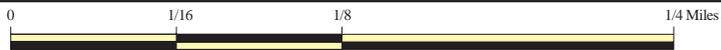
Category: -

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 1621597.10s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: Puunene Abandoned Vehicle Facility
ADDRESS: Mokulele Highway
Puunene HI 96753
LAT/LONG: 20.8138 / 156.4624

CLIENT: Myounghee Noh and Associates
CONTACT: Melissa Farris
INQUIRY #: 1621597.10s
DATE: February 27, 2006

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: WAIAKOA

Soil Surface Texture: extremely stony - silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 20 inches

Depth to Bedrock Max: > 40 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	1 inches	extremely stony - silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Kaolinitic suffix for CL.	Max: 2.00 Min: 0.60	Max: 7.30 Min: 6.60
2	1 inches	20 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Kaolinitic suffix for CL.	Max: 2.00 Min: 0.60	Max: 7.30 Min: 6.10
3	20 inches	28 inches	stony - silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Kaolinitic suffix for CL.	Max: 2.00 Min: 0.60	Max: 8.40 Min: 7.40

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
4	28 inches	32 inches	unweathered bedrock	Not reported	Not reported	Max: 0.60 Min: 0.00	Max: 0.00 Min: 0.00

Soil Map ID: 2

Soil Component Name: WAIAKOA

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 20 inches

Depth to Bedrock Max: > 40 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	2 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Kaolinitic suffix for CL.	Max: 2.00 Min: 0.60	Max: 7.30 Min: 6.60
2	2 inches	25 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Kaolinitic suffix for CL.	Max: 2.00 Min: 0.60	Max: 7.30 Min: 6.10
3	25 inches	33 inches	stony - silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Kaolinitic suffix for CL.	Max: 2.00 Min: 0.60	Max: 8.40 Min: 7.40

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
4	33 inches	37 inches	unweathered bedrock	Not reported	Not reported	Max: 0.60 Min: 0.00	Max: 0.00 Min: 0.00

Soil Map ID: 3

Soil Component Name: EWA

Soil Surface Texture: cobbly - silty clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	18 inches	cobbly - silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Kaolinitic suffix for CL.	Max: 2.00 Min: 0.60	Max: 7.80 Min: 6.60
2	18 inches	60 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	Kaolinitic suffix for CL.	Max: 2.00 Min: 0.60	Max: 7.80 Min: 6.60

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Map ID: 4

Soil Component Name: PULEHU

Soil Surface Texture: cobbly - silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	21 inches	cobbly - silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 7.30 Min: 6.60
2	21 inches	60 inches	stratified	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay. FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), silt.	Max: 2.00 Min: 0.60	Max: 7.80 Min: 6.60

Soil Map ID: 5

Soil Component Name: ALAE

Soil Surface Texture: sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively. Soils have very high and high hydraulic conductivity and low water holding capacity. Depth to water table is more than 6 feet.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: MODERATE

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	7 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 7.80 Min: 7.40
2	7 inches	14 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 7.80 Min: 7.40
3	14 inches	55 inches	very gravelly - coarse sand	Granular materials (35 pct. or less passing No. 200), Stone Fragments, Gravel and Sand.	COARSE-GRAINED SOILS, Gravels, Clean gravels, Poorly Graded Gravel.	Max: 20.00 Min: 6.00	Max: 8.40 Min: 7.90

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

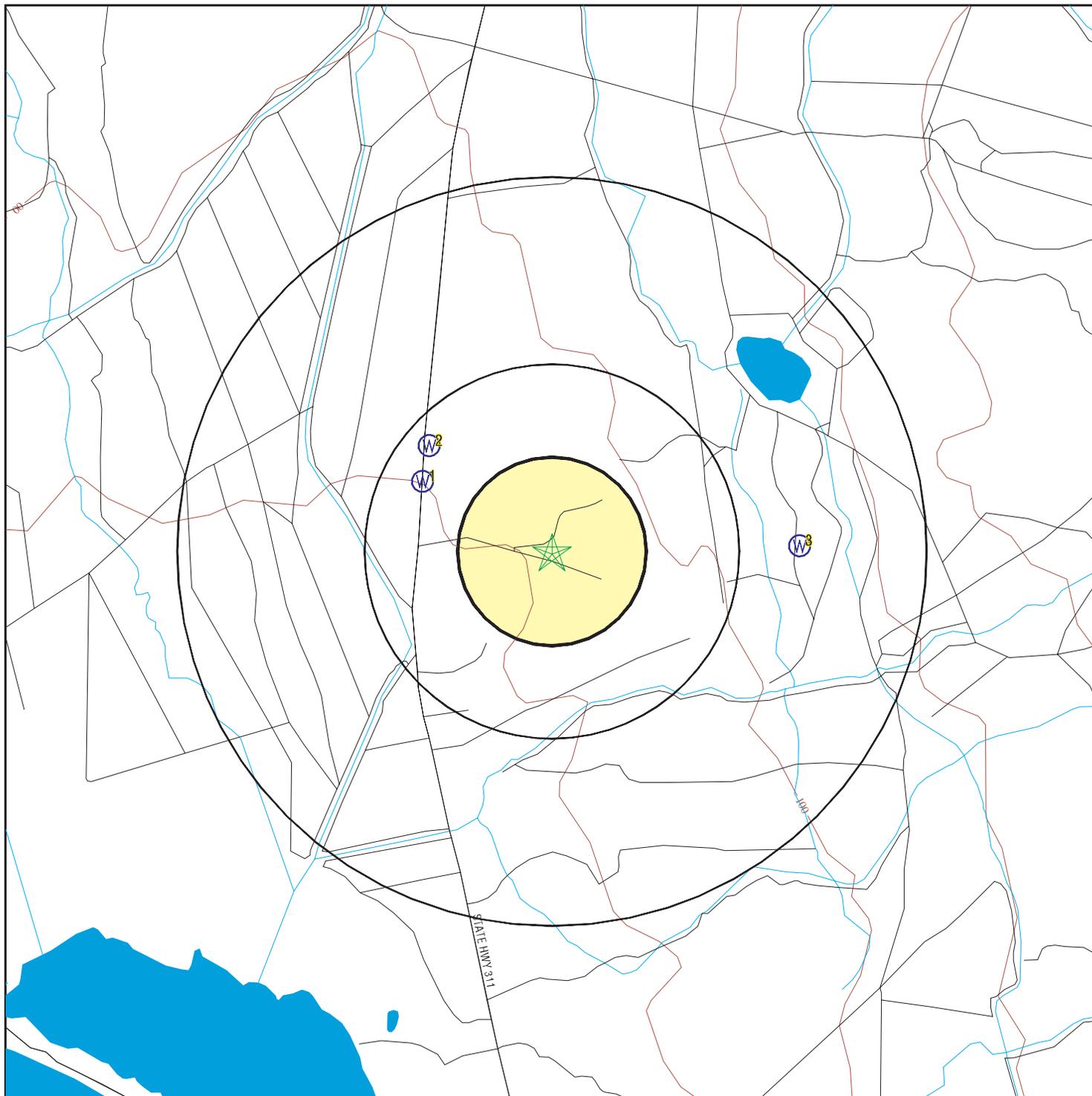
<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	6-4928-002	1/4 - 1/2 Mile WNW
2	6-4928-001	1/4 - 1/2 Mile NW
3	6-4927-001	1/2 - 1 Mile East

PHYSICAL SETTING SOURCE MAP - 1621597.10s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location

SITE NAME: Puunene Abandoned Vehicle Facility
 ADDRESS: Mokulele Highway
 Puunene HI 96753
 LAT/LONG: 20.8138 / 156.4624

CLIENT: Myounghee Noh and Associates
 CONTACT: Melissa Farris
 INQUIRY #: 1621597.10s
 DATE: February 27, 2006

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1
WNW
1/4 - 1/2 Mile
Lower

HI WELLS 6-4928-002

Wid:	6-4928-002	Island Code:	6
Island Name:	Maui	Well no:	4928-02
Well name:	Puunene Airp Sha	Old name:	Not Reported
Yr drilled:	1942	Driller:	U S NAVY
Quad_map:	06	Latitude:	204911
Longitude:	1562814	UTM:	N
Gps:	Y	Owner/user:	Hc & S Co
Old number:	34-SH	Well_type:	TUN
Type:	Tunnelled	Casing dia:	72
Ground Elev:	50	Well depth:	53
Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	UNU	Use Desc:	Unused
Use year:	Not Reported	Water Top Elev:	3.7
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	2000
Annual Draft:	474	Static Water Lvl:	4.3
Geology:	THO	Geology desc:	Tertiary Honomanu series of Haleakala, Maui
Installed:	Not Reported	Last Measured:	70
Max chlorides:	01/01/1973 00:00:00	Max Cl year:	73
Min chlorides:	07/19/1973 00:00:00	Min Cl year:	73
Bot_hole depth:	-3	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	2.880	Draft (mgd):	1.3
Tax map key:	3-8-008:001	Aquifer code:	60301
Latest head mmt:	4.3	Cur head mmt:	Not Reported
Current Cl mmt:	Not Reported	Const. Date:	01/01/1942 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

2
NW
1/4 - 1/2 Mile
Higher

HI WELLS 6-4928-001

Wid:	6-4928-001	Island Code:	6
Island Name:	Maui	Well no:	4928-01
Well name:	Puunene Airp TH	Old name:	Not Reported
Yr drilled:	1942	Driller:	U S NAVY
Quad_map:	06	Latitude:	204916
Longitude:	1562813	UTM:	N
Gps:	Y	Owner/user:	State Dot-Airp
Old number:	1-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	8
Ground Elev:	70	Well depth:	70

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	UNU	Use Desc:	Unused
Use year:	71	Water Top Elev:	3.6
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	300
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	THO	Geology desc:	Tertiary Honomanu series of Haleakala, Maui
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	0
Min chlorides:	01/01/1958 00:00:00	Min CI year:	0
Bot_hole depth:	0	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	.432	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	60301
Latest head mmt:	0	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	01/01/1942 00:00:00
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

3
East
1/2 - 1 Mile
Higher

HI WELLS 6-4927-001

Wid:	6-4927-001	Island Code:	6
Island Name:	Maui	Well no:	4927-01
Well name:	Tmk 3-8-08	Old name:	Not Reported
Yr drilled:	Not Reported	Driller:	Not Reported
Quad_map:	08	Latitude:	204902
Longitude:	1562718	UTM:	Y
Gps:	N	Owner/user:	Makimoto N
Old number:	260-	Well_type:	Not Reported
Type:	Not Reported	Casing dia:	Not Reported
Ground Elev:	120	Well depth:	Not Reported
Solid casing Depth:	Not Reported	Perf casing Depth:	Not Reported
Use:	OTH	Use Desc:	Other
Use year:	71	Water Top Elev:	0
Chloride value:	0	Test date:	Not Reported
Pumping Test rate:	Not Reported	Drop in water Lvl:	Not Reported
Chloride Test:	Not Reported	Temperature:	Not Reported
Units:	Not Reported	Pump Capacity:	0
Annual Draft:	Not Reported	Static Water Lvl:	Not Reported
Geology:	THO	Geology desc:	Tertiary Honomanu series of Haleakala, Maui
Installed:	Not Reported	Last Measured:	Not Reported
Max chlorides:	Not Reported	Max CI year:	0
Min chlorides:	Not Reported	Min CI year:	0
Bot_hole depth:	Not Reported	bot_solid depth:	Not Reported
Bot_perf depth:	Not Reported	Well Capacity:	Not Reported
Pump Capacity:	Not Reported	Draft (mgd):	Not Reported
Tax map key:	Not Reported	Aquifer code:	60301
Latest head mmt:	0	Cur head mmt:	Not Reported
Current CI mmt:	Not Reported	Const. Date:	Not Reported
Pump Inst. Date:	Not Reported	Surveyor:	Not Reported
Transmissivity:	0	Pump intake elev:	Not Reported
Pump depth:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for MAUI County: 3

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

Federal Area Radon Information for Zip Code: 96753

Number of sites tested: 10

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.010 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

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 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 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

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: 202-564-3750

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 RECORDS

Ground Water Wells

Source: Department of Land and Natural Resources

Telephone: 808-587-0242

OTHER STATE DATABASE INFORMATION

RADON

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

The EDR Aerial Photo Decade Package

**Puunene Abandoned Vehicle Facility
Mokulele Highway
Puunene, HI 96784**

Inquiry Number: 1621597.13

February 27, 2006



**EDR® Environmental
Data Resources Inc**

The Standard in Environmental Risk Management Information

**440 Wheelers Farms Road
Milford, Connecticut 06461**

Nationwide Customer Service

**Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com**

THE EDR AERIAL PHOTO DECADE PACKAGE

Environmental Data Resources, Inc.'s (EDR) Aerial Photography Print Service is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs at one photo per decade.

References

EPAs Standards and Practices for All Appropriate Inquiries (AAI), section 312.24, identifies the historical sources of information necessary to achieve the objectives and performance factors of section 312.20. According to AAI, *"historical documents and records may include, but are not limited to, aerial photographs, fire insurance maps, building department records, chain of title documents, and land use records."*

To meet the prior use requirements of ASTM E 1527-05, Section 8.3.2, the following standard *historical sources* may be used: aerial photographs, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, city directories, building department records, or zoning/land use records. ASTM E 1527-05, Section 8.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. ASTM E 1527-05 requires *"All obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historical sources as are necessary and both reasonably ascertainable and likely to be useful."* (ASTM E 1527-05, Section 8.3.2) *Reasonably ascertainable means information that is publicly available, obtainable from a source within reasonable time and cost constraints, and practically reviewable.*

Data Gaps

In order to address *data gaps*, additional sources of information may be consulted. According to the AAI, Section 312.20 (g), *"to the extent there are data gaps (as defined in section 312.10) in the information developed...that affect the ability of persons (including the environmental professional) conducting the all appropriate inquiries to identify conditions indicative of releases or threatened releases...such persons should identify such data gaps, identify the sources of information consulted to address such data gaps, and comment upon the significance of such data gaps."* According to ASTM E 1527-05, Section 8.3.2.3, *"historical research is complete when either: (1) the objectives in 8.3.1 through 8.3.2.2 are achieved; or (2) data failure is encountered. Data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met....If data failure is encountered, the report shall document the failure and, if any of the standard historical sources were excluded, give the reasons for their exclusion."*

NO COVERAGE

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Melissa Farris
Myounghee Noh and
99-1046 Iwaena Street
Aiea, HI 96701

Order Date: 2/27/2006 **Completion Date:** 2/27/2006

Inquiry #: 1621597.11

P.O. #: NA

Site Name: Puunene Abandoned Vehicle Facility

Address: Mokulele Highway

City/State: Puunene, HI 96784

Cross Streets:

Customer Project: NA

8010224BRU 808-484-9214

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

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.

APPENDIX C

Photographs



Photograph 1. A general view of the landscape of the proposed project area. Tall grasses, shrubs, and bushes cover the majority of the project area (March 6, 2006).



Photograph 2. A general view of the project vicinity. Sugarcane fields are identifiable in the background. The photograph illustrates the openness of the surrounding areas (March 6, 2006).



Photograph 3. A view of the paved Maui Raceway Park access road which borders the proposed project area on its north side (March 6, 2006).



Photograph 4. A view of the paved roadway running through the middle of the proposed project area (March 6, 2006).





Photograph 5. A view of the dirt roadway bordering the proposed project area to the south. Sugarcane land lies beyond the road (left) and the project area is seen on the right (March 6, 2006).



Photograph 6. A view of the adjoining sugarcane fields adjacent to the proposed project area beyond its southern boundary (March 6, 2006).



Photograph 7. A view of some debris scattered across the ground surface of the proposed project area (March 6, 2006).



Photograph 8. A view of more debris found in the proposed project area. Old tires and metal scraps are seen in this photograph (March 6, 2006).





Photograph 9. A view of an old, rusted automobile found in the southern area of the proposed project site (March 6, 2006).



Photograph 10. A view of discarded automobile parts left on the proposed project site (March 6, 2006).



Photograph 11. A view of the rusted water tank found in the south-east corner of the proposed project area (March 6, 2006).



Photograph 12. A view of the generator mount located in the north-ern corner of the proposed project site (March 6, 2006).





Photograph 13. A view of the bulldoze pile located in the southern portion of the project area. Boulders from the former housing unit south of the site are seen in the background (March 6, 2006).



Photograph 14. A view of the bulldoze pile containing remnants of the nearby housing units used during Naval Air Station Puunene operations (March 6, 2006).



Photograph 15. A another view of the bulldoze pile in the southern portion of the site (March 6, 2006).



Photograph 16. A view of boulders placed on the site from the former navy housing on the adjoining property (March 6, 2006).



APPENDIX D

Qualifications of Environmental Professionals

Technical &
Professional
Training



MELISSA FARRIS

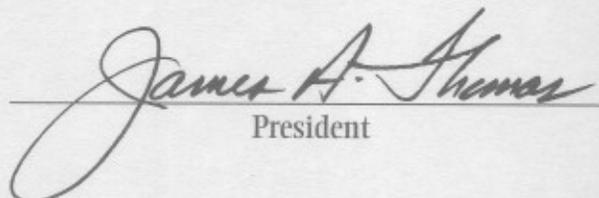
Is Awarded 1.4 CEU'S

*for successful completion of
the course on*

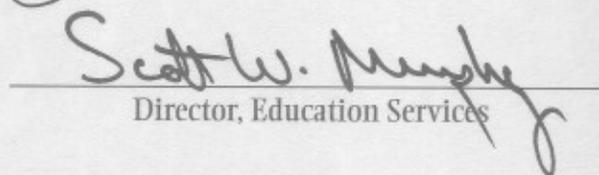
**Environmental Site Assessments
For Commercial Real Estate**

September 8, 2005

Denver, CO



President



Director, Education Services

Technical &
Professional
Training



Joanna Boyette

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**Environmental Site Assessments
for Commercial Real Estate**

May 21 - 22, 2002

Las Vegas, NV



President



Manager, Technical & Professional Training

APPENDIX D

AN ARCHAEOLOGICAL INVENTORY SURVEY REPORT

**AN ARCHAEOLOGICAL INVENTORY SURVEY FOR A
15.20-ACRE PARCEL LOCATED AT
Pūlehu Nui Ahupua‘a, Wailuku District, Maui Island
TMK: (2) 3-8-008:001**

**Prepared for
SSFM International, Inc.
Mr. Ronald Sato**

**Prepared by
Robert Hill, B.A.,
Tanya Lee-Greig, M.A.
and
Hallett H. Hammatt, Ph.D.**

**Cultural Surveys Hawai‘i, Inc.
Wailuku, Hawai‘i
(Job Code: PULEH 1)**

April 2006

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Maui Office
16 S. Market Street, Suite 2N
Wailuku, Hawai‘i 96793
Ph: (808) 242-9882
Fax: (808) 244-1994

Management Summary

Reference	An Archaeological Inventory Survey Report for an 15.20-Acre Parcel located at Pūlehu Nui Ahupua'a, Wailuku District, Maui Island [TMK (2) 3-8-008:001] (Hill <i>et al</i> 2006)
Date	April 2006
Project Number	Cultural Surveys Hawai'i Inc. (CSH) Job Code: PULEH-1
Investigation Permit Number	CSH completed the inventory survey fieldwork under state archaeological permit No. 0605 (2006) issued by the Department of Land & Natural Resources/ State Inventory of Historic Places (DLNR/ SIHP) per Hawai'i Administrative Rules (HAR) Chapter 13-13-282.
Project Location	East of Mokulele Highway, Pūlehu Nui Ahupua'a, Wailuku District, Maui Island, TMK: (2) 3-8-008:001. This area is depicted on the 1998 Pu'u o Kali and Mā'alaea 7.5-minute USGS topographic quadrangles.
Land Jurisdiction	Government: County of Maui
Agencies	DLNR/ SHPD and the County of Maui.
Project Description	<p>CSH undertook this inventory survey investigation for the County of Maui, who is proposing to locate a processing and storage facility for abandoned vehicles in the project area.</p> <p>In consultation with SHPD, this document was prepared to support the proposed project's historic preservation review under HRS Chapter 6E-42, HAR Chapter 13-13-284, and state requirements for archaeological field survey[Hawai'i Administrative Rules Chapter 13-276-4].</p>
Project Acreage	Approximately 15.20 Acres.
Area of Potential Effect (APE) and Survey Acreage	For this inventory survey, the project's APE is defined as the entire 15.20-acre footprint of the proposed abandoned vehicle storage and processing facility (14.51 acres), as well as the paved access road (0.69 acres). The project area's surrounding built environment is a mixture of military (Hawaii Army Air National Guard), recreational (Valley Isle Timing Association's drag strip), and agricultural (HC&S Company's sugar cane fields), and the proposed light industrial use appears to pose no additional auditory, visual, or other environmental impacts to any surrounding potential historic properties. The existing paved road for access and egress to the project area is subject to increased traffic, and is included in the project APE. Accordingly, for the current inventory survey investigation, the survey area, including the access roadway, and the project APE are one and the same.

Historic Preservation Regulatory Context	The project is subject to Hawai'i State environmental and historic preservation review legislation [Hawai'i Revised Statutes (HRS) Chapter 343 and HRS 6E-8/ Hawaii Administrative Rules (HAR) Chapter 13-13-275 respectively]. This document is intended to facilitate the project's planning, and fulfill the requirements for the project's historic preservation review.
Fieldwork Effort	Fieldwork was accomplished on January 27, 2006 by Robert Hill, B.A., under the general supervision of Hallett H. Hammatt, Ph.D., as principal investigator. The field effort included a systematic pedestrian inspection, photographs, maps, and scale drawings. The total time required to complete the fieldwork consisted of one person-day.
Number of Historic Properties Identified	One
Historic Properties Recommended Eligible to the Hawai'i Register of Historic Places (Hawai'i Register)	One previously recorded historic property was identified within the APE. SIHP 50-50-09-4800, Feature BB, (Tomonari-Tuggle <i>et al</i> 2001), as a historic military structure. It is recommended eligible for the Hawai'i Register of Historic Places (HRHP) based on Criteria A, B, C, and D, due to its' association with significant personalities and events of World War II (See Consultation Section 2.3), its' distinctive structural characteristics, and its' ability to yield further historic information.
Historic Properties Recommended Ineligible to the Hawai'i Register	Remnant concrete rubble associated with the State Inventory of Historic Places (SIHP) 50-50-09-4164, Naval Air Station Puunene, was observed within the APE. One previously identified (Tomonari-Tuggle 2001) bulldozed concentration of structural concrete is described further in this inventory survey: Bulldozer Pile 14, (BD-14), historic remnant concrete rubble, recommended ineligible.
Effect Recommendation	Under Hawai'i State historic preservation review legislation (HAR 13-275) a project effect determination of "effect, with proposed mitigation commitments" is warranted for the single historic property identified within the present project area. The documentation process pursued during the current inventory survey investigation has revealed the importance of preservation for SIHP 50-50-09-4800, Feature BB.

Mitigation Recommendation	<p>In order to alleviate the proposed project's adverse effects on the historic property recommended eligible to the State Register, CSH offers the following mitigation recommendations.</p> <p>The proposed abandoned vehicle storage and processing site should be located within the project area in such a way as to avoid and preserve SIHP 50-50-09-4800, Feature BB. The historic structure is one of few remaining WWII facilities of NAS Puunene. A construction buffer zone is therefore stipulated. The buffer zone should effectively protect and preserve the historic property from any damage from the proposed use of the project area.</p> <p>Insofar as the remainder of the project area, no further historic preservation work is recommended for the proposed uses for this parcel.</p>
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Section 1 Introduction

1.1 Project Background

At the request of Mr. Ronald Sato of SSFM International Inc., Cultural Surveys Hawai'i, Inc. (CSH) conducted an archaeological inventory survey of a 15.20-acre parcel of land located in Pūlehu Nui Ahupua'a, Wailuku District, Maui Island [TMK: (2) 3-8-008:001]. (Figure 1 and Figure 2) The area under consideration for the storage and processing of abandoned automobiles consists of a parcel of property (14.51 acres), as well as the access roadway (0.69 acres) which intersects Mokulele Highway. The area of potential effect (APE) for the project under consideration includes the section of roadway located outside and adjacent to the 14.51-acre project area (Figure 3). The entire approximate 15.20-acre APE, hereafter referred to as the "project area", was inspected as a part of this investigation.

The project area is bounded to the north by approximately 14.50 acres of open field, presently also under the jurisdiction of Maui County. This property is bounded by land maintained as a drag racing strip by the Valley Isle Timers Association. Sugar cane lands cultivated by the Hawaiian Commercial and Sugar Company (HC&S) occur to the south and east. Unused open field lands occur to the northwest, which are then bounded by property recently developed as an armory and heliport for the Hawai'i Army Air National Guard.

The project area parcel is accessed from the Mokulele Highway, by way of an access roadway that serves the neighboring land uses at the drag strip, as well as the Hawai'i Army Air National Guard armory. CSH undertook this archaeological inventory survey to comply with the historic preservation review process (Hawai'i Revised Statutes [HRS] Chapter 6E-8/42 and HAR Chapter 13-275/284) for the proposed project.

1.2 Scope of Work

The scope of work included:

1. A complete ground survey of the entire project area for the purpose of site inventory. All sites were located, described, and mapped with an evaluation of function, interrelationships, and significance. Documentation included photographs and scale drawings of selected sites and complexes;
2. Research on historic and archaeological background, including searches of historic maps, written records, and Land Commission Award documents. This research focused on the specific project area, with background on the traditional district, the *ahupua'a*, and with special emphasis on settlement patterns;
3. The administrative rules of SHPD/DLNR also required consultation with community members about their cultural and historical concerns with the project area. CSH conducted a consultation from a list of knowledgeable *kama'aina* residents; and,
4. Preparation of a survey report that includes the following:
 - a. A topographic map of the survey area showing all archaeological sites and site areas;
 - b. Description of all archaeological sites with selected photographs, scale drawings, and discussions of function;
 - c. Historical and archaeological background sections summarizing pre-contact and historic land use as they relate to the archaeological features;
 - d. A summary of site categories and their significance in an archaeological and historic context;
 - e. Recommendations based on all information generated that specify what steps should be taken to mitigate impact of development on archaeological resources- such as data recovery (excavation) and preservation of specific areas. These recommendations were developed in consultation with the client and the State agencies.

This scope of work also includes full coordination with the State Historic Preservation Division (SHPD), and County agencies relating to archaeological matters. This coordination only took place after the consent of the owner or the owners' representatives.



Figure 1. A portion of the 1992 Pu'u o Kali and 1996 Mā'alaea 7.5-minute USGS topographic quadrangles, project location indicated by lined area.

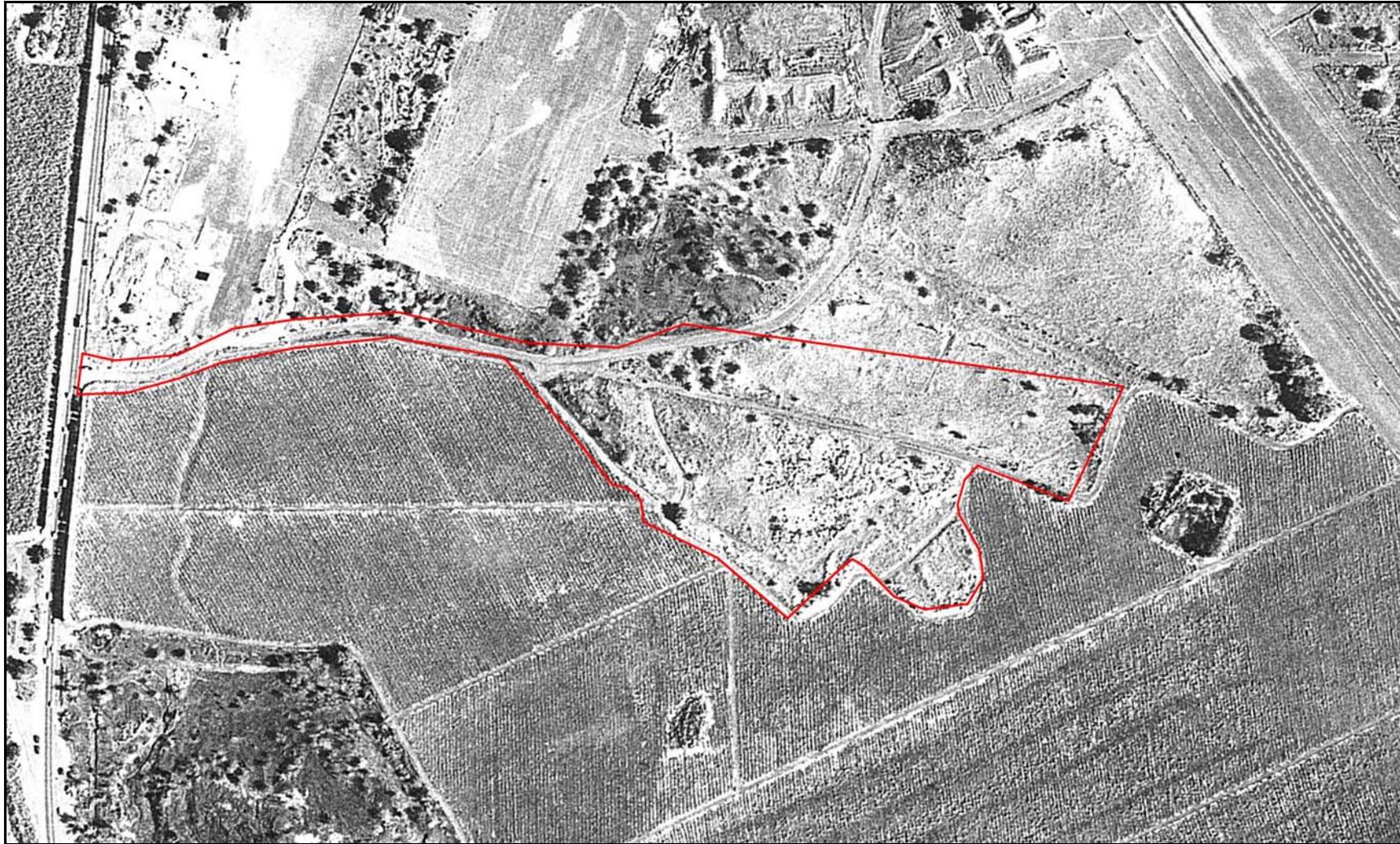


Figure 3. Aerial photograph depicting project APE (outlined in red). Surrounding area includes HC&S Field System 9151, portion of Maui Raceway Park (top), and area subsequently developed as an armory by the U.S. Army Air National Guard (left). (Photo by R.M. Towill Corp., 1973, courtesy Hawai'i State Department of Transportation, Airports Division)

1.3 Environmental Setting

1.3.1 Natural Environment

Lands within the project area are generally flat, averaging less than a 2 percent slope, at an average elevation of 80 feet above mean sea level (amsl), and consist of soils of the Pulehu-Ewa-Jaucas association. This soil association is found on alluvial fans and in basins on the island of Maui, mainly within Central Maui (Foote et al 1972:8). This association consists of well-drained and excessively-drained, medium textured, moderately fine textured, and coarse textured soils. (Foot *et al* 1972) and is considered suitable for sugar cane.

Pulehu-Ewa-Jaucas association soils have a surface layer of dark-brown friable silt loam. Their substratum is dark brown and dark yellowish-brown alluvium weathered from basic igneous rock. The specific soils found within the project area are Waiakoa extremely stony silty clay loam, 3 to 25 percent, slopes, eroded (WID2) (Figure 4). This series is characterized by stones covering between 3 to 15 percent of the surface (Foote et al. 1972:26).

The Waiakoa Soil Series consists of well drained, gently sloping to moderately steep soils located on the upland areas. The upper part of the Waiakoa Series is influenced by volcanic ash and developed from material weathered from basic igneous rock. The U.S. Department of Agriculture (USDA) Soil Conservation Service survey lists WID2 type soils as “Waste Lands”, and not suitable for cane cultivation. Lands of this soil class are generally relegated to wildlife habitat and pasture.

Rainfall accumulation within the project area averages around 15 inches per year with the heaviest rainfall occurring during the winter months (December through February) and little to no rainfall during the summer months (June through August) (Giambelluca and Schroeder 1998). This pattern of rainfall and low annual precipitation rate once sustained a lowland, dry shrubland and grassland native ecosystem (Pratt and Gon III 1998).

The landscape of the project area had been heavily modified by historic sugar cultivation southwest of the access roadway which runs east-west through the project area. The area northeast of the access roadway had been graded and cleared for WWII military operations. The vegetation currently consists of moderately dense *kiawe* (*Prosopis pallida*) and *koa haole* (*Leucaena leucocephala*) with knee to waist high grasses along the project area boundaries where the project area lands are closest to irrigated sugar cane fields. Thin stands of *kiawe* and *koa haole* trees, knee to waist-high buffelgrass (*Cenchrus ciliaris*) and other alien grass species, interspersed with sparse occurrences of *‘ilima* (*Sida fallax*) and *‘uhaloa* (*Waltheria indica*), could be found throughout the project area.

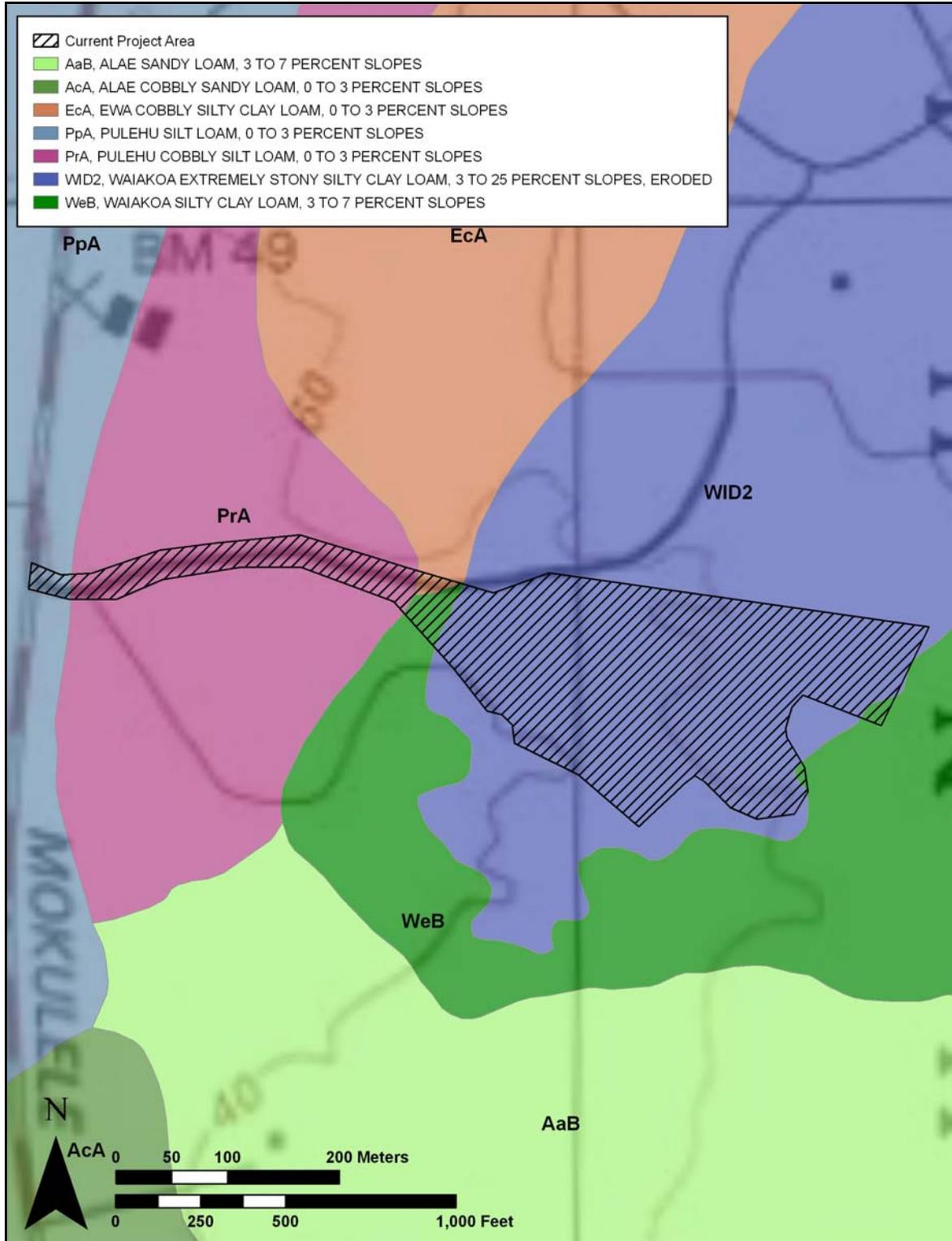


Figure 4. A portion of the 1992 Pu'u o Kali and 1996 Mā'ālaea 7.5-minute USGS topographic quadrangles, showing the project area relative to the local soil series (U.S. Department of Agriculture, Natural Resources Conservation Service 2001)

1.3.2 Built Environment

The built environment consists of a paved access and egress roadway leading to the project area from the Mokulele Highway. The access roadway is oriented in an east-to-west direction, and travels past the developed area of the U.S. Army Air National Guard heliport (Figure 5). The access roadway travels from the Mokulele Highway approximately 310 (1,000 feet) meters to a fork. The northward fork continues toward the Maui Raceway Park area. The southern fork travels approximately 220 meters (725 feet) due east through the project area, as a paved road bisecting stony soils to the south from less stony soils north of the roadway (Figure 6).



Figure 5. Facilities of the Hawaii Army Air National Guard, located along the same roadway for access and egress that serves the project area, as well as the varied recreational facilities of Maui Raceway Park. View to north.



Figure 6. View of project area roadway, (due west) toward the West Maui Mountains. Note boulder terrain of southern portion of project area (left) and level terrain of military area (right).



Figure 7. Bulldozed Pile 14 (BD-14), view to north.

Section 2 Methods

Archaeological fieldwork was conducted by archaeologist Robert R. Hill, B.A., under the overall direction of Principal Archaeologist Hallett Hammatt, Ph.D. The fieldwork was conducted on January 27, 2006.

2.1 Field Methods

The project area consisted of two distinct landscape types (see Figure 8 and Figure 9):

1. Barren former military lands;
2. Uncultivated stony lands;

The field inspection methods were adjusted according to the type of landscape. The portion southeast of the paved roadway bisecting the project area consisted of uncultivated stony lands and was systematically surveyed by one archaeologist at 20 to 25 meter intervals oriented in a north-south direction paralleling the roadway. In the less stony landscape northeast of the roadway, the survey intervals were spaced closer together at ten meters. The access and egress roadway connecting the project area to Mokulele Highway was also surveyed.

Documentation methods included photographs and maps of the historic property within the project area. Maps were drawn to scale using a meter-tape and compass. Photographs were taken using both a digital camera and an analog (film) camera. The location of the historic property was recorded with the Garmin GPSMAP 76S Unit using the UTM coordinate system.

2.2 Document Review

As part of the inventory survey, a review of all previous archaeological work conducted in the surrounding area was performed. In addition, a variety of resources devoted to historical perspectives of the region and traditional stories and accounts were reviewed. Research venues included the State Historic Preservation Division of the Department of Land and Natural Resources and the Survey Office of the Department of Accounting and General Services. Research regarding the history of NAS Puunene was conducted using the services of the National Archives and Records Administration, in College Park, Maryland, and the U.S. Naval Historical Center, located within the Washington Navy Yard, Washington, D.C. All relevant Land Claim Awards (LCA) and Royal Patents were researched using resources associated with the Waihona Aina online database (Waihona Aina Corp. 2002).



Figure 8. Barren former military landscape along northern project area boundary (view to east).



Figure 9. Uncultivated boulder landscape in the southern project area (view to northwest).

2.3 Consultation

A separate document representing a cultural impact evaluation is being conducted as part of the necessary studies for the potential development of the project area. Hawaiian organizations, government agencies, community members, and cultural and lineal descendants with ties to Pūlehu Nui and the north Kīhei area have been contacted to identify potentially knowledgeable individuals with cultural expertise and knowledge of the project area and surrounding vicinity, as well as, any cultural concerns and potential impacts that may be associated with the proposed light industrial use of the project area.

A number of individuals, both civilian and military, had been interviewed for the Tomonari-Tuggle 2001 report, as having either served “aboard” NAS Puunene, or as having lived in nearby plantation camps during the term that NAS Puunene was in operation. An interview which was not submitted for publication in the Tomonari-Tuggle 2001 report is included as a part of this document. It was conducted with a Navy pilot who trained at NAS Puunene with his fighter squadron. This interview was conducted at NAS Pensacola, Florida, during dedication ceremonies for an exhibit of WWII artifacts from a Maui family.

The WWII experiences of Rear Admiral Edward “Whitey” Feightner, during his training on Maui, were related to the author in 1996. Some of RADM Feightner’s Maui experiences were subsequently published in Steve Ewing’s 1997 book, “Fateful Rendezvous”. As a member of the “Grim Reapers” of Fighting Squadron VF-10, then-Ensign Feightner was drilled by NAS Puunene tactical instructor, and Medal-Of-Honor recipient, Commander Edward “Butch” O’Hare, in the most up-to-date aerial combat methods.

RADM Feightner described how “Butch” O’Hare had been assigned to flight training operations at NAS Puunene; to teach air combat doctrine as developed by (then) LCDR John Smith Thach, and the Commanding Officer of the “Grim Reapers” (VF-10), CDR James Flatley. “Butch” [O’Hare] let us practice against the Army boys! We’d fly to Oahu and ‘surprise-attack’ the Army Air Corps!” CDR O’Hare had spent over a year on Maui, during which time he helped develop the first practical use of airborne radar to intercept enemy aircraft at night. The air combat tactical problems he developed at NAS Puunene were legendary, wherein he emphasized better coordination between pilots of Navy Carrier Air Groups.

RADM Feightner recalled, “But life aboard base wasn’t always work! “Butch” would sometimes requisition the base’s J2F “Duck” [an amphibious aircraft built by Grumman, and assigned to utility squadron VJ-3] and fly a bunch of us [pilots] to Kaho’olawe. We would be anchored just offshore, and “Butch” would bob around in the water for a couple of minutes, dive down, and pull an octopus off the rocks for us. He floated on his back, just like an otter, and bit the thing in the eye to kill it, and showed us how to eat them. I never had a taste for that stuff: tasted just like rubber to me, but “Butch” really enjoyed them.”

“But this is exactly how I got my nickname. If you were going to be with “Butch”, you were going to spend a lot of time out in the sun fishing. I could never tan like the rest of the guys; I just got red and peeled. So “Butch” called me “Whitey”, and it stuck.”

“We [pilots] also got the royal treatment at the von Tempsky estate on Haleakalā mountain. Our C.O., Commander [James] Flatley took good care of us, and made it so we had rides all arranged from Pu’unēnē to the estate and back. Boyd von Tempsky and his wife Mamea always

had ranch-hands who could take us hunting, or make us food like we were back home. Alexa von Tempsky was a Countess (Figure 10), and she made sure we had a good time at her house. If we were out flying, we would “buzz” her estate to let her know we were coming for dinner. Her house was designated “COMWOLFPAC” by us pilots, and she had a flag she would fly in her yard with a rack of Admiral’s stars on it. If the flag was flying, it meant that the coast was clear: that it was O.K. to drop-in for dinner. Sometimes she had bigwigs, admirals, generals or whoever at the estate, so we would steer clear and make other plans. That’s when the standard “Stars and Bars” would be up flying on the flagpole.”

“I remember a time that “Butch” got a group of guys together for a big hunting party in Haleakalā Crater. There were big sheep in the crater that the boys wanted to go after, and it would take a few days of camping. I volunteered to fly into the crater and drop supplies in for them, which I did. But I got caught in the fog, in the “Duck”, [Grumman J2F] which I just couldn’t get any altitude in. I circled around the inside of the crater until I finally found my way out a gap in the mountain, and flew right into the windiest spot on Maui [Kaupō]. I had a rough ride back to the base, but at least I got out of the crater in one piece!”

“Butch” really did save my life on Maui. He taught me how to get out of a fight with a Japanese “Zero”. You have to remember that we were flying the [Grumman] “Wildcat”, and we were really underpowered when it came to a dogfight. “Butch” taught me to never try to climb with a “Zero”, but to immediately “jink” to the side, as soon as the Japanese pilot tried to sucker you into a climbing loop. [At this point in the interview, RADM Feightner used his hands to simulate the positions of the dogfighters.] This way, you’d catch him sideways at the bottom of his loop. My very first combat, I was able to use this tactic to break away from two “Zeros”, and shoot down three heavily-armed “Bettys” [bombers]. The first time we took the new F6F “Hellcats” into combat, I shot down two “Zeros” exactly the way he had taught me.”

This interview took place in the atrium of the National Museum of Naval Aviation, on the grounds of NAS Pensacola. The exhibit, “Lex’s Wall”, with WWII artifacts and writings attributed to Mauian Alexa von Tempsky Zabriskie, was dedicated May, 1996, during a week-long symposium on naval aviation history. RADM Feightner had joined other high-ranking military officials, including Admiral Boorda, the Navy’s then-current Chief of Naval Operations, and keynote symposium speaker President George Herbert Walker Bush, in reviewing the display.

The “Lex’s Wall” display included a set of “stars” as worn by four-star admirals in the U.S. Navy during WWII. According to “Whitey”, this particular set had been given to Alexa von Tempsky by Fleet Admiral Chester W. Nimitz. “The story was, that [Admiral] Nimitz had inadvertently left his “stars” at the von Tempsky estate, and flew back to Oahu without them. He had to telegraph the military police at NAS Puunene to retrieve them, or face a reprimand for being “out of uniform”. Nimitz gave her a facsimile - a replacement set of his “four-stars” as a memento of the whole escapade”.

RADM Feightner said, “Maui was such a great place to be during WWII, and we were lucky that we got to rotate through Maui twice. Alexa von Tempsky was on a first-name-basis with people like Admiral [John Henry] Towers: the “father” of naval aviation. Alexa had, at her estate, an enormous set of Japanese naval binoculars, set up on a huge tripod: a battle trophy from a Japanese cruiser that [Admiral] Nimitz or Towers had sent over to her.”



Figure 10. A portrait of Mauian Alexa von Tempsky Zabriskie (center) with pilots from Navy Fighting Squadron Eleven (left to right) Ensign Paul Hintz, Ensign R. McBride, Lt. Blake Moranville, Lt. John Ramsey, Lt. James S. Swope, and Ensign Jack “Soapy” Suddreth. These VF-11 “Sundowners” were among hundreds of WWII pilots who were guests at the upcountry estate of Robert (“Boy”) and Mamea von Tempsky. (photograph courtesy Gordon and Mary von Tempsky)

Section 3 Background Research

The division of Maui's lands into political districts occurred during the rule of Kaka'alaneo, under the direction of his *kahuna*, Kalaiha'ōhi'a (Beckwith 1970:383). This division resulted in twelve districts or *moku* during traditional times: Honua'ula, Kahikinui, Kaupō, Kīpahulu, Hana, Ko'olau, Hāmākua Loa, Hāmākua Poko, Ka'anapali, Lahaina, and Kula. The current project area is located on the leeward flank of Haleakalā in the *moku* of Kula and *ahupua'a* of Pūlehu Nui (Figure 11) at a place where the Pūlehu Nui Stream ends.

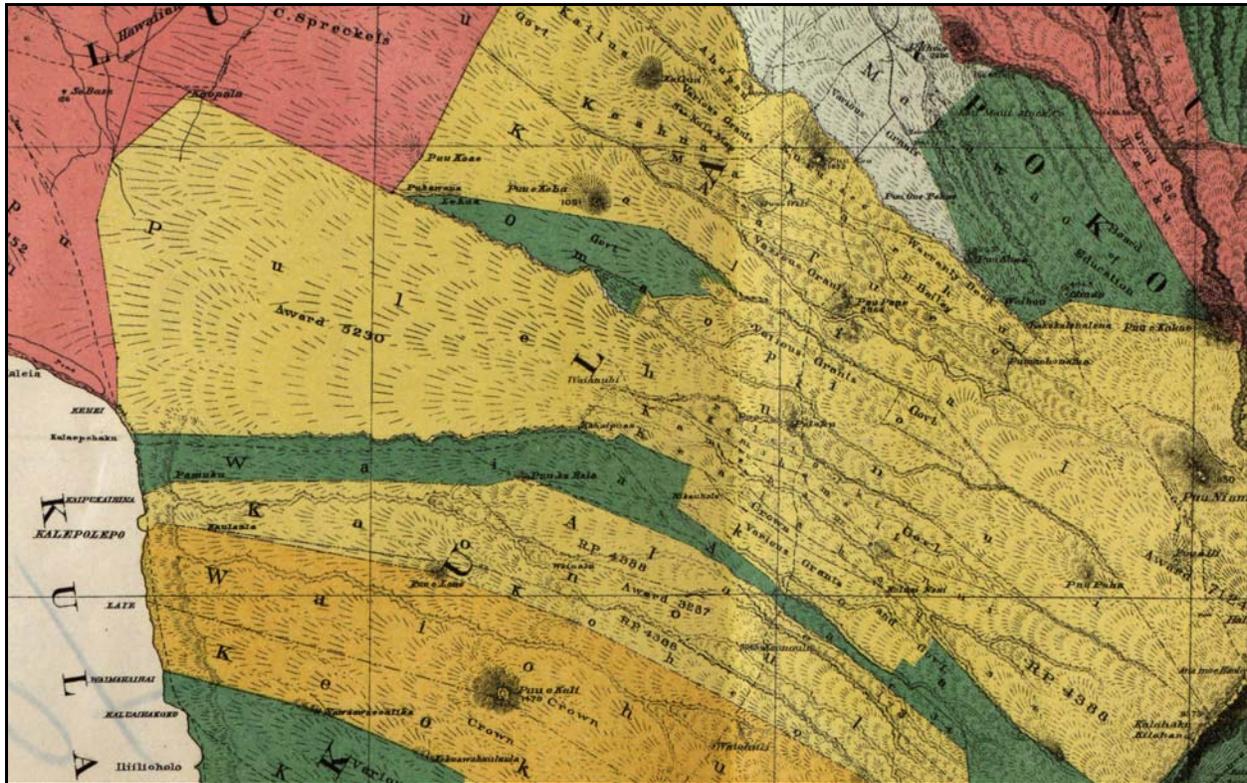


Figure 11. A portion of the F.S Dodge map (1885) showing Pūlehu Nui Ahupua'a in relation to the traditional *moku* of Kula (crown lands in yellow, government lands in green).

3.1 Traditional and Historical Background

3.1.1 Mythological Accounts

While the mythological and traditional accounts of the Kīhei area are relatively scarce, an analysis of the place name meanings for the region surrounding the project area may yield some insight into the patterns of life in an area. Literal translations of several of the place names for land areas and divisions near to the project area are listed on page 15. Unless otherwise noted, the translations are taken from Pukui et al. (1974):

Kula (<i>moku</i>)	literally translated as "plain"; always an arid region (Handy in Sterling 1995:242)
Pūlehu Nui (<i>ahupua`a</i>)	large <i>pūlehu</i> where <i>pūlehu</i> is literally translated as "broiled"
Kīhei	literally "cape or cloak"; sandy point and boundary marker between Pūlehu Nui and Waikapu (Sterling 1998:255); commonly used place name for the South Maui area
Kīheipūko`a	<i>kīhei</i> literally translates as "cape or cloak" and <i>pūko`a</i> literally translates as "coral head"; Kīheipūko`a was a place near Keālia between Kalepolepo and Ma`alaea (Sterling 1998:257)
Keālia	literally "salt encrustation"; a pond near Kīhei and major salt pan location (Sterling 1998:95)
Kale`ia	literally "the abundance", possibly in reference to the resources available from the fishponds and offshore fishing grounds
Kalepolepo	literally "the dirt"
Ka`ie`ie	"a plaything for floating in the rapids", ancient name of Kalepolepo (Sterling 1998:252)
Kaopala	literally "the rubbish"; dividing line between Pūlehu Nui and Waikapu
Waiakoa	literally "water (used) by warrior"; the name of the gulch that serves as the northern boundary of the project area
Keāhuaiwi	literally "the bone pile"; the name of a gulch immediately adjacent to and north of Waiakoa Gulch
Kalaepohaku	"the stony promontory"
Pohaku Ki`i	"tilted stone"; a resting place for travelers
Alakoa	"soldiers street"
Kohemalamalama	"the vagina"; also the ancient name for Kaho`olawe

The above place names, together with the environmental data, suggest that the lands of and surrounding coastal Pūlehu Nui were fairly dry and barren in an agricultural sense but rich in marine resources. Previous research on pre-contact occupation in Kula District (Kolb et al. 1997) has suggested that most permanent habitations were in the uplands with a smaller permanent population located along the coastline. While a reconstruction of the coastal and archaeological landscape of Kula Moku underscores the importance of the uplands as a focus of agriculture and habitation, Hawaiian traditions and the presence of four fishponds are evidence that the coastal environs were also a focus of settlement and marine exploitation. The relative scarcity of recorded coastal place names, however, may be an indication of a smaller population that was widely spread out across the leeward coastal line. The vicinity surrounding the current project area was also a site of conflict between the Hawai'i Island chief Kalaniopu`u and Maui Island chief Kahekili and is perhaps the origins for such place names as "Waiakoa" and "Keāhuaiwi".

3.1.2 Traditional Accounts

The earliest account concerning Kīhei and Hawaiian politics is given by Kamakau (1961) during the time of Alapa'i and Kekaulike:

Alapa'i sailed from Kohala on Hawai'i...But when he landed at Mokulau in Kaupō (Maui) and heard that Ke-kau-like was dying, he gave up all thought of war and wished only to meet Ke-kau-like and his (half) sister Ke-ku'i-ipo-iwanui...He landed at Kīheipukoa with all his chiefs and fighting men...While he was at Kīhei, Alapa'i heard that the ruling chief of Oahu was making war upon Molokai. Most of the chiefs of Molokai...were of Hawai'i...Alapa'i's sympathy was aroused, for these were his own brothers and children (relatives), and he made ready to go to their help on Molokai. [1961:70]

Other accounts involve the continuing conflict between Kahekili of Maui Island and Kalani'opu'u of Hawai'i Island during the late 18th century. Following a losing battle at Kaupō in 1775, Kalani'opu'u dedicated several war *heiau* on Hawai'i Island to aid in the defeat of Kahekili. Upon hearing this news Kahekili sent for the *kahuna* (priest) Kaleopu'upu'u who directed construction of the *heiau* of Kaluli and Pu'uohala on the north side of Wailuku. When Kaluli Heiau was completed Kaleopu'upu' said to Kahekili:

This is the house of your god; open the sluice gate that the fish may enter. [Kamakau 1961: 85].

In the year 1776, the army of Kalani'opu'u landed at Keoneo'o'io with their war canoes extending to Makena at Honua'ula and proceeded to ravage the countryside. Kalani'opu'u landed with additional forces at Kīhepuko'a at Kealia to Kapa'ahu, 800 strong and eager to drink the waters of Wailuku:

Across the plains of Pu'u'ainako (Can-trash-hill) and Kama'oma'o shone the feather cloaks of the soldiers ... Ka-hekili was at Kalanihale just below Kihahale and above the plateau of Ka'ilipoe at Pohakuaokahi ... Kaleopu'upu'u [said] to Ka-hekili, "The fish have entered the sluice; draw in the net." [Kamakau 1961:85]

The forces of Kahekili descended on and destroyed the soldiers of Kalani'opu'u, slaying the Alapa (elite soldiers of Kalani'opu'u) on the sandhills at the southeast of Kalua. Only two men escaped to Kīheipuko'a to tell Kalani'opu'u the news of their defeat. After a second day of warfare, Kalani'opu'u sued for peace and was granted such by Kahekili and his messengers at Kīheipuko'a (Kamakau 1961:88-89).

3.1.3 Early Historic Period

Kīhei was one of the locations visited by Captain George Vancouver. A monument at Mai Poina 'Oe Ia'u Beach Park in Kīhei commemorates Vancouver's on-shore expedition in 1792, when he first met the ruling chief Kahekili. With its sheltered coastline and easy access to upcountry resources over a vast slope, Kīhei would continue to be a common stop for visiting ships.

During the early and middle 1800s, the Hawaiian demography was affected by two dramatic factors: radical depopulation resulting from Western disease; and nucleation around the

developing port towns. The traditionally Hawaiian population was largely dispersed and, although there were royal centers and areas of more concentrated population, these areas never came close to rivaling the populations of the historic port towns that developed on Hawai'i's shorelines during the 1800s. In this regard, Kuykendall (1938:313) notes that in the period from 1830 to 1854:

The commercial development during this period, by magnifying the importance of a few ports, gave momentum and direction to a townward drift of population; the population of the kingdom as a whole was steadily going down, but the population of Honolulu, Lahaina and Hilo was growing.

We believe that Kuykendall's observation was most likely the demographic pattern at the Kalepolepo entrepot, a hub of early historic activity for Kīhei and eventually all of Kula Moku (Kolb et al. 1997:69), located approximately one mile to the south of the current project area. The development of Kalepolepo as an entrepot and a focus of Christian life in the 1840s and 1850s most likely increased the population in the immediate vicinity above the pre-contact population figures, contrary to the island-wide trend of depopulation. That the population and areal extent of the Kalepolepo community reached its zenith during the mid 1800's appears to be supported by Kolb (*et al.* 1997:68):

The ancient village of Kalepolepo was relatively small, and was built around an economy primarily based upon the exploitation of ocean resources--primarily the excellent fishing grounds as well as three large fishponds. However, as the number of visiting ships increased, Kalepolepo soon became an important provisioning area. By 1850 we know that the economic opportunities were attracting a number of European entrepreneurs.

In 1820, the whaling industry was introduced in Hawai'i. Although the whaling trade centered on Lahaina, mainly affecting the Kula/Kīhei area through agricultural demands, Clark (1980:47) notes that "From the 1840s to the 1860s a small whaling station was maintained at Kalepolepo [Kīhei]." The introduction of whaling to the Maui community brought with it an increased demand for foodstuffs and in particular the long-lasting Irish potato. After 1830, dryland agriculture in the old Kula District expanded with a focus on Irish potato cultivation. The California Gold Rush of 1849 further intensified the demand as a California-Hawai'i potato trade began to flourish. Kula became the area of highest potato production and was known as "the potato district" (the area between 2000 and 5000 ft. amsl). During this time period sugar cultivation and ranching were established in the Kula region. Sugar was present prior to 1846, with six sugar producers operating on the slopes of Haleakalā (Wong Smith in Brown and Haun 1989:C-7). As Wong Smith points out (Brown and Haun 1989: C-6), ranching was present in the area prior to the 1840s. Much of the produce, sugar and livestock moved down the Kalepolepo and Kekuawaha'ula'ula Trails to the landing at Kalepolepo, just south and east of the project area. Donham (1992:5) notes that the inundation of land clearing and cultivation associated with the Gold Rush resulted in "deforestation [which] adversely affect[ed] the amount of rainfall in the district, and periods of drought became more common."

Around 1849 John Halstead built the Koa House at Kalepolepo in Kīhei. The building, part store and part residence, thrived on both the trade of the whaling industry and the then thriving potato industry. During the Gold Rush years, the store became "an emporium for Irish potatoes"

and served as a gathering place for the whaling sailors. David Malo created a balance for the boisterous whaling crowd by constructing the Kilolani Church at Kalepolepo around 1852. Potato production thrived in Kula from 1830-1850 until successful potato cultivation and production in California and Oregon resulted in a decline in the Hawai'i trade (Burgett and Spear 1995:6-7). Halstead ran his store until 1876, closing shop when the potato industry diminished and moved to Ulupalakua (Janion 1977:25-31).

3.1.4 Mid- to late-1800s

The most significant change in land-use patterns and allocation came with The Great Māhele of 1848 and the privatization of land in Hawai'i. This action hastened the shift of the Hawaiian economy from that of a subsistence-based economy to that of a market-based economy. During the Māhele, all of the lands in the Kingdom of Hawai'i were divided between *mō'ī* (king), *ali'i* and *konohiki* (overseer of an *ahupua'a*), and *maka'āinana* (tenants of the land) and passed into the Western land tenure model of private ownership. On March 8, 1848, Kamehameha III (Kamehameha III) further divided his personal holdings into lands he would retain as private holdings and parcels he would give to the government. This act paved the way for government land sales to foreigners, and in 1850 the legislature granted resident aliens the right to acquire fee simple land rights (Moffat and Fitzpatrick 1995: 41-51).

Native Hawaiians who desired to claim the lands on which they resided were required to present testimony before the Board of Commissioners to Quiet Land Titles. Upon acceptance of a claim the Board granted a Land Commission Award (LCA) to the individual. The awardee was then required to pay in cash an amount equal to one-third of the total land value or to pay in unused land. Following this payment, a Royal Patent was issued that gave full title of ownership to the tenant. But by 1850, the government of Hawaii was offering land for sale to both Native Hawaiians and foreigners. Such lands were referred to as Royal Patent Grants or as Grants.

A total of 13 land commission claims were made in Pulehū Nui and nine were awarded (Table 1). A portion of the 1889 Monsarrat and Dodge map of Kula shows that the area in which the current project area lies was awarded to Keaweamahi as a part of LCA 5230 and supporting testimony given to the land commissioners indicate that the land of Pulehū (Pulehū Nui) was given to Keaweamahi by the King in 1843 and never disputed (Waihona 'Aina 2000). The testimony given by Kaauwai and Kaiakekaua additionally maintained that there were a great many natives that lived within the *ahupua'a* of Pulehū Nui (Waihona 'Aina 2000). As indicated in Table 1, the majority of the lands that were awarded were *kula* lands used for potato (both sweet potato and Irish potato) cultivation and primarily located along the upper elevations of Kula Moku. Only one land claim, made by Kapono (LCA 9018), made mention of fishing rights and access to a *loko*. Land commission claim # 9018 was not awarded.

Table 1. Land Commission Awards Within Pulehū Nui Ahupua'a

LCA	Royal Patent Number	Claimant	Award Type	Acreage
0327B	7691	Preveer, John	Apana	6.03
9671	2202	Kekahuna	2 kula, 1 Irish potato	5.78
9019	6330	Helehua	3 kula	9.08

LCA	Royal Patent Number	Claimant	Award Type	Acreage
4672	6560	Poonui	6 kula, 3 sweet potato plots, 1 Irish potato	4.09
9672	5190	Napoko	2 kula, 3 Irish potato	12.56
9673	6329	Lonoaea	2 kula	4.06
8866	5168	Kaniho and Pakeau	2 kula, 1 house lot, 1 mala of Irish potatoes	14.9
4567	7484, 7896	Wahine	11 kula, 10 sweet potato	7896
5230	8140	Keaweamahi	ahupua'a	1668.78

By the time John Halstead closed shop in 1876, the boom years of Kalepolepo had passed. By 1880 the government survey of the Kula area showed the demarcation of only a few Land Commission Awards and who had received awards had replaced them with grants. Lower Kula consisted primarily of pastureland for ranching (Wong Smith in Donham 1990b:B-6). Kennedy (1992:7) notes that at this point *kiawe* was imported to feed cattle and provide wood.

Regarding the settlement at Kalepolepo and the impact of the changes associated with the change to ranching on the general area known as Kīhei, Clark comments:

Halstead finally closed his store in 1876, as demands for his goods had steadily decreased, and moved to Ulupalakua . . . By this time the once thriving Hawaiian village at Kalepolepo had been almost totally abandoned as well. The slopes of Haleakala had gradually become denuded of their forests and torrential rains had caused heavy soil runoffs into the Kalepolepo shoreline. Cattle had trampled down the brush and grassy fields, causing sand dunes to drift and fill up the pond. Clouds of dust filled the air instead of cooling winds. Except for a handful of fishing families, Kalepolepo (and likely the Kīhei area in general) was deserted. (Clark 1980:48).

Sugar would soon fill the void and in 1898 the Kihei Plantation Company (KPC) was founded. The KPC began sugar operations in Kīhei and the plain above.

3.1.5 Early to Mid-1900s

The Kihei Plantation Company, Ltd. was organized late in 1898 with a capitalization of 60,000 shares at \$50 par value. Water was the most critical component in the decision to locate sugar cultivation along the leeward shores of Maui's arid coastline. The discovery of an ample supply of irrigation water early in 1898 led to the drilling of a large, successful well, but the supply of water was limited (Stearns 1942). Over the next four years, two ditches were developed to supplement the water needs of the 4,873 acres of sugar under cultivation at Kīhei (Gilmore 1936).

The history of the Kihei Plantation Company begins with the annexation of the Hawaiian Islands by the United States in 1898. With annexation came political stability for Hawai'i.

Worldwide sugar prices were rising due to the outbreak of war between the United States and Spain over her colonies in Cuba, Puerto Rico and the Philippines. Henry P. Baldwin, of the Maui plantation of HC&S, entered into a partnership with O'ahu businessman Benjamin F. Dillingham to convert Lorrin A. Thurston's landholdings in Kīhei into a sugar enterprise.

Up to that time, sugar cultivation within the central isthmus of Maui was centered around the main towns of Wailuku and Kahului. Water tunneled from springs in the West Maui Mountains flowed through ditches in Wailuku to irrigate fields as far away as Mā'alaea. Water from the windward rain belt of Kailua ran through a network of ditches from East Maui to Pā'ia, to irrigate fields in Pu'unēnē.

The McCandless Brothers drilled a successful Maui-Type well (U.S. Geological Survey Well 14 / Hawaiian Commercial & Sugar Well K1) in 1899. It was located just inland from the coast in North Kīhei, between Keālia Pond and the Waiakoa Homestead Lands. This well was drilled vertically to approximately 60 feet through the Honomanū basalts, and tunneled laterally over 1,500 feet in order to skim 10 million gallons of fresh irrigation water per day from sources beneath the Kīhei plains (McCandless 1936).

The Kihei Plantation Company had the McCandless Brothers drill two or three additional Maui-Type wells on the north side of reservoir K2 at the discharge end of the existing pipeline of Well 14. The plantation in Kīhei failed in 1908 before the well site was able to be developed. It would have been named the HC&S K2 well, and would have included a large pumping station (Stearns 1942).

The plantation company in Kīhei built bridges to span streams and gulches flowing through the company fields. The plantation had planned the construction of a mill in North Kīhei, and ordered a plant to be built. It was decided that the new HC&S mill under construction at Pu'unēnē would have more than enough capacity to mill all the cane from the Kīhei fields. The order for the mill was transferred to the 'Ōla'a Sugar Company in Hawai'i, in exchange for a supply of steel rails for new railway requirements at Pu'unēnē. A large scale Kona storm hit the plantation on November 15th, 1900, and caused immense damage to both Kīhei and the HC&S fields in Pu'unēnē (Dean 1950). Bridges were knocked out, buildings were flattened, and washouts filled irrigation ditches with silt. Repairs were effected immediately, with the new HC&S mill at Pu'unēnē commencing operations January 29, 1902.

3.1.5.1 Railway Operations

The Kihei Plantation Company planned to construct a railway to move their cane. The sugar agency of William Dimond & Company placed an order for a locomotive from the Baldwin Locomotive Works in Philadelphia. The order was placed April 1899, and the plantation locomotive "Haleakala" was built and sent on to Maui (Conde 1973).

By March of 1900, the first annual report of the Kihei Plantation Company stated, "It was our intention to complete the main [rail]road only as far as Camp #2, or for about 2 miles, but as the development of Camp #3 required pushing on of the [rail]road one and a half miles further, this has been done, having been completed the 15th of February." An additional six miles of track connected the Kīhei wharf to the various well pumping stations, and jogged north to meet up with existing HC&S track (Conde 1973). Establishing the railroad at Kīhei made it possible to harvest and transport over two thousand tons of sugar in a single year (Dean 1950).

The laying of the railroad and the cultivation of the sugar cane in Kīhei was performed primarily by Japanese field labor; the new Maui plantation employing a small part of some 19,908 immigrants from Japan who arrived in Hawai'i in 1899. Kīhei's plantation Camp #1 was set up inland of the Kīhei wharf and mooring pier. Two stables and a plantation store were located at Camp #1. Hospital services were provided by HC&S in Pu'unēnē. Kihei Camp #3 was located 2 ½ miles north of Kihei Camp 1 at Kolaloa Gulch, along the North Kīhei line of the HC&S railroad and south of the current project area.

The 3-foot gauge track for the Kihei Plantation Company railroad was built to the same specifications as the railway linking the HC&S mill at Spreckelsville to its fields; and to the sugar warehouses at the Kahului wharf. By 1902, with the new Pu'unēnē mill completed, a new milling contract with HC&S provided that all cane loaded by the Kihei Plantation Company was to be ground and manufactured into sugar by HC&S (Figure 12).

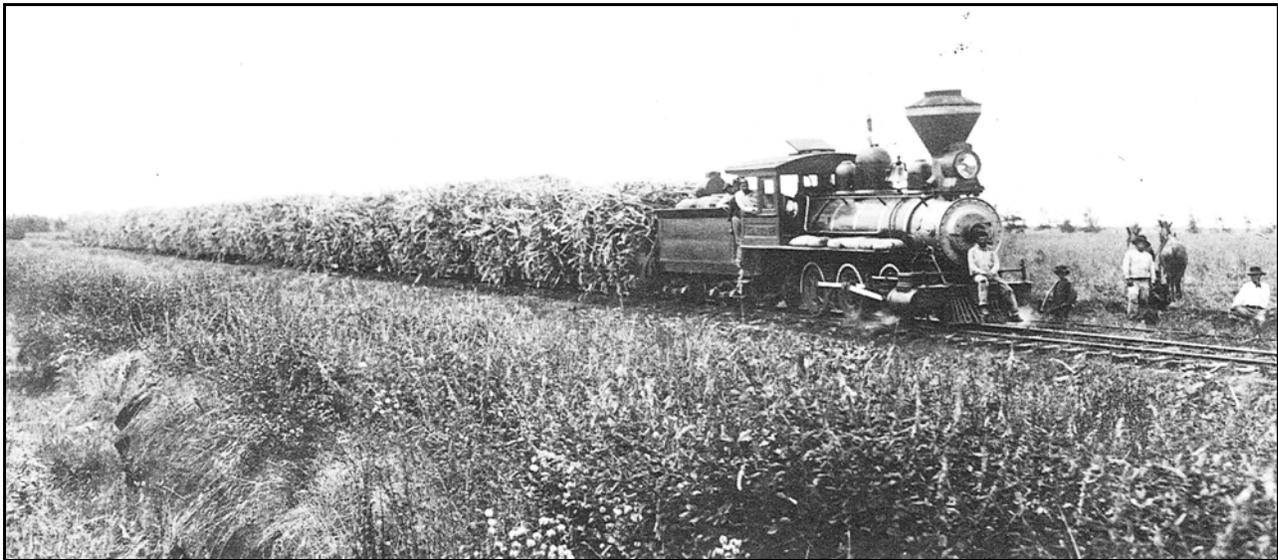


Figure 12. Cane from the Kīhei fields to the Puunene Mill, circa 1905. (photo from Conde 1973)

3.1.5.2 Water Source Development

The Lowrie Ditch project, named for former HC&S manager William J. Lowrie, brought an additional source of water to the Kīhei plains. His plan was to begin the ditch at the Pāpa'a'ea Reservoir, at the 1,000 ft. elevation, and maintain a four-foot drop per mile following the ditch's initial plunge from the Kailua reservoir. Steep mountain gulches were traversed using the force of the constant weight of water flowing in a series of siphons. The Halehaku Gulch, at 250 feet deep, and the Māliko Gulch, at over 350 feet deep, were both crossed by giant siphons fabricated of three-eighths-inch iron, and set in place by Japanese laborers. At a weir located above Pā'ia, the allocation of water began. The first tenth of the water flow in the Lowrie Ditch was divided out to the Pā'ia Plantation (an 11/20ths share) and the Haikū Plantation (a 9/20ths share). The distance traveled, from Kailua to the plantation's Kīhei boundary, was 21.9 miles (Thrum 1900).

More water was required, both from wells and from the East Maui water shed. The manager for the Kihei Plantation Company, W.F. Pogue, asked the management of HC&S for an even larger allocation of water for the Kīhei lands. In 1901, Samuel T. Alexander ordered the

construction of a new ditch, tapping the water sources from Nāhiku to Honomanū. It was determined that the Kihei Plantation Company would receive 2/9^{ths} of the capacity from the enterprise (Dean 1950).

The Kihei Plantation Company failed to live up to the expectations of its promoters with an inadequate water supply as the key difficulty. With the waters of the Ko'olau Ditch flowing to the Kihei fields, production appeared to have hit its peak. Although 5,609 tons of sugar was delivered in 1903, high costs required a change of managers in Kīhei, and a reduction of the HC&S milling charge to \$7 per ton. The incoming HC&S manager, Frank Fowler Baldwin, determined that the best course of action was to buy out the company for \$375,000 (Conde 1973).

In 1908, the lands of the Kihei Plantation Company were divided up between five new major business entities of HC&S. The Kahului Railroad Company, which had already been absorbed by HC&S, acquired the rail lines to Kīhei and the rolling stock of the plantation. The Kailua Plantation Company (994 acres), the Kalialinui Plantation Company (923 acres), the Kula Plantation Company (996 acres), the Makawao Plantation Company (982 acres), and the Pulehu Plantation Company (978 acres) acquired the remaining acreage not included in the railroad right-of-way. Water rights reverted to HC&S, and were reapportioned between the new plantations (Dean 1950).

In 1912, HC&S began to modernize the existing plantation camps. Between a huge influx of immigrant workers in 1909, and the burning of village areas of Pā'ia and Kahului to control smallpox in 1910, changes to the camp system were in full swing. The plantation workforce continued to expand until 1917, when the United States declared war on Germany, and the accompanying draft seriously depleted the labor pool. By 1919, postwar requirements for sugar had driven the price to \$471.40 per ton: an all-time high (Burns 1991).

The postwar years saw HC&S add electricity to some villages. HC&S completed the Waikapu Well [Well 7] in 1926; one of the largest deep wells in the world. The additional capacity of 40 million gallons per day (mgd) was instrumental in planning more sugar and industry within Maui's central plains. In November 1929, commercial inter-island airplane flights commenced, using both Kahului Harbor and Mā'alaea Bay as landing areas for the amphibious aircraft of the day. Eventually, a small airport was built on the mudflats of Mā'alaea, to accommodate aircraft which taxied along a concrete ramp, leading from the waters of Mā'alaea Bay to a roadway serving Wailuku (Saito 2000).

Harold T. Stearns traversed the island of Maui between 1932 and 1942, conducting studies of the geology and ground-water resources. Gordon A. Macdonald spent between 1939 and 1940 completing geologic maps for the study. Their work highlighted the then-recent explorations for water in Pūlehu Nui, both as a source of drinking water, and for dust control during construction of the airport (Stearns 1942). They reported that the isthmus of Maui, "was without trees and covered with drifting sand prior to the planting of cane. Old residents report that red dust storms were nearly a daily occurrence. It seems possible that very little water existed under the Maui isthmus, prior to irrigation. If so, the annual pumpage of 45.500 million gallons (average over the past 10 years) represents mostly return flow from the 78.271 million gallons of surface water imported for irrigation. [This measurement establishes that] recovery from wells is about 58% of surface water deliveries."

The Stearns and Macdonald study calculated the mean monthly rainfall on Maui through 1938, and gave specific numbers for Pūlehu Nui at the Kihei Well Site #1 (elevation 45 feet) as 11.29 inches annually, averaged over eight years. Mean monthly rainfall for Pu'unene (elevation 73 feet) was calculated as 21.42 inches annually, averaged over ten years. In a separate study, water supplies for various towns and villages of Maui were listed. The East Maui Plantation water system included Hawaiian Commercial & Sugar Co., as the "parent" system for the Airport Division: Airport Village. The Airport Village population (226), and consumption (24.9 mgd) were given for 1941. In contrast, the population of Camp 7, at Pu'u Hele, (64) had a 7 mgd average consumption rate (Stearns 1942).

Records of "Maui-type" wells (Stearns 1942: 216-17) lists both a U.S. Navy (System 45) well site at Pu'unene, and a Maui Airport (System 16) Lowrie Ditch and Wailoa Ditch site. Test holes at Pu'u Hele [upper Ma'alaea] were described as encountering water 6.5 feet above sea level, after drilling 325-foot deep shafts (1.5-inch diameter test drillings). The narrative reporting the U.S. Navy Maui-type well, stated, "A 6 x 9-foot vertical shaft was under construction by the U.S. Navy in January 1941, at about 50 feet altitude at the Puunene Airport. Two tunnels, each 45 feet long, one of which encountered a lava tube full of water, exist at the bottom of the shaft. A deep-well turbine with a capacity of 2,000 gallons per minute and 150 hp electric motor will be installed. The shaft penetrated soil 0-5 feet; dense basalt 5-35 feet; loose black lapilli fire-fountain debris 35-41 feet; basalt 41-53 feet. The aquifer is probably *pahoehoe* of the Honomanū volcanic series" (Stearns 1942).

3.1.5.3 Prewar Aviation History

The Civil Aviation Authority (CAA) for the Territory recommended an airport for Pu'unene to accommodate the growth of commercial service in the early 1930's. The site was approved by the U. S. Army, Inter-Island Airways (later Hawaiian Airlines), HC&S, the Kahului Railroad Company, and the CAA (Territory of Hawaii 1938). Three intersecting runways were designed (see Figure 13) alongside the existing government roadway and railway lines connecting Kīhei to the HC&S mill and village at Pu'unene.

By the mid-1930's, it was clear that Japanese aggression against mainland China was jeopardizing the political stability of the Pacific region (Morison 1951). The Pacific Naval Air Bases (PNAB) construction engineers began reinforcing United States military outposts across the Pacific. In Hawai'i, the construction of new civilian airports at Kane'ohe, (O'ahu) and Pu'unēnē (Maui) was assigned to U.S. Engineer Department (USED) civilian contractors. Prior to 1940, thirteen separate defense-related construction projects were begun in the Hawaiian Islands, primarily at Pearl Harbor (Woodbury 1946).

The Hepburn Board, a commission of six officers and engineers reporting to the United States Navy, authorized the immediate military-backed expansion of an existing design for a civilian airfield at Pu'unēnē. Quarters for a permanent Utility Squadron, as well as for rotating Carrier Air Service Units (CASU) crews, were hastily approved (Woodbury 1946). U.S. Engineer Department and Pacific Naval Air Base construction crews began work June 17, 1940, building quarters and messing facilities for 500 men (Table 2). Two 50,000-gallon above-ground gasoline tanks were erected, and railroad spurs were laid to facilitate a direct supply line with the Kahului Harbor. As work progressed, a slew of change orders added bombproof revetments for aircraft storage, as well as bomb and ammunition magazines. By the time Pearl Harbor, on the island

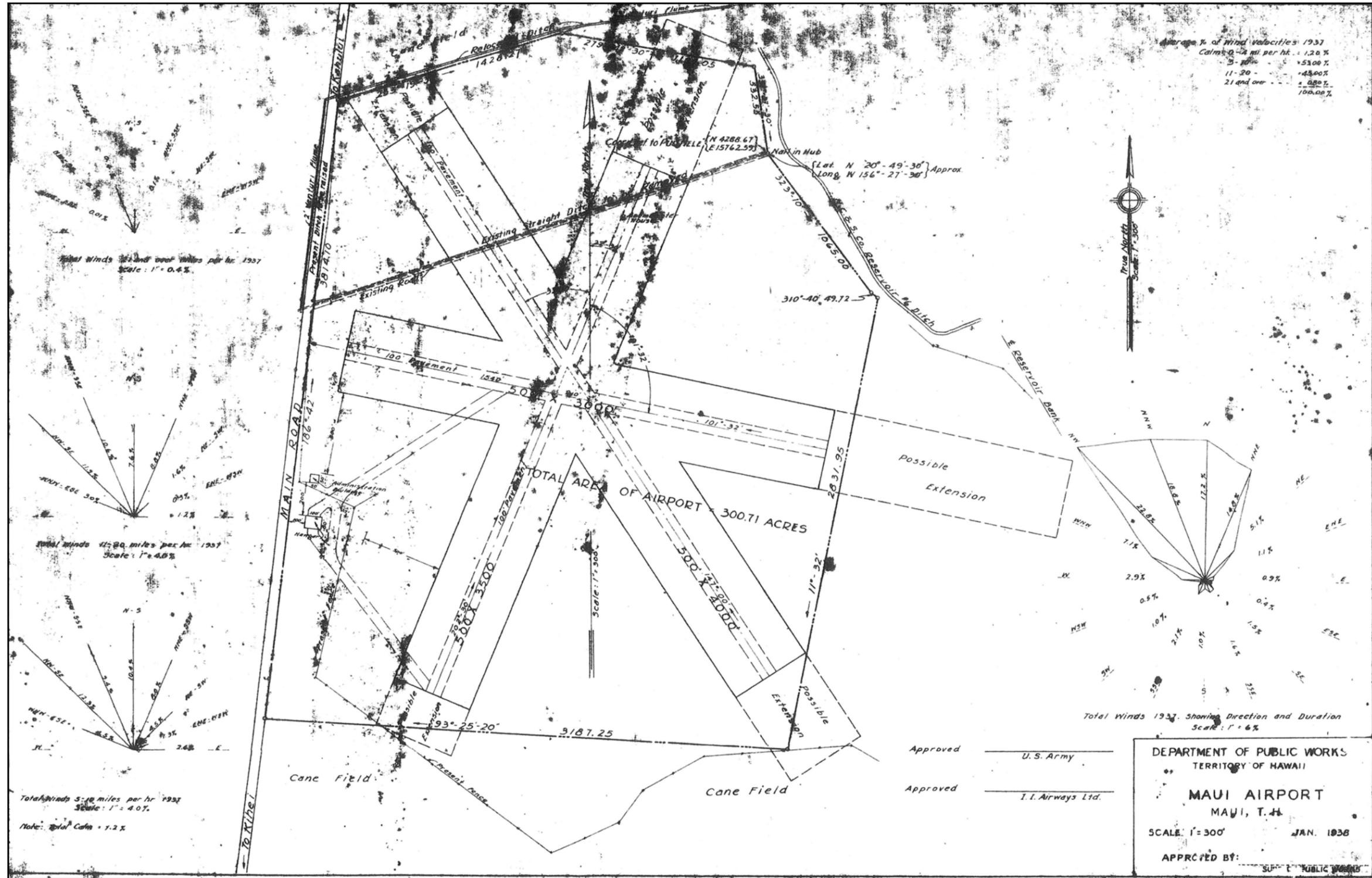


Figure 13. Section of 1938 Civil Aviation Authority (CAA) map at Pu'unēnē, including a passenger facility for Inter-Island Airlines (left) (map reproduced courtesy Cartography Division, HC&S Maui).

of O'ahu was attacked, Naval Air Station Puunene was an active training base (U.S. Government Printing Office 1947).

Table 2. Facilities at Maui Airport, Pu'unēnē. List dated 30 June, 1941, from microfilm roll MA-NI-109 (Naval Historical Center 2003)

Number	Use	Number	Use
1.	50 Men Barracks	18.	200 Men Barracks
2.	50 Men Barracks	19.	Caretaker's House
3.	50 Men Barracks	20.	Bachelor Officer's Quarters
4.	Latrine	21.	Shops Building
5.	Latrine	22.	Storage Building
6.	Mess Hall and Galley	23.	Recreation Hall
7.	C.P.O. Quarters	24.	Operations Tower
8.	Storage Building	25.	5-Ton Crane
9.	Shops Building	26.	Small Arms and Pyro Magazine
10.	Office and Garage	27.	Transformer Building
11.	Paint and Oil Storage Building	28.	Boiler House
12.	Deep Well and Pump House	29.	Boiler House
13.	10,000 Gal Brackish Water Sewage Tank	30.	Hangar
14.	10,000 Gal Brackish Water Sewage Tank	31.	Gas Tanks (25,000 Gal. each)
15.	7,000 Gal (2 Tanks) Drinking Water Storage	32.	Office and Storehouse
16.	Deep Well and Pump House	33.	Swimming Pool (under construction)
17.	Sentry Box	34.	160 Man Barracks

The location of Utility Squadron Three (VJ-3) at the Pu'unēnē airfield was found to be ideal for operations involving the use of radio-controlled aircraft for anti-aircraft training (See Figure 14). The development of radio-controlled full-scale aircraft was code-named "Project Dog", and began as a military program located on the east coast of the United States in the mid 1930's (Fahrney 1982). "Project Dog" was moved to San Diego in 1938, and finally to the Navy's Maui Airport at Pu'unēnē early in 1940, in order to prove the practicality of radio-controlled assault drones. These were the earliest experiments leading towards the development of the guided missile.



Figure 14. An N2C-2 drone aircraft operated by Utility Squadron Three, crash-landed on Maui during gunnery training (Foundation 2002).

Fortification of the Hawaiian Islands began immediately after President Franklin D. Roosevelt cancelled all trade agreements with Japan, in January of 1940. On May 7, 1940, The U.S. Pacific Fleet was ordered out of the Port of Los Angeles, to be based at Pearl Harbor, in the Territory of Hawai'i. This action was designed as a deterrent against further aggression by Japan in the Pacific region (Morison 1951).

Lieutenant Robert F. Jones commanded VJ-3 at Pu'unēnē, and advanced the syllabus of testing radio-controlled aircraft to the point where a radio-controlled aerial torpedo was thought to be possible. By April 1941, the Navy's efforts to develop a practical way to control drone aircraft from greater distances was in full swing (Foundation 2002). In the midst of this research program, Navy Fighting Squadron VF-2 arrived at the Pu'unēnē aerodrome for training purposes in April, 1941.

Based aboard the aircraft carrier U.S.S. Lexington, the "Bounty Hunters" of VF-2 trained on Maui for approximately two months, returning to sea with the U.S.S. Lexington to take part in operations to ferry aircraft and supplies to Midway Island. The training regime of VF-2 included the use of "unrestricted air space for gunnery and tactics and many nearby bombing and strafing targets" (Lacouture 1989). The target range was located at lower 'Ulupalakua, and the aircraft used "bombs" filled with lime powder and beach sand to mark their accuracy.

The 1st Battalion of the Army's 299th Infantry Regiment was assigned to establish defensive positions along the exposed coastal areas of Maui, in May, 1941. Tents housing the administrative section for the Army's 24th Infantry Division, and the Fourth Platoon Signal Company, Aircraft Warning Air Corps Detachment, were located at the Maui Airport at Pu'unēnē (Allen 1950).

3.1.6 World War II (1941-1945)

With the outbreak of war between Japan and the United States, NAS Puunene became the command headquarters for both Navy and Army units on the island of Maui. Plantation heavy equipment and plantation operators worked side by side with U.S. Engineering Department personnel to accelerate construction of defensive positions and immediately lengthen runways at the base. The call for an immediate extension of the runways to military specifications involved extensive engineering to reroute miles of irrigation culverts for HC&S. The dispersion of facilities planned for NAS Puunene would come to utilize over 2,500 acres of land, and involve housing for over 5,000 men (Command History 1945).

The attack on Pearl Harbor, December 7th, 1941, forced the “Project Dog” program at NAS Puunene to assign its research to safer bases in the mainland United States. Wartime operations for VJ-3 would concentrate exclusively on providing radio-controlled aircraft as realistic targets for fleet anti-aircraft gunnery training exercises (Foundation 2002). Under wartime conditions, responsibilities for VJ-3 included maintaining an intense schedule of weather flights, rescue flights, and anti-submarine reconnaissance flights in the waters surrounding Maui.

Early in 1942, the first Carrier Air Service Unit, CASU-4, was commissioned, and the utility squadron personnel of VJ-3 were reinforced by Naval Air Station Officers. In June, 1942, Navy Fighting Squadron 72, the first of over 150 squadrons of U.S. Navy fighter, bomber, and scout aircraft, arrived for advanced training prior to moving into forward combat areas (Wilcox 2004). For four days in early June, 1942, as the Battle of Midway raged 600 miles to the northwest, NAS Puunene personnel were ordered into shelters and revetments, expecting bombing raids by Japanese aircraft sweeping across the Hawaiian archipelago (Vint 2000). With the success of American naval forces at Midway, the threat of imminent invasion vanished, and efforts to outfit military bases in the Hawaiian Islands for wartime training were redoubled.

Anti-aircraft gun emplacements and protective aircraft revetments were given top construction priority by the U.S. Pacific Naval Air Bases supervisors. Heavy equipment and civilian operators from Wailuku Sugar Company and Hawaiian Commercial & Sugar Company were employed at NAS Puunene, with their pay charged back to the U.S. government. Milling at the plantation sugar mills was confined to daylight hours until “blackout” procedures were approved (HC&S Archives).

U.S. Engineering Department civilian construction contractors were entirely replaced at NAS Puunene by military PNAB personnel by July, 1942. Domestic water pipelines were laid by HC&S to supply military camps being constructed at ten separate locations across the central Maui plains, including the Camp 6 location proximate to NAS Puunene. The main government road and the railroad line that served the wharf at North Kīhei were rerouted, as NAS Puunene expanded. The Army National Guard’s 108th Regiment, 27th Infantry Division, took up defensive duties along Maui’s coastlines beginning March, 1942, and occupied formal headquarters at NAS Puunene. On November 16, 1942, 400 men forming an advance echelon of the Navy’s 39th Construction Battalion arrived at NAS Puunene, to begin construction of underground fuel bunkers, bombproof buildings, ammunition magazines and an aviation ground school.

The establishment in 1943 of NAS Puunene as a “Top Gun” school for fighter-aircraft tactics was based on the Navy’s use of highly-decorated veteran fighter pilots, such as Commanders Edward “Butch” O’Hare, James “Jimmy” Flatley, and James “Jim” Thach; to relay the latest

intelligence from the front lines to new pilots rotating into combat (Feightner 1996). “Maui Group Local Naval Defense Forces”, based at NAS Puunene, controlled the training airspace over the Kaho‘olawe aerial bombing ranges, and administered the training schedule (Lundstrom 1990). Aircraft carriers were modified for combat in the Pacific Ocean at the Pearl Harbor Navy Yard, while their air groups were flown to one of nine Navy airfields in Hawaii for advanced training – NAS Puunene being the premiere airfield (Morison 1953).

Army National Guard Divisions were assigned to occupation, guard, and training stations in the Hawaiian Islands during World War II. Shoreline defenses held by the 27th Infantry Division on Maui were replaced by men of the 40th Infantry Division. As elements of both the 27th and 40th Divisions were combined and sent to the South Pacific for combat duty, they were replaced on Maui by regiments from the 33rd Infantry Division. A resident of Maui during WWII said, “It was common to see groups of soldiers wearing their unit insignias all over Maui: the “Sunshine” [40th Division], and “Golden Cross” [33rd Division], and the last ones stationed here were the “Mohawks” [98th Division]” (Sandford 2004).

As of March 6, 1943, the 48th Construction Battalion replaced the 39th “Seabees”, and immediately began construction of a new sewer and water system for NAS Puunene (Turner 1946). Newsletters published by the 39th Seabees (Shore Lines) and the 48th Seabees (Trade Wind) were joined by an official NAS Puunene newspaper, “To All Hands” (Later renamed “The Island Breeze”). Although military news in these papers was censored, personnel changes, “scuttlebutt” gossip columns, and sports highlights featuring teams organized within military leagues on Maui attracted the largest readership (Figure 15).



Figure 15. Torpedo Squadron Six (VT-6) football team, fall of 1943, Pu‘unēnē, Maui (Photo courtesy the Naval Historical Center, Washington Navy Yard, Washington, D.C.).

The 127th Construction Battalion relieved the 48th Seabees in May of 1944, and finished an extensive network of ammunition magazines located toward Kīhei of the main air base. The completion of expanded housing areas (Figure 16), a second CASU area, and additional Seabees

housing was accomplished before the end of 1944. Two Mobile Construction Battalion Units, CBMU 563 and CBMU 575, arrived to maintain the existing refrigeration and water purification systems.

On July 1, 1945, NAS Puunene personnel numbered 565 officers and 2,798 enlisted men, including seven Navy nurses, eight WAVES (Women Accepted for Volunteer Emergency Service) officers, and 92 WAVES enlisted personnel (Monthly Station Report of On-Board Personnel, NAS Puunene, Confidential, 1 July 1945). Total aircraft on board numbered 271 (Monthly Station Report of On-Board Aircraft, Confidential, 1 June 1945). The total number of structures built numbered over 300 (Building Schedule 1945¹).

Immediately following the August 1945 surrender of Japan to the military forces of the United States, facilities essential to the operation of Naval Air Station Kahului began to be removed from Pu'unēnē. The bowling alley, bakery, and other specialized structures at NAS Puunene were relocated to NAS Kahului (Figure 17), only to be partially or entirely destroyed by a series of tidal waves that struck NAS Kahului facilities April 1, 1946 (Flyer 1946).

During 1946, Mauians were allowed to rent residential structures in Housing Area "A", the area closest to the *pūnāwai* (Reservoir 6) known as "Airport Village". The cost was reportedly \$36.00 per month (Cabos 2000). By 1947, postwar use of the airstrip at Pu'unēnē for civilian aviation led some Mauians to believe that the site might be further expanded (Belknap 1947). But, by the end of 1948, the site of the former Naval Air Station at Kahului had been chosen to replace the Pu'unēnē site for all future civilian flight operations.

By quitclaim deed dated December 31, 1948, the lands of the former air base were transferred from the United States back to the Territory of Hawai'i. The remaining base facilities, most of which were wooden structures, had, by that time, been abandoned or demolished. In May, 1951, the operations of Hawaiian Airlines and Trans-Pacific Airlines (Aloha Airlines) were moved to the new civilian airport at Kahului, which utilized the runways of the former Naval Air Station Kahului. Thereafter, Pu'unēnē airfield was placed on "caretaker status", and sugar cultivation reclaimed much of the land area formerly dedicated to the aerodrome.

¹For complete plans of Naval Air Station Puunene, refer to the oversized map in the pocket at the end of this report. The Building Schedule, which identifies each structure of NAS Puunene by a number, provides the basis for assigning SIHP feature numbers to SIHP 50-50-09-4164



Figure 16. Navy archive NA-24249-A, August 3, 1945, showing NAS Puunene facilities. Note proximity of project area (red outline) to Housing Area "B" structures, located to the right (Photo courtesy of the Naval Historical Center, Washington Navy Yard).



Figure 17. U.S. Air Forces oblique photograph taken 2-12-47. A number of the base buildings are dismantled, and a portion of the base is planted in sugar (photo courtesy of the Naval Historical Center, Washington Navy Yard, Washington, D.C.).

3.1.7 Modern Land Use

In 1955, a *Honolulu Star-Bulletin* article reported that Maui farmers were raising alfalfa on some of the land at the old Maui Airport. Until the late 1960's, most of the land immediately surrounding the runways remained in *kiawe* scrub (Figure 18). By the mid-1970's, sugar cultivation operations had demolished all but one of the main runways, and had retaken most of the land area (over 1,400 acres) previously given up for the original prewar Maui Airport (Figure 19). Over the past 50 years, portions of the abandoned airfield area have been used for both ranching and racing. Sanctioned drag races began in 1963, when the Valley Isle Timing Association was organized to regulate drag racing at the former airfield.

The present project area is located within lands that, until June 30, 2003, were subject to a general lease between Alexander & Baldwin, Inc. (the parent company of HC&S), and the State of Hawai'i. The terms of General Lease S-419, negotiated June 17, 1968, allowed HC&S to grow sugar cane on the 1,875.273 acre parcel formerly occupied by the air base.

Prior to the termination of the lease, parcels within a 273-acre section of the property governed by the lease were reapportioned for use by various government and civic agencies under a County of Maui study by Helber Hastert and Fee, Planners, Inc. (Helber 1995). Approximately 1,500 acres under cultivation by HC&S remained in sugar, under new agreements held by A&B Hawaii, Inc. The Hawaii Army Air National Guard developed a 10-acre parcel of property within the former air base for use as an armory, which included facilities for helicopter landings and military vehicle maintenance.

Under Executive Order No. 4024, the State of Hawai'i transferred 222.626 acres, including the acreage of the project area, to the County of Maui, December 08, 2003. Access to the acreage is accomplished by way of "Access Easement A", which connects the public, recreational, and Army Air National Guard sites to Mokulele Highway.

The present project area borders a 14.5-acre parcel of open land, which then abuts the main recreational area on Maui for drag racing, radio-controlled model racing, motorcycle dirt track racing and automobile "demolition" racing. Access to the project area is provided by the same road right-of-way as discussed above.

Section 4 Previous Archaeological Research

The proposed project area has been previously described in “*Fire on the Land: Archaeology, Architecture, and Oral History of Former Naval Air Station Puunene, Pulehunui, Maui*” prepared by Myra Tomonari-Tuggle, *et al*, for the International Archaeological Research Institute, Inc., November 2001. The Tomonari-Tuggle *et al* 2001 report identified historic structures constructed for the former Naval Air Station Puunene during World War II (1941-1945).

The majority of archaeological reconnaissance and inventory surveys in the North Kīhei area (Figure 20 and Table 3) have produced relatively little significant information in the way of archaeological data. While this may be due in large measure to changes on the land associated with sugar cane cultivation, ranching, and military use, as well as resort and housing construction, it still seems inescapable that there are only few areas in the Hawaiian Islands abutting sandy beaches that have less in the way of documented Hawaiian cultural deposits than Kīhei. While only a few projects in areas back from the coast have identified both pre-contact and post-contact agricultural features (Donham 1989 and 1990; Chaffee *et al.* 1997; Kennedy 1987, Cordy 1977), enclosures and deposits with a posited pre-contact and post-contact habitation function (Cox 1976; Cordy 1977; Donham 1990; Fredericksen *et al.* 1993 and 1994; and Fredericksen and Fredericksen 1995, McDermott *et al.* 2000 and 2001), pre-contact burials (Kennedy 1990) and military sites (Fredericksen *et al.* 1994; Tomanari-Tuggle *et al.* 2000), a number of archaeological studies have identified no archaeological sites at all (Hill 2005; Hommon 1981; Borthwick *et al.* 2002; Burgett and Spear 1997; Chaffee 1999; Burgett *et al.* 1998; Kennedy 1986 and b, 1988 a and b, and 1989).

During a large scale archaeological reconnaissance and salvage project for the then proposed Pi'ilani Highway road corridor, located directly east and adjacent to the current project area, Cox (1976) identified a total of six archaeological sites from Pulehū Nui to Kama'ole Ahupua'a. The archaeological findings included one miscellaneous alignment (-0220), two historic house complexes (-0221 and -0222), an *ahu* (-0219), and two pre-contact temporary shelter sites (-0223 and -0224). Subsequent work by Cordy (1977) identified a total of 32 additional single component and multi-component archaeological sites within the same road corridor. Including the Cox study, 23 archaeological sites were identified as pre-contact sites representing temporary habitation (n=13), agriculture (n=6), and aquaculture (n=2). Only two out of the twenty-three sites identified as pre-contact was of an indeterminate function. The remaining 15 archaeological sites were determined to be of the historic era and represent railroad and transportation remnants (n=6), ranching (n=3), water control (n=1), and habitation (n=1). Four wall features that were identified as historic were also recorded but function could not be determined.

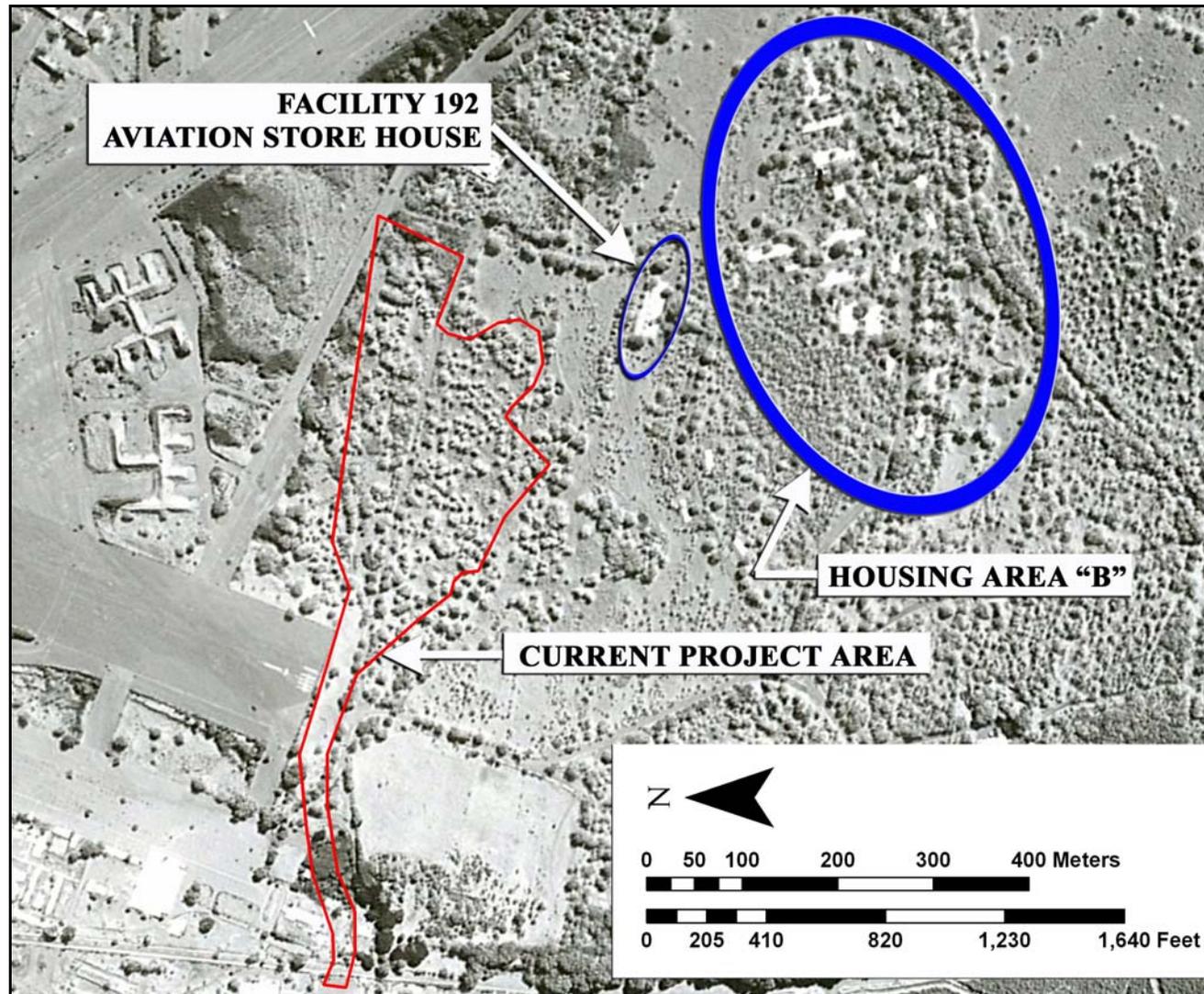


Figure 18. R.M. Towill Corporation photograph taken November 13, 1967 showing remnant concrete building foundations from Housing Area “B” (blue) to right of project area (in red) (Photo courtesy of HC&S Engineering Division, Pu‘unēnē).

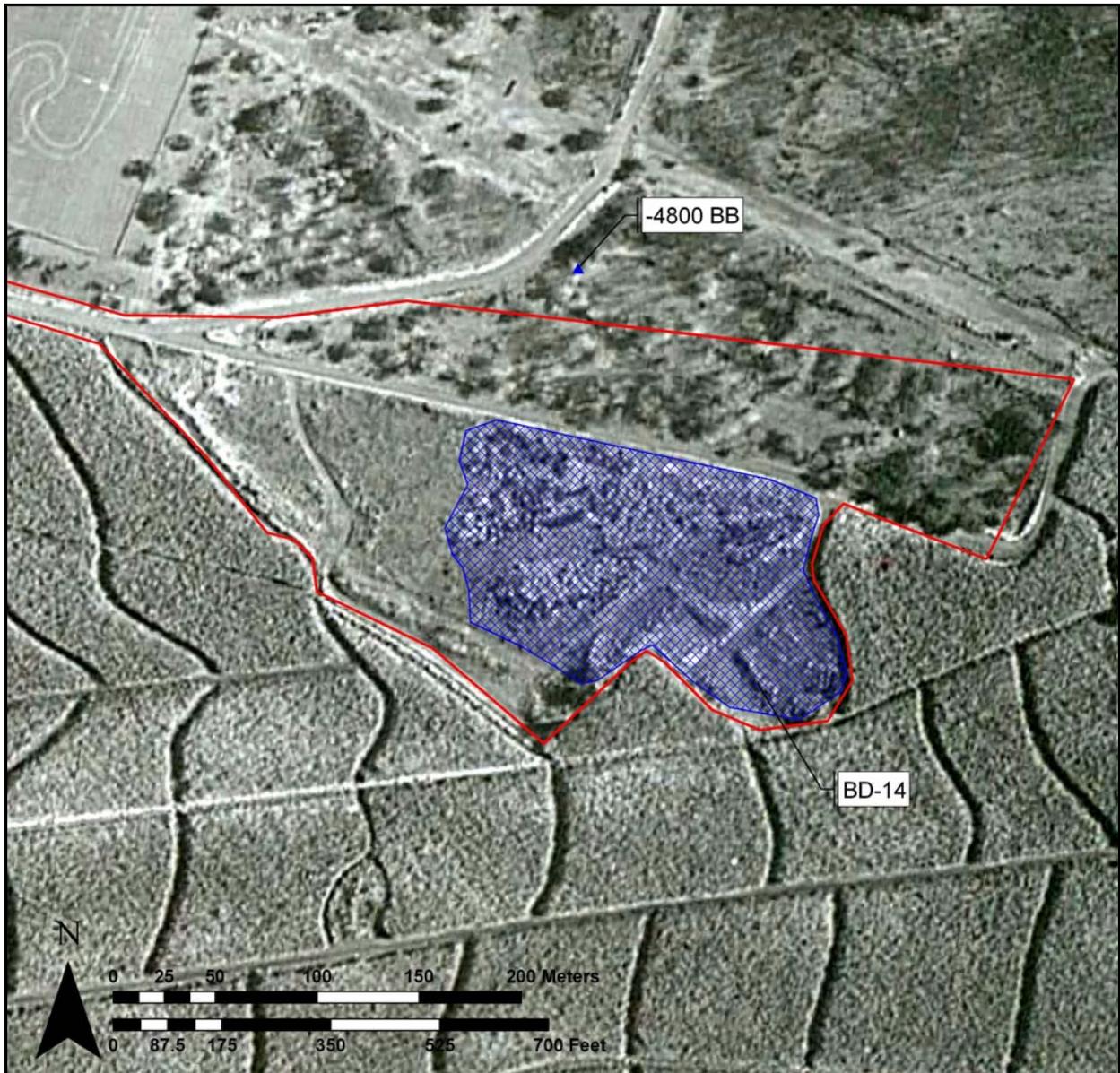


Figure 19. R.M. Towill Corporation photograph July 19, 1977. Note locations of historic feature SIHP -4800: BB (to the north) and the debris field BD-14 (to the south) (HC&S photo).



Figure 20. A portion of the 1998 Puu o Kali and Maalaea 7.5-minute USGS topographic quadrangles, showing the project area relative to areas of previous archaeology.

Table 3 .Summary of Previous Archaeology of the North Kihei Vicinity.

Date	Author	Ahupua'a	Nature of Study	Findings
1931	W. Walker	Entire Island	Reconnaissance	three <i>heiau</i> in the uplands of Pūlehu Nui
1973	W. Kikuchi	State-wide fishpond survey	Fishpond survey	Notes 3 fishponds in the Kalepolepo area
1976	D. Cox	Pūlehu Nui to Kama'ole	Surface Survey	Identified 6 sites
1977	R. Cordy	Pūlehu Nui to Paeahu	Reconnaissance	Identified 38 sites: 30 in Waiohuli, 0 in Ka'ono'ulu and 8 in Kēōkea
1981	R. Hommon	Coastal Waiakoa	Reconnaissance	No archaeological findings
1982	R. Bordner & D. Cox	Coastal Waiohuli & Kēōkea	Reconnaissance	Reports 9 sites
1986c	J. Kennedy	Coastal Waiohuli	Reconnaissance	No archaeological sites were found
1988 (a)	J. Kennedy	Coastal Waikapu	Testing & Monitoring	No archaeological findings
1988 (b)	J. Kennedy	Coastal Ka'ono'ulu	Reconnaissance	No archaeological findings
1988 (c)	J. Kennedy	Coastal Waiohuli	Reconnaissance	No archaeological Findings
1988 (d)	J. Kennedy	Coastal Waiohuli	Reconnaissance	No archaeological Findings
1989	T. Donham	Waiohuli	Inventory Survey	Identified 4 sites in a portion of the Miura 1982 study area and recommended data recovery
1989	W. Fredericksen <i>et al.</i>	Coastal Kama'ole	Inventory Survey	No archaeological findings
1989 (c)	J. Kennedy	Coastal Pūlehū	Inspection	No archaeological findings
1989 (d)	J. Kennedy	Coastal Waiohuli	Subsurface Testing	No archaeological findings
1990 (a)	T. Donham	Coastal Waiohuli	Data Recovery	Site 2475 was excavated
1990 (b)	T. Donham	Coastal Kēōkea	Inventory survey	Part of Miura 1982 study area. 16 sites were identified
1990 (a)	W. Fredericksen & D. Fredericksen	Coastal Kēōkea	Monitoring	No archaeological findings

Date	Author	Ahupua'a	Nature of Study	Findings
1990 (b)	W. Fredericksen & D. Fredericksen	Coastal Kēōkea	Survey & Monitoring	No archaeological findings
1990a	J. Kennedy	Coastal Waiakoa	Survey	No archaeological findings
1990 (a)	A. Sinoto	Coastal Waiakoa	Survey & Testing	No archaeological findings (other than 2 pieces of midden)
1991	J. Kennedy & M. Breithaupt	Coastal Kēōkea	Inventory survey	No archaeological findings
1992	J. Kennedy	Coastal Kama'ole	Inventory survey	Identified 4 sites including a permanent pre-contact habitation/religious site
1992	J. Kennedy <i>et al.</i>	Coastal Kama'ole	Inventory survey wt Subsurface Testing	Identified 4 sites all believed to be historic; two military and 2 ranching
1992	Sinoto & Pantaleo	Coastal Pūlehu Nui	Inventory Survey	No archaeological findings other than a bridge foundation (site -3131)
1993	D. Fredericksen <i>et al.</i>	Coastal Waiohuli	Inventory Survey/Data Recovery	A rock shelter excavation yielded lithic artifacts, midden and a date of A.D. 1560 to 1800
1994c	E. Fredericksen <i>et al.</i>	Ka'ono'ulu, mauka of Pi'ilani Highway	Inventory Survey	21 sites were identified, some military and some pre-contact
1994	W. Fredericksen <i>et al.</i>	Coastal Waiohuli	Inventory Survey	22 backhoe test trenches were excavated but there were no significant archaeological findings
1995a	E. Fredericksen & D. Fredericksen	Waiohuli	Inventory Survey	one rock shelter site was identified as a pre-contact temporary habitation site
1995b	E. Fredericksen & D. Fredericksen	Waiohuli	Data Recovery	Four carbon dates were obtained suggesting late pre-contact use.
1997	Chaffee <i>et al.</i>	Waiohuli (120' elevation)	Archaeological Inventory Survey	3 sites were identified, all interpreted as agricultural
2000	Pepalis, J. & Michael J. Kolb	Waiohuli	Archaeological Excavations	Found evidence of a stream-fed pond near Kalepolepo Church

Date	Author	Ahupua'a	Nature of Study	Findings
2000	McDermott, Shideler, and Hammatt	Waiohuli, adjacent to the Kalepolepo Church	Additional Archaeological Inventory Survey (Backhoe Testing)	Document Site 50-50-09-4981, former inland pond that contains evidence of early occupation at coastal Kīhei--approximately A. D. 600-900. An elaboration on Pepalis and Kolb's work, described below.
2001	Tomonari-Tuggle, D. Tuggle, Duensing, Magnuson, and Prasad	Pūlehu Nui	Archaeological Inventory Survey And Oral History Project	Documented WWII facilities and structures of former Naval Air Station Puunene with recommendations for preservation for 16 of 63 remnant structures.
2001	M. McDermott	Waiohuli Kīhei	MA Thesis	Historical ecological study of Kīhei utilizing pollen, soil, and ¹⁴ C analysis as evidence to document an early habitation sequence for coastal Kīhei
2002	Pepalis and Kolb	Waiohuli Ahupua'a	Sub-Surface Testing	Documented highly stratified cultural deposits of an inland pond.
2005	Hill	Waiohuli-Keokea Homesteads	Sub-Surface Testing	Investigation of extent of shoreline dune system.
2006	Lee-Greig <i>et al</i>	Pūlehu Nui	Inventory Survey	Documented historical ranching and sugar plantation infrastructure.

Bordner (1980) conducted an archaeological investigation south of the present project area and identified primarily historic era properties. Bordner's study area covered the residential subdivision currently known as the Hale Pi'ilani Subdivision located *mauka* or west of the Pi'ilani Highway, as well as, a section *makai* or east of the Pi'ilani Highway that was later developed into the Kihei Villages Condominium Complex. During the course of the inventory survey, Bordner relocated SIHP #'s -0219, -0220, and -0221, originally identified by Cox (1976), as well as six new historic properties within the *mauka* section of the study area. The six new sites consisted of historic era *ahu*, two remnant alignments of an indeterminate age, a historic stacked stone wall and an elongate basalt mound with an upright slab of an indeterminate age. Bordner reports no surface findings in the *makai* portion of the project area. In 1987, Kennedy revisited the *makai* portion of the Bordner project area in anticipation of the Kihei Villages development and identified six new early Hawaiian pre-contact era archaeological sites. These sites consisted of a stacked *ahupua'a* boundary wall approximately 300m long, two rock mounds, one upright, a series of low parallel rock alignments attributed to sweet potato agriculture, and one large mound or dune with possible burials.

Sinoto and Pantaleo (1992) conducted an archaeological inventory survey of approximately 38.5 acres south of the present project area near the former location of Kihei Camp One. Only one historic property, the remains of concrete footings from a bridge crossing Waiakoa Gulch, was recorded. Due to the considerable ground disturbances, which included several bulldozing events, Sinoto and Pantaleo did not undertake a subsurface testing program.

Lee-Greig and Hammatt (2006) conducted an archaeological inventory survey of approximately 100 acres including the gulch created by the intermittent flow of the Waiakoa Stream. The parcel, located alongside the existing Hale Pi'ilani neighborhood, included farm lands currently utilized by the Monsanto Global Seeds Corporation. Two historic properties were recorded, consisting of a set of concrete bridge footings similar to those recorded by Sinoto and Pantaleo in 1992, and the remains of a ranching-era well.

Tomonari-Tuggle and others (2001) conducted an intensive archaeological inventory survey of the area that encompassed the former location of Naval Air Station (NAS) Puunene, which includes the present project area. This inventory survey resulted in the recordation a total of four multi-component archaeological complexes (50-50-09-4164, -4801, 4803, and 4800), as well as one single component site noted as the Kihei Railroad Bed (SIHP # -4802). SIHP # -4164 consists of 165 features, all of which are associated with NAS Puunene. SIHP numbers -4800 and -4803 were representative of the sugar plantation use of the central isthmus and consisted of seven plantation era features for the former site number and remnants of the Haiku ditch and reservoir (n=5) for the latter. Historic properties reflecting post-war ranching activities (SIHP # -4801) were also recorded during the course of this inventory survey.

Xamanek Researches (Fredericksen et al. 1994) conducted an inventory survey in Ka'ono'ulu Ahupua'a at a similar elevation as the current project area. A total of 21 archaeological features reflecting pre-contact use of the area, as well as, post-contact military and ranch use were recorded. The pre-contact or Early Hawaiian archaeological features included five stone piles possibly representing agricultural use, five surface scatters representing pre-contact temporary habitation and one petroglyph. Military use of the area is represented by five stone cairns, three alignments, and one enclosure. A single feature, interpreted as an erosion containment area, was recorded in association with ranching activities.

Also south of the project area, Chaffee and others (1997) identified three historic properties that were interpreted as agricultural features. Donham (1989, 1990) identified 16 sites, including nine terraces, seven enclosures, four C-shapes, four rock piles, two platforms, an alignment, and a modified outcrop. Most features were interpreted as agricultural features, while a few were considered temporary habitations. Donham concluded that these agricultural and habitation features likely indicated a more extensive use of the "transitional" or barren zone than some settlement models suggested. Donham's (1989, 1990) work took place within a portion of the Bordner and Cox (1982) project boundaries and found similar archaeological features.

The inventory surveys for the then proposed "Pi'ilani Residential Community - Phases I and II" (Bordner and Cox 1982; Donham 1989, 1990b) identified only rock alignments and no further research was conducted related to the proposed phased subdivision. A single site (50-50-10-2475) near Pi'ilani Highway. and Līpoa Street was subjected to data recovery (Donham 1990a) and interpreted as an agricultural terrace complex. Following this data recovery, no further research was recommended and the commercial and residential subdivision was subsequently constructed.

The chronological timeline for settlement of the Kīhei area however, is still being debated. Based on McDermott's (et al. 2000, McDermott 2001) results, habitation in the coastal areas may date to as early as A.D. 600-900. Without a doubt, coastal habitation along with more populous inland/upland settlement was firmly established by A. D. 1400-1500. The majority of permanent habitation would have been in the uplands, concentrated in the well-watered and fertile agricultural areas. Coastal permanent habitations were likely less numerous and centered around the ceremonial structures and fish ponds at Kalepolepo. The fish ponds are thought to date to the 1500s (Kolb et al. 1997:66).

Until recently, the few available radiocarbon dates from the Kīhei area were consistent in their rather broad, later prehistoric age determinations, most commonly post A.D. 1500 (Fredericksen and Fredericksen 1995b; Fredericksen 1994; Fredericksen et al. 1993). This fits with the model that the more intensive use of the Kīhei area was a later prehistoric development that corresponded with the expansion of upland permanent habitation, ceremonial constructions, and agricultural clearing after A.D. 1400-1500 (Kolb et al. 1997:281-282).

Evidence of earlier coastal habitation in the Kīhei area has recently come to light at excavations adjacent to the site of the Kalepolepo Church. The recent excavations described in McDermott et al. (2000) and McDermott (2001), in conjunction with those of Pepalis and Kolb (2002), provide evidence in the form of charcoal concentrations, midden deposits, 14C dates, and palynomorph identification, indicating settlement in the vicinity of an inland pond feature by c. A. D. 600-900.

4.1 Background Summary and Predictive Model

Previous archaeological studies have led to archaeological site interpretations based on the division of the settlement pattern for Maui into three zones: 1. coastal; 2. barren or transitional; and 3. inland (Cordy 1977; Walton 1972; Cox 1976). The coastal zone is a ¼ mile wide band running along the shoreline. The inland zone begins approximately five to seven miles from the shore and is characterized by heavier rainfall accumulation and lush vegetation. The transitional or barren zone is classified as the area between the edge of the coastal zone and beginning of the inland zone and characterized by brush/scrub vegetation and low annual rainfall accumulation.

Based on available archaeological evidence and interpretations, the following settlement pattern and site type expectability is proposed. Temporary habitations related to marine exploitation, such as stacked-stone enclosures, and possibly smaller ceremonial structures, such as stacked-stone fishing shrines, may have been scattered along the coastline. It is likely that human burials would have been interred in the coastal sand dunes (where present) and immediately back from the coast. *Mauka-makai* trails would have connected the coastal settlements with the *mauka* permanent habitation areas, and coastal or *alanui* trails would have connected different coastal habitation areas between Mākena and Kīhei (Kolb et al. 1997:33). The upland areas, with a larger water supply and good soil, would have sustained a larger population. Subsistence in this zone would have revolved around dry-land agriculture. High occurrences of agricultural fields and larger structures and cultural deposits representing permanent habitation would be expected. Larger *heiau* or ceremonial structures would occur in the inland regions that were more heavily populated.

However, the barren or intermediate zone, where the current project area lies, is broad in this portion of Maui. Inventory surveys of portions of this transitional/barren zone of Waiohuli and Ka'ono'ulu Ahupua'a have found pre-contact remnants of dispersed, low-intensity, dry-land agricultural features, such as mounds and alignments, as well as temporary habitations (Chaffee et al. 1997; Donham 1990; Miura 1982).

Given that the project area is located in the transitional or barren settlement zone for this area of Maui, it is postulated that pre-contact archaeological sites representing temporary habitation or campsites could have occurred within the project area, prior to modern disturbance, in addition to mounds and/or small terraces related to small scale agriculture. After further review of the historic literature and the occurrence of historic agriculture in the immediate vicinity of the project area, historic properties associated with early plantation infrastructure (e.g. water control features and transportation features) as well as military assets of the former NAS Puunene, were also probable.

Section 5 Results of Fieldwork

5.1 Survey Findings

An archaeological inventory survey was conducted by archaeologist Robert R. Hill, B.A., under the general supervision of Principal Archaeologist Hallett H. Hammatt, Ph.D., January 27, 2006.

The entire project area has been heavily modified by agriculture from the mid-to late historic period (1890-1938), with further modifications made during the period that the territorial government and the military developed Naval Air Station Puunene (1939-1947). Additional changes made during the return of cane lands to cultivation in the late 1940's resulted in numerous push piles from sugar cultivation in the southern portion of the project area within the areas closest to the edges of existing cane fields. The central portion of the southern half of the project area also contains a thick layer of demolished concrete rubble and piles of bulldozed asphalt from one of the main housing areas of the former WWII air base. Cane is cultivated along the southern and western borders of the project area, in HC&S Field 9151 (Figure 21). This field system shares a common eastern boundary with the Maui Drag Strip, and consists of approximately 160 acres of irrigated fields.

The northern portion of the project area is currently open field, cleared of most of the large boulders evident in the southern portion of the project area. It is evident that this portion of the project area was utilized by the military during World War II, and has been abandoned as an "infield" area between two runways from the former base. The pedestrian survey within this portion of the project area revealed small sections where intact remnants of former roadways, sidewalks, and water pipes had been constructed by the military, demolished by grading, and left essentially untouched for many years.

One previously recorded historic property (SIHP 50-50-09-4800 Feature BB) was identified and further documented during the pedestrian survey of the project area (See 5.2 Site Descriptions). The earthen ramp feature (SIHP -4800: BB) was located in the project area using GPS coordinates, which was noted on the plan-view sketch shown in Figure 22. (Note: plan view is not to scale).

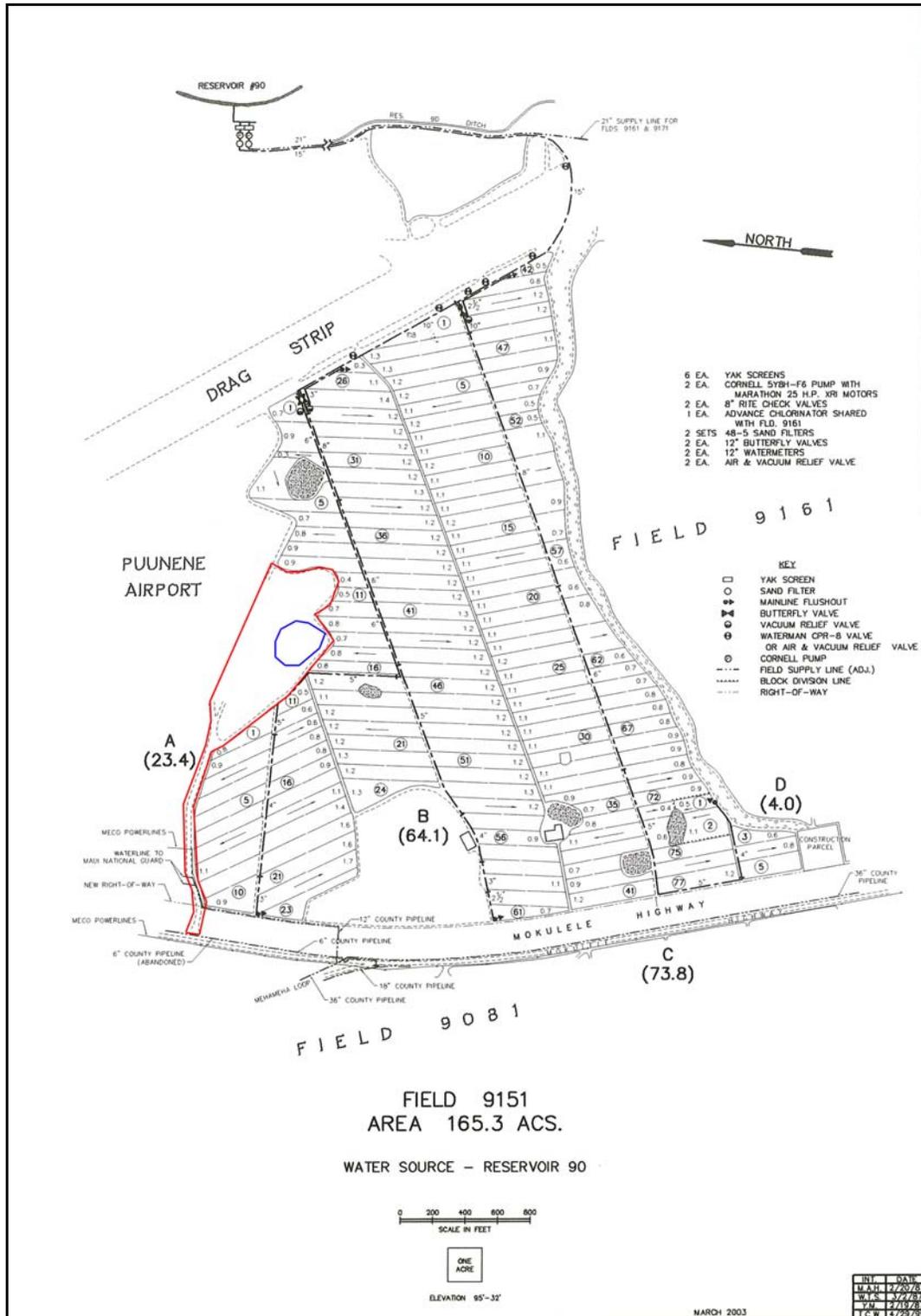


Figure 21. Portion of HC&S Field Map for Field 9151, dated March, 2003. Survey findings noted Bulldozer Pile 14 (BD-14) in the project area, consistent with boulder piles found in Field 9151. Approximate concentration of BD-14 is outlined in blue (HC&S Company map).

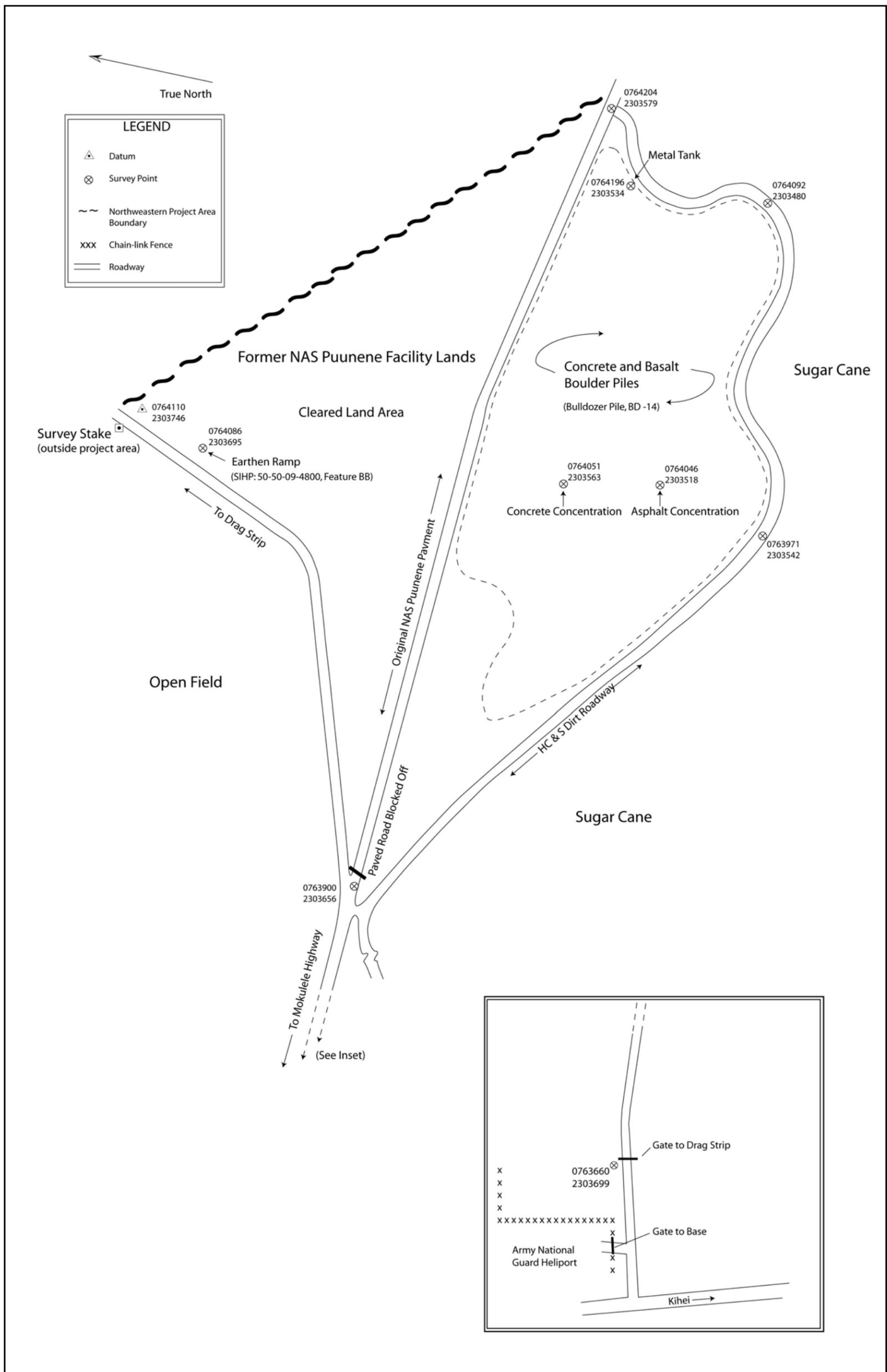


Figure 22. Plan view of the inventory survey area. GPS points taken during field inspection at SIHP 50-50-06-4800, Feature BB, and at Bulldozer Pile 14 (BD-14). Plan View is not to scale. North boundary change during survey not reflected in above drawing.

5.2 Site Descriptions

5.2.1 SIHP Number 50-50-09-4800

FEATURE:	BB
FEATURE TYPE:	Unknown
FEATURE FUNCTION:	Military Use
AGE:	Historic
DIMENSIONS:	31 m by 9 m by 2.01m
SIGNIFICANCE:	Criteria A and D

Description: SIHP 50-50-09-4800, Feature BB is a structure which was recorded within lands formerly used for the World War II-era Naval Air Station Puunene. The construction consists of three separate components: an earthen ramp, a concrete mounting base, and a faced basalt cobble and boulder wall (Figure 23). Based on the construction method and materials, the structure is estimated to have been built by either the U.S. Engineer Department (USED) or the Pacific Naval Air Bases civilian contractors (PNAB), in the years leading up to, or early in, World War II (1940-1942). While the use of cut basalt as material for ballast, set in place as a dry-stacked wall, were materials and methods known by masons employed by the plantations, the three components together comprise a military structure, and not a structure used by the plantation. The structure was originally recorded as part of a site investigation performed by Myra Tomonari-Tuggle, and others, in 2001. At that time, SIHP -4800 was designated as an “agricultural” structure.

The earthen ramp was constructed using locally available basalt boulders and aggregate, shaped, and filled with earth, and is located in the project area directly adjacent to the main access roadway to the project area and the Maui Raceway Park (Figure 21). The ramp construction takes advantage of dry weather conditions prevalent at the project area. Damage from the occasional, southern exposure (“Kona” or *Naulu*) storms would have been easily repaired by replacing the earth filling. The structure standing today is intact, and remains intact after 60 years of neglect. The north edge of the ramp is partially lined with basalt cobbles, which was noted in the 2001 Tomonari-Tuggle survey report (Tomonari-Tuggle *et al* 2001:D-52), with the alignment of the ramp proximate to “Safe Street”, a WWII street, as shown on the Building Schedule for NAS Puunene (Fourteenth Naval District 1945).

The west-facing stacked basalt wall was constructed as a buttress for the earthen ramp. This support structure is composed of medium to large angular-cut basalt cobbles, constructed in twelve courses, to a height of just over 2.01 meters (m) (6.60 ft). The first three courses are partially covered with soil. At the point where the fourth course of rock meets the top of a poured concrete support structure, the construction of the basalt wall becomes visible. The courses are neatly stacked, faced, and reinforced with small basalt chips wedged into spaces and recesses in the face of the wall. Along the west-facing base, the wall measured 8.99 m (29.5 ft) wide and was built to a thickness of three courses of angular basalt cobbles, measuring about 60 cm (24 in). The uppermost level of the wall measured 3.04 m (10 ft) wide and was finished using a fine gravel mixed with soil. The overall dimensions of the faced wall and the earthen ramp together measures 31 m long by 9 m wide.

The entire ramp structure is constructed using rough angular basalt cobbles, set with fractured basalt chips, and filled with earth and gravel to form a gradual slope from ground level at its eastern end, to the faced wall of its western end. Two “c”-shaped revetments remain partially intact at the eastern end of the structure. These may have served as sentry positions.

The concrete mounting base was constructed by pouring concrete into wooden forms. The finished cast resulted in a concrete footing with embedded anchor bolts. The sections of castings formed a boxlike support, allowing a large piece of equipment to be bolted down. The concrete footings were cast 30.5 cm (twelve inches) thick and 182 cm (6.0 ft) tall. Four 30.5 cm (12-inch) tall bolts secured equipment to the footings.

The intact ramp structure was mapped at the western-most end of a row of bulldozer-push basalt boulders, and boulder push-piles, that continue in an east-to-west alignment along the northern project area boundary (Figure 24).



Figure 23. SIHP 50-50-06-4800, Feature BB. The earthen ramp feature; consisting of a stacked basalt, faced, wall, and a poured concrete mounting base. The feature appears to be a military structure, but was previously recorded as an agricultural structure.

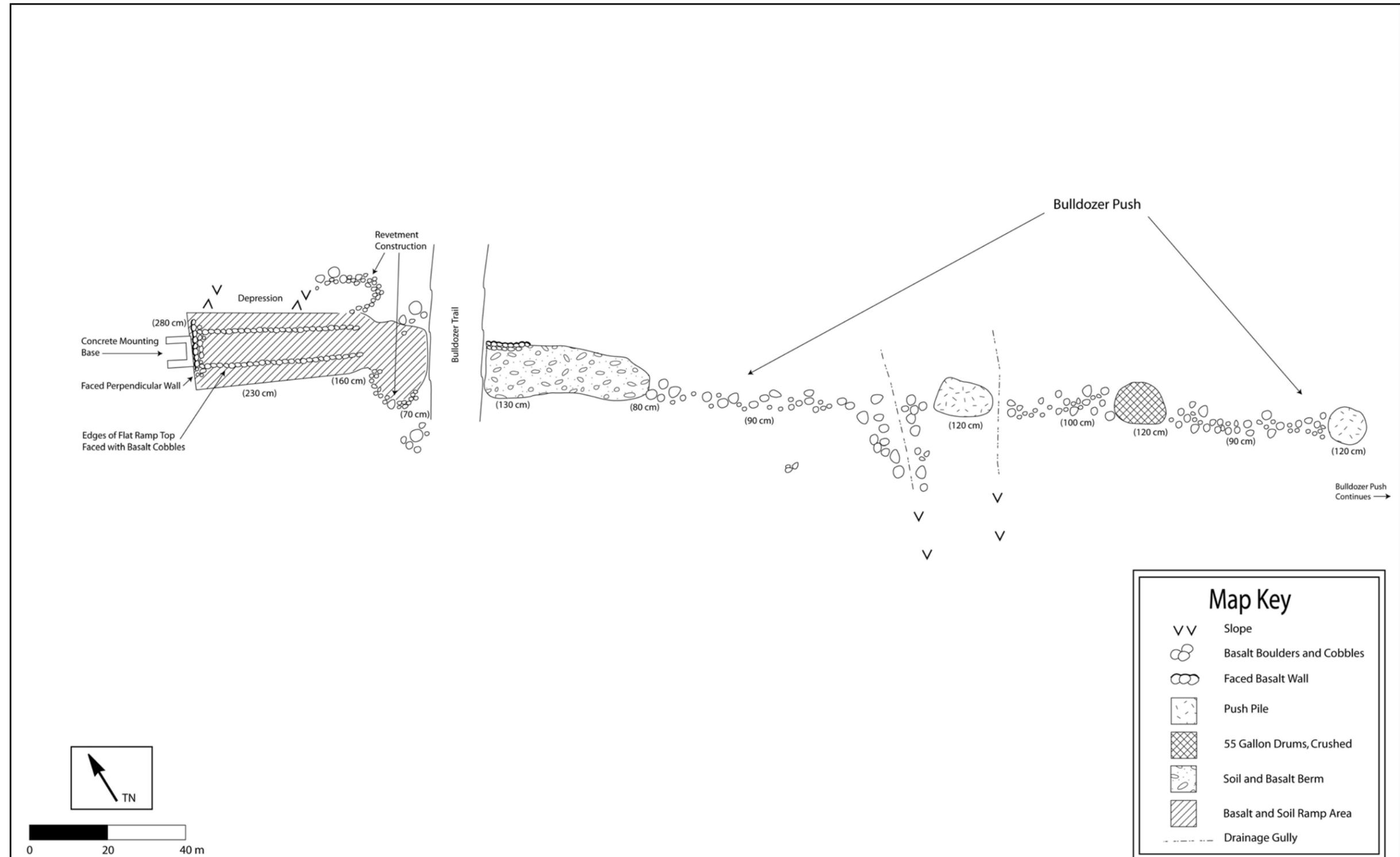


Figure 24. Plan view of formal ramp construction of SIHP 50-50-09-4800, Feature BB, along an associated alignment of bulldozer debris, stretching over 160 meters along the northern project area boundary.

5.2.2 Bulldozer Pile 14 (BD-14)

DESCRIPTION: Bulldozer Pile 14 (BD-14) is comprised of multiple push-piles of agricultural boulders, asphalt debris, and concrete rubble (Figure 25 and Figure 26, respectively) (Tomonari-Tuggle *et al* 2001). The surface area affected by these massive push piles is estimated at six acres. Large rounded basalt boulders were apparently moved into the project area during the recovery of cane lands from military use in the late 1940's. The reinforced concrete debris and associated asphalt debris was moved into the project area during the demolition of military "Housing Area B", also during the late 1940's. Most of the project area south of the paved access roadway consists of this concentration of large boulders and concrete rubble. A ruptured steel water tank was also observed in this concentration (Figure 27).



Figure 25. Bulldozer Pile 14 (BD-14), asphalt push-pile concentration located at GPS coordinates 0764046 / 2303518, view to north.



Figure 26. Bulldozer Pile 14 (BD-14), showing concentration of reinforced concrete debris, located at GPS coordinates 0764051 / 2303563, view to north.



Figure 27. Bulldozer Pile 14 (BD-14), showing water tank and concrete debris at GPS coordinates 0764196 / 2303534.

Section 6 Summary and Interpretation

6.1 Summary

A review of the historic documentation indicates that the lands of Pūlehu Nui Ahupua‘a were extensively developed for agriculture during the early 1900’s. The high level of disturbance to the soils of the central plains appears to have obliterated any original evidence that the initial occupants of the alluvial plains may have tended small agricultural plots. Kirch (1985) presumed that agricultural sites for this area of Maui would have occurred in the “upland zone of this region”, and not in this transitional/ barren zone.

With the project area located in the transitional/barren zone of the pre-contact settlement pattern accepted for this region of Maui, pre-contact site density was expected to be low. The lands in and surrounding the current project area have undergone heavy landscape modifications by historic sugar cultivation and military construction operations, effectively eliminating surficial pre-contact archaeological sites. The current inventory survey has documented a historic WWII-era (1941-1945) structure and confirmed the history of plantation and military modifications made within the project area.

One historic-era archaeological feature was identified during the course of this survey. SIHP 50-50-09-4800, Feature BB, is interpreted as a military structure constructed by U.S. Engineer Department personnel in the early days of World War II. Feature BB was constructed parallel to the taxiway connecting the two main runways at NAS Puunene.

The intact military structure evident at SIHP 50-50-09-4800, Feature BB, is deemed significant according to Criteria A, B, C, and D, for information related to the World War II history of NAS Puunene. In spite of the extensive modern land modifications for cane cultivation, this military structure remains intact in an uncultivated portion of the project area.

CSH proposes a change in the site designation for this feature. The following table (Tomonari-Tuggle *et al* 2001:70) lists the five separate site designation categories:

Table 4. Sites Recorded in the Project Area

Site No. *	Name/Description	Total Inventory Features
4164	Former NAS Puunene	165**
4800	Sugar cane plantation features	7
4801	Post-war ranching features	2***
4802	Old Kīhei Railroad Bed	1
4803	Haiku Ditch and reservoir	5

*Site Numbers are preceded by “50-50-09”

**Standing facilities include splinter shelters, earth revetments, and magazines

***Complexes of fences, corrals, watering troughs, etc.

In addition to the main project area, a survey of the roadway for access and egress was performed. This roadway terminates at the Mokulele Highway intersection, serves the the newly-developed Hawaii Army Air National Guard armory and heliport, and continues as a paved road which bisects the project area. Although a few modern remnant postwar ranching (1950's) fenceposts and remnant historic military-era (1940's) fenceposts exist along this right-of-way, they do not fit any of the significance criteria, and were not recorded.

No subsurface testing was conducted at SIHP 4800, Feature BB. Confirmation of both the high level of surface modification within the project area, and that the extent of clearance operations had included the entire parcel, had precluded any subsurface testing. Preparation of the land during the construction of the Maui Airport and NAS Puunene, and the subsequent return of airport lands to sugar cultivation, eradicated any features associated with pre-contact agricultural or habitation use.

Section 7 Significance Assessments

In accordance with the State Department of Land and Natural Resources (DLNR) Chapter 13-284, Hawai'i Administrative Rules (HAR), entitled "Rules Governing Procedures for Historic Preservation Review to Comment on Section 6E-42, Hawai'i Revised Statutes (HRS), Projects"; Chapter 13-284-6 entitled "Evaluation of Significance", states:

- a. Once a historic property is identified, then an assessment of significance shall occur. The agency shall make this initial assessment, or delegate this assessment, in writing, to the SHPD. This information shall be submitted concurrently with the survey report, if historic properties are found in the survey.
- b. To be significant, a historic property shall possess integrity of location, design, setting, materials, workmanship, feeling, and association and shall meet one or more of the following criteria:
 - A. Sites that are associated with events that have made a significant contribution to broad patterns of our history; or
 - B. Sites that are associated with the lives of persons significant in our past; or
 - C. Sites that embody the distinctive characteristics of a type, period, or method of construction, or that represents the work of a master, or that possesses high artistic values, or that represents a significant or distinguishable entity, whose components may lack individual distinction; or
 - D. Sites which have yielded, or may be likely to yield, information important in prehistory or history; or
 - E. Sites which have an important value to the native Hawaiian people or to another ethnic group of the State due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts- these associations being important to the groups' history and cultural identity.

The significance assessment for the historic site recorded within the project area or that could be negatively impacted by the proposed project is provided in Table 4..

Table 5. Site Significance Table for Site SIHP 50-50-09-4800: Feature BB.

SIHP (50-50-09-)	Feature	Function	Age	Significance Criteria
4800	BB	Military Use	WWII	A, B, C, and D

It appears clear from the present inventory survey that the true site designation for the historic property recorded in the present project area should be SIHP 50-50-09-4164: Feature BB.

Accordingly, SIHP 50-50-09-4164, Feature BB, is deemed significant under Criteria A, C, and D, as established by Tomonari-Tuggle *et al* (2001) for SIHP -4164 NAS Puunene features.

Quoting from the Tomonari-Tuggle *et al* (2001) study: “NAS Puunene’s role in World War II may qualify buildings and magazine complexes associated with the station for the Hawai‘i and National Registers of Historic Places under Criterion A, as the overall installation was, “associated with events that have made an important contribution to the broad patterns of our history” (U.S. Dept. of the Interior 1987: 243).

The Tomonari-Tuggle *et al* (2001) study further stated that NAS Puunene structures were eligible under Criterion D, “[for its] potential to yield information as [an] intact revetment, underground structure, section of a runway or taxiway, building or magazine, of the first Navy facility on Maui.”

In addition, the Tomonari-Tuggle *et al* (2001) study further qualified: “Many individual structures can be evaluated under the overall historical context of NAS Puunene and are likely eligible for the National register under Criterion C, as resources that embody “the distinctive characteristics of a type, period, or method of construction...or that represent a significant and distinguishable entity” (U.S. Dept. of the Interior 1987: 243).

CSH further proposes that SIHP -4164: Feature BB is deemed significant according to Criterion B, due to its association with famous military personalities of NAS Puunene. These personalities contributed significantly to the success of the United States military forces entering combat in the Pacific Theater of Operations (PTO) during WWII. Prominent commanders of the U.S. Navy, Army, and Marine Corps played pivotal roles in the successful prosecution of the war from their headquarters at NAS Puunene.

Section 8 Project Effect and Mitigation Recommendations

8.1 Project Effect

Under Hawai'i state historic preservation legislation, the only two possible effect determinations for a given project under historic preservation review are “no historic properties affected” and “effect, with proposed mitigation commitments” (HAR Chapter 13-284-7). The only property recorded within the project area boundary consisted of Feature BD-14, a bulldozer push pile initially identified by Tomonori-Tuggle and others (2001) (see Section 5.2.2) and evaluated as not significant. The closest historic property, SIHP 50-50-09-4164 (see Section 5.2.1 and Section 7), is located outside of and directly adjacent to the project area. Based on the archaeological findings within the project area, CSH recommends a project specific effect determination of “no historic properties affected”.

8.2 Mitigation Recommendations

Although the proposed project will have no negative effect on historic properties within the project area boundaries, it is recommended that a 50-foot wide protective buffer zone be established entirely around SIHP 50-50-09-4164, Feature BB. This historic property consists of an existing agricultural/military structure, which contains significant military architectural information. SIHP -4164 BB is significant for its information content, and remains as an intact structure of Naval Air Station Puunene. According to the SHPD Review Letter (LOG NO: 26206, DOC NO: 0009MK08) dated May 8, 2001, Don Hibbard stated that:

“Regarding mitigation proposals for the four significant sites [4800, 4801, 4802 and 4803], we agree that appropriate mitigation for the constituent buildings of Site 4164 (NAS Puunene) is not yet clear. The current master plan for Maui County does not fully elucidate treatment on all of the historic properties present, only those within the seven acre parcel intended for use as a Naval Memorial and entrance to County fair grounds. It may be that the mitigation of these structures could be recording at a satisfactory level. However, the mitigation needs for this site needs to undergo a full evaluation prior to or in concert with any planning for governmental facility development. We agree that Sites 4800, 4802, and 4803 can be preserved. Alternately, data recovery documentation could be proposed, but at this point, we will accept a preservation commitment.” (Hibbard 2001)

It would be appropriate to install orange high-visibility vinyl fencing around the earthen ramp, stacked basalt wall, and concrete mounting base components of SIHP – 4164, Feature BB and maintained in such a way that the structure remains protected for the entire time that the project area is used as an industrial work area. The use of “extended-radius” equipment within the project area, such as excavators and/or construction cranes, may make it necessary to establish a larger buffer zone, in order to protect the integrity of the structure from accidental damage.

In the unlikely event that any significant pre-contact or historic deposits (i.e. subsurface concentrations of indigenous or historic era artifacts and or structural remnants) or human burials be exposed during the development of the parcel, subsurface excavation work and/or surface

grading should be halted in the immediate area and the SHPD staff archaeologist for Maui County, Melissa Kirkendall, Ph.D, (808-243-5169) should be contacted.

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APPENDIX E

A CULTURAL IMPACT EVALUATION REPORT

**A CULTURAL IMPACT EVALUATION REPORT
FOR A 15.20 ACRE PARCEL LOCATED AT
Pūlehu Nui Ahupua‘a, Wailuku District, Maui Island
TMK: (2) 3-8-08: 001**

**Prepared for
SSFM international, Inc.**

**Prepared by
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Management Summary

Report Reference	A Cultural Impact Evaluation Report for an 15.20-Acre Parcel located at Pūlehu Nui Ahupua‘a, Wailuku District, Maui Island [TMK (2) 3-8-008:001] (Hill <i>et al</i> 2006)
Date	April 2006
Project Number	Cultural Surveys Hawai‘i Inc. (CSH) Job Code: PULEH 2
Investigation Permit Number	CSH completed the Cultural Impact Evaluation (CIE) interviews under state archaeological permit No. 0605 (2006) issued by the Department of Land & Natural Resources/ State Inventory of Historic Places (DLNR/ SIHP) per Hawai‘i Administrative Rules (HAR) Chapter 13-13-282.
Project Location	East of Mokulele Highway, Pūlehu Nui Ahupua‘a, Wailuku District, Maui Island, TMK: (2) 3-8-008:001. This area is depicted on the 1998 Pu‘u o Kali and Mā‘alaea 7.5-minute USGS topographic quadrangles.
Land Jurisdiction	Government: County of Maui
Agencies	DLNR/ SHPD and the County of Maui.
Project Description	CSH performed a cultural impact evaluation (CIE) investigation for the County of Maui, who is proposing to locate a processing and storage facility for abandoned vehicles in the project area. This CIE was prepared to document any potential impact that the proposed project may have on cultural practices by conducting cultural consultations with community members. This CIE investigation projects cultural impacts, per HRS Chapter 343 and the Office of Environmental Quality’s <i>Guidelines for Assessing Cultural Impacts</i> .
Project Acreage	Approximately 15.20 Acres.
Area of Potential Effect (APE) and Survey Acreage	The project’s APE is defined as the entire 15.20-acre footprint of the proposed abandoned vehicle storage and processing facility (14.51 acres), as well as the paved access road (0.69 acres). The project area’s surrounding built environment is a mixture of military (Hawaii Army Air National Guard), recreational (Valley Isle Timing Association’s drag strip), and agricultural (HC&S Company’s sugar cane fields) The existing paved road for access and egress to the project area is subject to increased traffic, and is included in the project APE. Accordingly, for the current cultural impact evaluation, the survey area, including the access roadway, and the project APE, are one and the same.

Project Environmental Regulatory Context	As a county funded project, the proposed project is subject to Hawai'i state environmental legislation (Hawai'i Revised Statutes [HRS] Chapter 343 and HRS Chapter 6E-8).
Consultation Effort	Hawaiian organizations, agencies, and community members were contacted in order to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the project area and the vicinity. The organizations consulted included the State Historic Preservation Division (SHPD) of the Hawai'i State Department of Land & Natural Resources (DLNR), the Office of Hawaiian Affairs (OHA), The Maui/ Lana'i Islands Burial Council, the Maui County Cultural Resources Commission, the Central Maui Chapter of Hawaiian Civic Clubs, and the Hawaiian Studies Department at Maui Community College. Archaeologist Robert Hill, B.A. conducted the consultation effort under the general supervision of Hallett H. Hammatt, Ph.D.
Consultation Results	While the area was once noted as a place of pre-contact trails used for transit from <i>ahupua'a</i> and places situated on and around the flanks of Haleakalā to <i>ahupua'a</i> and areas in the valleys and surrounding coastline of West Maui, as well as probable agricultural pursuits (see Table 5 and 0), there were no contemporary or continuing traditional cultural practices were identified for the study area. A Hawaiian cultural concern was raised regarding the obstruction of the view plain from Hawaiian Home Lands situated <i>mauka</i> of the project area, the implication being that the abandoned vehicles would be a visual eyesore from the homes (see Table 5).
Cultural Impact Recommendation	Based on the findings of this evaluation, the Pūlehu Nui abandoned vehicle storage and processing project will have minimal impact upon Native Hawaiian cultural resources and practices. It should be noted, however, that there was some concern regarding the proximity of the abandoned vehicle site to the Maui Raceway Park and the potential for environmental contaminants (e.g. chemicals associated with the recycling process) or pests to negatively impact the area set aside for family oriented activities. Due to the concerns raised, it would appear that the image of a "clean" operation would be an image desired by the management of the facility, to enhance public relations. Additionally, there are many intact structures of the former Naval Air Station Puunene in the vicinity of the project area, and as a precautionary measure, personnel involved in the construction of the abandoned vehicle storage and processing facility should follow proper setbacks and buffer zones to ensure the integrity of these intact structures.

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Section 1 Introduction

1.1 Project Background

At the request of Mr. Ronald Sato of SSFM International Inc., Cultural Surveys Hawai'i, Inc. (CSH) conducted a cultural impact evaluation, in coordination with an archaeological inventory survey of a 15.20-acre parcel of land located in Pūlehu Nui Ahupua'a, Wailuku District, Maui Island [TMK: (2) 3-8-008:001].(Figure 1 and Figure 2) The area under consideration for the storage and processing of abandoned automobiles consists of a parcel of property (14.51 acres), as well as the supporting access roadway (0.69 acres) which intersects Mokulele Highway. The area of potential effect (APE) for the project under consideration includes the section of roadway located outside and adjacent to the 15.20 acre project area (Figure 3). The entire approximate 15.20-acre APE, hereafter referred to as the "project area", and was inspected as a part of this investigation.

The project area is bounded to the north by approximately 14.50 acres of open field, presently also under the jurisdiction of Maui County. This property is bounded by land maintained as a drag racing strip by the Valley Isle Timers Association. Sugar cane lands cultivated by the Hawaiian Commercial and Sugar Company (HC&S) occur to the south and east. Unused open field lands occur to the northwest, which are then bounded by property recently developed as an armory and heliport for the Hawai'i Army Air National Guard.

The project area parcel is accessed from the Mokulele Highway by way of an access roadway that serves the neighboring land uses at the drag strip, as well as the Hawai'i Army Air National Guard armory. While this cultural impact evaluation does not meet the standards set up by the State of Hawaii Office of Environmental Quality Control (OEQC) for cultural impact assessments, the level of work should be sufficient to address the potential impact of the proposed project on traditional cultural practices within or surrounding the project area.

1.2 Scope of Work

The scope for the cultural impact evaluation included research into the historical and previous archaeological background that included a study of archival sources, historic maps, Land Commission Awards, and previous archaeological reports. This research was used to model the history of land use and determine if archaeological sites, which might indicate past traditional cultural practices, have been recorded on or near this property. Consultation with individuals in the community on an informal basis was also conducted to identify and describe any present cultural concerns and subsequently assess the any potential impacts that proposed project may have on traditional cultural practices.



Figure 1. A portion of the 1992 Pu'u o Kali and 1996 Mā'ālaea 7.5-minute USGS topographic quadrangles, with the project location indicated by the lined area.

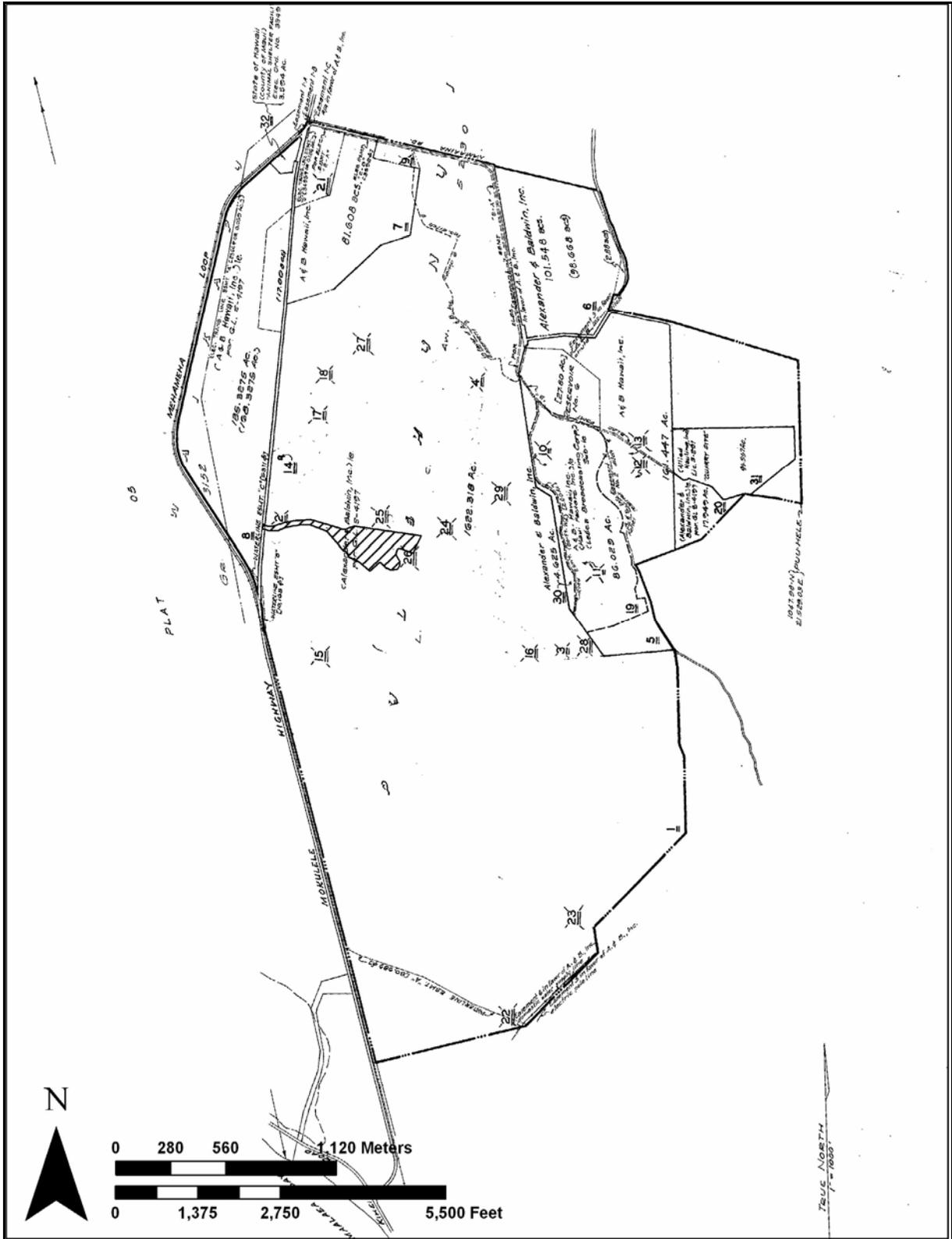


Figure 2. 1998 TMK map [TMK:(2) 3-8-008: 001] showing project area outlined in red.

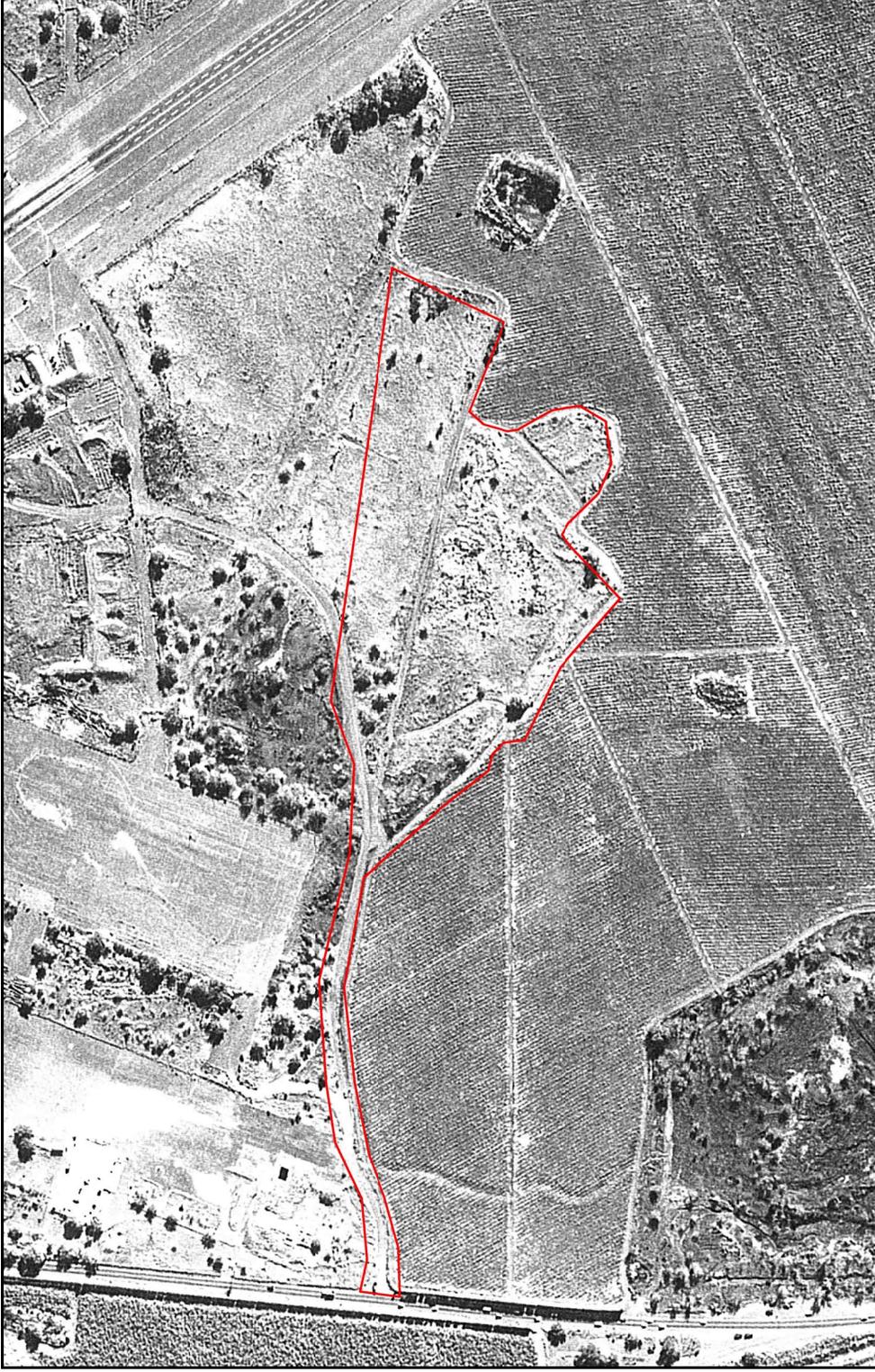


Figure 3. Aerial photograph depicting project APE. Surrounding uses show HC&S Field System 9151, the recreational areas of the Maui Raceway Park, and the former military area (upper left) subsequently developed for the U.S. Army Air National Guard (photo by R.M. Towill Corp., 1973, courtesy Hawai'i State Department of Transportation, Airports Division)

1.3 Environmental Setting

Lands within the project area are generally flat, averaging less than a 2 percent slope, at an average elevation of 80 feet above mean sea level (amsl), and consist of soils of the Pulehu-Ewa-Jaucas association. This soil association is found on alluvial fans and in basins on the island of Maui, mainly within Central Maui (Foote et al 1972:8). This association consists of well-drained and excessively-drained, medium textured, moderately fine textured, and coarse textured soils. (Foot *et al* 1972) and is considered suitable for sugar cane.

Pulehu-Ewa-Jaucas association soils have a surface layer of dark-brown friable silt loam. Their substratum is dark brown and dark yellowish-brown alluvium weathered from basic igneous rock. The specific soils found within the project area are Waiakoa extremely stony silty clay loam, 3 to 25 percent, slopes, eroded (WID2) (Figure 4). This series is characterized by stones covering between 3 to 15 percent of the surface (Foote et al. 1972:26).

The Waiakoa Soil Series consists of well drained, gently sloping to moderately steep soils located on the upland areas. The upper part of the Waiakoa Series is influenced by volcanic ash and developed from material weathered from basic igneous rock. The U.S. Department of Agriculture (USDA) Soil Conservation Service survey lists WID2 type soils as “Waste Lands”, and not suitable for cane cultivation. Lands of this soil class are generally relegated to wildlife habitat and pasture.

Rainfall accumulation within the project area averages around 15 inches per year with the heaviest rainfall occurring during the winter months (December through February) and little to no rainfall during the summer months (June through August) (Giambelluca and Schroeder 1998). This pattern of rainfall and low annual precipitation rate once sustained a lowland, dry shrubland and grassland native ecosystem (Pratt and Gon III 1998).

The landscape of the project area had been heavily modified by historic sugar cultivation southwest of the access roadway which runs east-west through the project area. The area northeast of the access roadway had been graded and cleared for WWII military operations. The vegetation currently consists of moderately dense *kiawe* (*Prosopis pallida*) and *koa haole* (*Leucaena leucocephala*) with knee to waist high grasses along the project area boundaries where the project area lands are closest to irrigated sugar cane fields. Thin stands of *kiawe* and *koa haole* trees, knee to waist-high buffelgrass (*Cenchrus ciliaris*) and other alien grass species, interspersed with sparse occurrences of *'ilima* (*Sida fallax*) and *'uhaloa* (*Waltheria indica*), could be found throughout the project area.

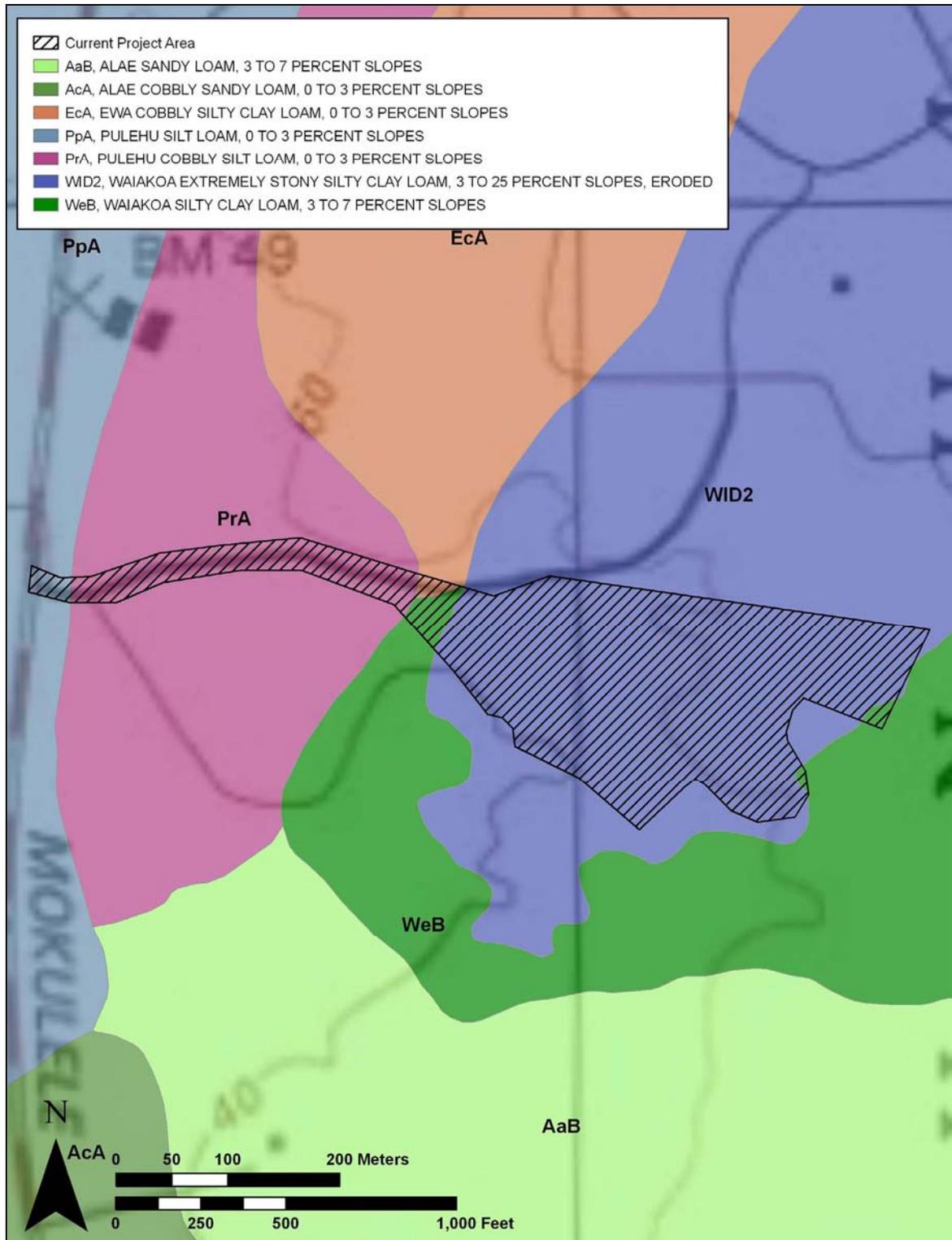


Figure 4. A portion of the 1992 Pu'u o Kali and 1996 Mā'alaea 7.5-minute USGS topographic quadrangles, showing the project area relative to the local soil series (U.S. Department of Agriculture, Natural Resources Conservation Service 2001).

1.3.1 Built Environment

The built environment consists of a paved access and egress roadway leading to the project area from the Mokulele Highway. The access roadway is oriented in an east-to-west direction, and travels past the developed area of the U.S. Army Air National Guard heliport (Figure 5). The access roadway travels from the Mokulele Highway approximately 310 (1,000 feet) meters to a fork. The northward fork continues toward the Maui Raceway Park area. The southern fork travels approximately 220 meters (725 feet) due east through the project area, as a paved road bisecting stony soils to the south from less stony soils north of the roadway (Figure 6). The southern portion of the project area is generally characterized by push-pile debris from concrete building foundations demolished by plantation field clearance activities (Figure 7).



Figure 5. Facilities of the Hawaii Army Air National Guard, located along the roadway for access and egress that serves the project area, as well as the varied recreational facilities of Maui Raceway Park. View to north.



Figure 6. Photograph of project area roadway, view to the west. Note boulder terrain of southern portion of project area (left) and level terrain of military area (right).



Figure 7. Bulldozed Pile 14 (BD-14), view to north

Section 2 Methods

Numerous published and unpublished accounts, surveys, reports, maps and photographs found in public and private collections pertaining to the Naval Air Station Puunene project area were investigated by Cultural Surveys Hawai'i Inc. Historical documents, maps and existing archaeological information pertaining to the sites in the vicinity of this project were researched at the State Historic Preservation Division library and the Engineering Offices at the Hawaii State Department of Transportation, Airports Division.

The Office of Hawaiian Affairs, The Maui/Lanai Islands Burial Council, and members of other community organizations were contacted in order to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the study area and the surrounding vicinity. The names for potential community contacts were also provided by colleagues at CSH and from the researcher's familiarity with other historians in the field of naval aviation history. Some of the prospective community contacts were not available to be interviewed as part of this project. A discussion of the consultation process can be found in the following section on "Community Consultations". Please refer to Table 5 for a complete list of individuals and organizations contacted.

Research regarding the history of NAS Puunene was conducted using the services of the National Archives and Records Administration, in College Park, Maryland, and the U.S. Naval Historical Center, located within the Washington Navy Yard, Washington, D.C. All relevant Land Claim Awards (LCA) and Royal Patents were researched using resources associated with the Waihona Aina online database (Waihona Aina Corp. 2002).

Section 3 Background Research

The division of Maui's lands into political districts occurred during the rule of Kaka'alaneo, under the direction of his *kahuna*, Kalaiha'ōhi'a (Beckwith 1970:383). This division resulted in twelve districts or *moku* during traditional times: Honua'ula, Kahikinui, Kaupō, Kīpahulu, Hana, Ko'olau, Hāmākua Loa, Hāmākua Poko, Ka'anapali, Lahaina, and Kula. The current project area is located on the leeward flank of Haleakalā in the *moku* of Kula and *ahupua'a* of Pūlehu Nui (Figure 8) at a place where the Pūlehu Nui Stream ends.

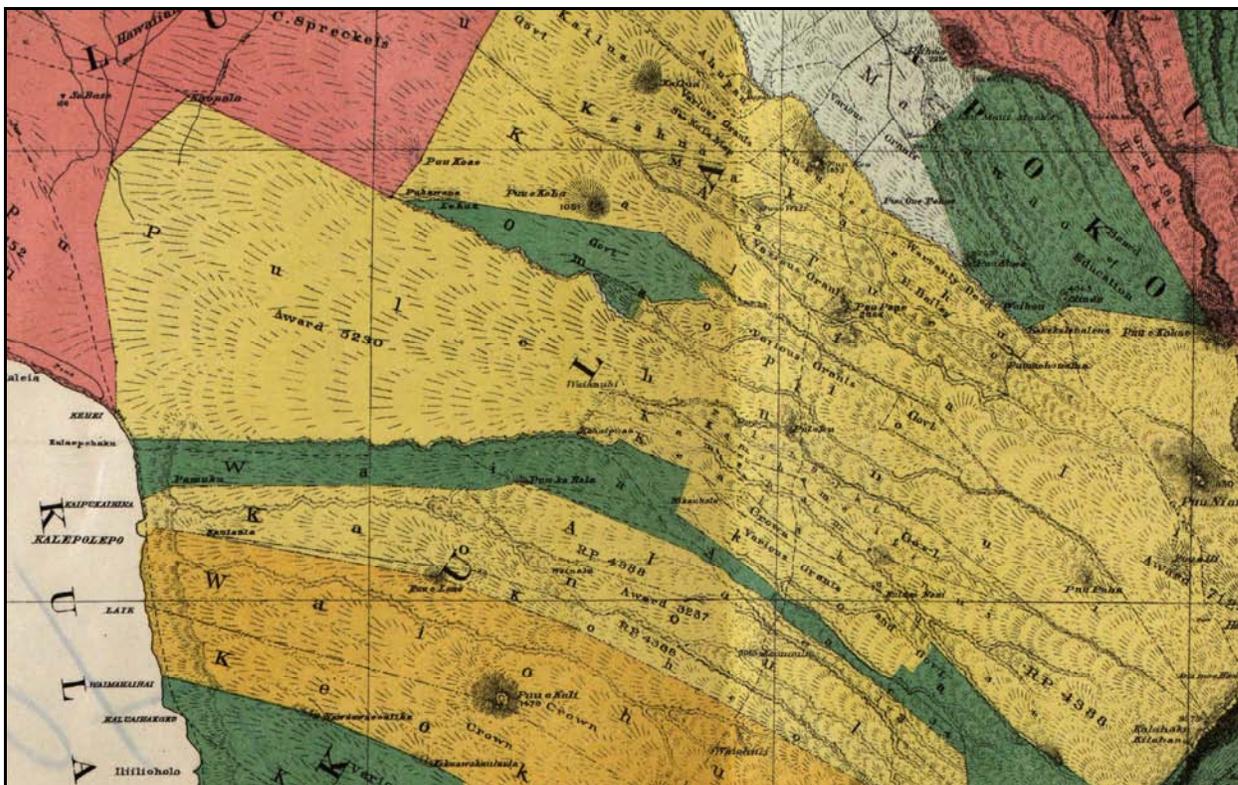


Figure 8. A portion of the F.S Dodge map (1885) showing Pūlehu Nui Ahupua'a in relation to the traditional *moku* of Kula (crown lands in yellow, government lands in green).

3.1 Traditional and Historical Background

3.1.1 Mythological Accounts

While the mythological and traditional accounts of the Kīhei area are relatively scarce, an analysis of the place name meanings for the region surrounding the project area may yield some insight into the patterns of life in an area. Literal translations of several of the place names for land areas and divisions near the project area are listed on Table 1. Unless otherwise noted, the translations are taken from Pukui *et al* (1974).

Table 1. Table of Place-Name Translations.

Kula (<i>moku</i>)	literally translated as "plain"; always an arid region (Handy in Sterling 1995:242)
Pūlehu Nui (<i>ahupua</i> ')	large <i>pūlehu</i> where <i>pūlehu</i> is literally translated as "broiled"
Kīhei	literally "cape or cloak"; sandy point and boundary marker between Pūlehu Nui and Waikapu (Sterling 1998:255); commonly used place name for the South Maui area
Kīheipūko'a	<i>kīhei</i> literally translates as "cape or cloak" and <i>pūko'a</i> literally translates as "coral head"; Kīheipūko'a was a place near Keālia between Kalepolepo and Ma'alaea (Sterling 1998:257)
Keālia	literally "salt encrustation"; a pond near Kīhei and major salt pan location (Sterling 1998:95)
Kale'ia	literally "the abundance", possibly in reference to the resources available from the fishponds and offshore fishing grounds
Kalepolepo	literally "the dirt"
Ka'ie'ie	"a plaything for floating in the rapids", ancient name of Kalepolepo (Sterling 1998:252)
Kaopala	literally "the rubbish"; dividing line between Pūlehu Nui and Waikapu
Waiakoa	literally "water (used) by warrior"; the name of a gulch carved by southern exposure (Nāulu) rainstorm waters to the sea in North Kīhei.
Keāhuaiwi	literally "the bone pile"; the name of a gulch immediately adjacent to and north of Waiakoa Gulch
Kalaepohaku	"the stony promontory"
Pohaku Ki'i	"tilted stone"; a resting place for travelers
Alakoa	"soldiers street"
Kohemalamalama	"the vagina"; also the ancient name for Kaho'olawe

The above place names, together with the environmental data, suggest that the lands of and surrounding coastal Pūlehu Nui were fairly dry and barren in an agricultural sense but rich in marine resources. Previous research on pre-contact occupation in Kula District (Kolb et al. 1997) has suggested that most permanent habitations were in the uplands with a smaller permanent population located along the coastline. While a reconstruction of the coastal and archaeological landscape of Kula Moku underscores the importance of the uplands as a focus of agriculture and habitation, Hawaiian traditions and the presence of four fishponds are evidence that the coastal environs were also a focus of settlement and marine exploitation. The relative scarcity of recorded coastal place names, however, may be an indication of a smaller population that was widely spread out across the leeward coastal line. The vicinity south of the current project area

was also a site of conflict between the Hawai'i Island chief Kalani'opu'u and Maui Island chief Kahekili and is perhaps the origin for such place names as "Waiakoa" and "Keāhuaiwi".

3.1.2 Traditional Accounts

The earliest account concerning Kīhei and Hawaiian politics is given by Kamakau (1961) during the time of Alapa'i and Kekaulike:

Alapa'i sailed from Kohala on Hawai'i...But when he landed at Mokulau in Kaupō (Maui) and heard that Ke-kau-like was dying, he gave up all thought of war and wished only to meet Ke-kau-like and his (half) sister Ke-ku'i-apo-iwanui...He landed at Kīheipukoa with all his chiefs and fighting men...While he was at Kīhei, Alapa'i heard that the ruling chief of Oahu was making war upon Molokai. Most of the chiefs of Molokai...were of Hawai'i...Alapa'i's sympathy was aroused, for these were his own brothers and children (relatives), and he made ready to go to their help on Molokai. [1961:70]

Other accounts involve the continuing conflict between Kahekili of Maui Island and Kalani'opu'u of Hawai'i Island during the late 18th century. Following a losing battle at Kaupō in 1775, Kalani'opu'u dedicated several war *heiau* on Hawai'i Island to aid in the defeat of Kahekili. Upon hearing this news Kahekili sent for the *kahuna* (priest) Kaleopu'upu'u who directed construction of the *heiau* of Kaluli and Pu'uohala on the north side of Wailuku. When Kaluli Heiau was completed Kaleopu'upu' said to Kahekili:

This is the house of your god; open the sluice gate that the fish may enter.
[Kamakau 1961: 85].

In the year 1776, the army of Kalani'opu'u landed at Keoneo'o'io with their war canoes extending to Makena at Honua'ula and proceeded to ravage the countryside. Kalani'opu'u landed with additional forces at Kīhepuko'a at Kealia to Kapa'ahu, 800 strong and eager to drink the waters of Wailuku:

Across the plains of Pu'u'ainako (Can-trash-hill) and Kama'oma'o shone the feather cloaks of the soldiers ... Ka-hekili was at Kalanihale just below Kihahale and above the plateau of Ka'ilipoe at Pohakuaokahi ... Kaleopu'upu'u [said] to Ka-hekili, "The fish have entered the sluice; draw in the net." [Kamakau 1961:85]

As the forces of Hawaii's chief, Kalani'opu'u, marched toward to Wailuku, the forces of Maui's chief, Kahekili, were arranged, "...seaward of the sand hills of Kahulu'u." Kahekili's army was able to surround the entire invading force "as fish that had entered the sluice", and slaughter them all, save two. "This great slaughter was called *Ahulau ka Pi'iPi'i Kakanilua* (Slaughter of the Pi'iPi'i at Kakanilua)" (Kamakau 1992). When news of the annihilation of the "Alapa" and "Pi'iPi'i" fighting forces reached Kalani'opu'u, he called for the council of his remaining chiefs. It was decided to continue the attack against Kahekili. The next day, the forces of Kalani'opu'u moved from Kiheipuko'a at Kealia, crossed of the central isthmus of Kama'oma'o, and climbed toward the sand hills of Kakanilua. The army of Kahekili took up a position to ambush the invaders, and were again successful. At the sandhills of Kama'oma'o, Kahekili's army surrounded the army of Kalani'opu'u, driving the terrified soldiers before them,

“like leaves before a whirlwind”. The retreat of the army from the Big Island appeared: “like the creeping branches of the *‘ulei*, so moved the cloaked warriors, young and middle-aged, over the *‘ilima*-covered plain of Paholei.” After a second day of warfare, Kalani‘opu‘u sued for peace and was granted such by Kahekili and his messengers at Kīheipūko‘a (Kamakau 1961:88-89).

3.1.3 Early Historic Period

Kīhei was one of the locations visited by Captain George Vancouver. A monument at Mai Poina ‘Oe Ia‘u Beach Park in Kīhei commemorates Vancouver's on-shore expedition in 1792, when he first met the ruling chief Kahekili. With its sheltered coastline and easy access to upcountry resources over a vast slope, Kīhei would continue to be a common stop for visiting ships.

During the early and middle 1800s, the Hawaiian demography was affected by two dramatic factors: radical depopulation resulting from Western disease; and nucleation around the developing port towns. The traditionally Hawaiian population was largely dispersed and, although there were royal centers and areas of more concentrated population, these areas never came close to rivaling the populations of the historic port towns that developed on Hawai‘i's shorelines during the 1800s. In this regard, Kuykendall (1938:313) notes that in the period from 1830 to 1854:

The commercial development during this period, by magnifying the importance of a few ports, gave momentum and direction to a townward drift of population; the population of the kingdom as a whole was steadily going down, but the population of Honolulu, Lahaina and Hilo was growing.

We believe that Kuykendall's observation was most likely the demographic pattern at the Kalepolepo entrepot, a hub of early historic activity for Kīhei and eventually all of Kula Moku (Kolb et al. 1997:69), located approximately one mile to the south of the current project area. The development of Kalepolepo as an entrepot and a focus of Christian life in the 1840s and 1850s most likely increased the population in the immediate vicinity above the pre-contact population figures, contrary to the island-wide trend of depopulation. That the population and areal extent of the Kalepolepo community reached its zenith during the mid 1800's appears to be supported by Kolb (*et al.* 1997:68):

The ancient village of Kalepolepo was relatively small, and was built around an economy primarily based upon the exploitation of ocean resources--primarily the excellent fishing grounds as well as three large fishponds. However, as the number of visiting ships increased, Kalepolepo soon became an important provisioning area. By 1850 we know that the economic opportunities were attracting a number of European entrepreneurs.

In 1820, the whaling industry was introduced in Hawai‘i. Although the whaling trade centered on Lahaina, mainly affecting the Kula/Kīhei area through agricultural demands, Clark (1980:47) notes that "From the 1840s to the 1860s a small whaling station was maintained at Kalepolepo [Kīhei]." The introduction of whaling to the Maui community brought with it an increased demand for foodstuffs and in particular the long-lasting Irish potato. After 1830, dryland agriculture in the old Kula District expanded with a focus on Irish potato cultivation. The

California Gold Rush of 1849 further intensified the demand as a California-Hawai'i potato trade began to flourish. Kula became the area of highest potato production and was known as "the potato district" (the area between 2000 and 5000 ft. amsl). During this time period sugar cultivation and ranching were established in the Kula region. Sugar was present prior to 1846, with six sugar producers operating on the slopes of Haleakalā (Wong Smith in Brown and Haun 1989:C-7). As Wong Smith points out (Brown and Haun 1989: C-6), ranching was present in the area prior to the 1840s. Much of the produce, sugar and livestock moved down the Kalepolepo and Kekuawaha'ula'ula Trails to the landing at Kalepolepo, just south and east of the project area. Donham (1992:5) notes that the inundation of land clearing and cultivation associated with the Gold Rush resulted in "deforestation [which] adversely affect[ed] the amount of rainfall in the district, and periods of drought became more common."

Around 1849 John Halstead built the Koa House at Kalepolepo in Kīhei. The building, part store and part residence, thrived on both the trade of the whaling industry and the then thriving potato industry. During the Gold Rush years, the store became "an emporium for Irish potatoes" and served as a gathering place for the whaling sailors. David Malo created a balance for the boisterous whaling crowd by constructing the Kilolani Church at Kalepolepo around 1852. Potato production thrived in Kula from 1830-1850 until successful potato cultivation and production in California and Oregon resulted in a decline in the Hawai'i trade (Burgett and Spear 1995:6-7). Halstead ran his store until 1876, closing shop when the potato industry diminished and moved to Ulupalakua (Janion 1977:25-31).

3.1.4 Mid- to late- 1800s

The most significant change in land-use patterns and allocation came with The Great Māhele of 1848 and the privatization of land in Hawai'i. This action hastened the shift of the Hawaiian economy from that of a subsistence-based economy to that of a market-based economy. During the Māhele, all of the lands in the Kingdom of Hawai'i were divided between *mō'ī* (king), *ali'i* and *konohiki* (overseer of an *ahupua'a*), and *maka'āinana* (tenants of the land) and passed into the Western land tenure model of private ownership. On March 8, 1848, Kamehameha III (Kamehameha III) further divided his personal holdings into lands he would retain as private holdings and parcels he would give to the government. This act paved the way for government land sales to foreigners, and in 1850 the legislature granted resident aliens the right to acquire fee simple land rights (Moffat and Fitzpatrick 1995: 41-51).

Native Hawaiians who desired to claim the lands on which they resided were required to present testimony before the Board of Commissioners to Quiet Land Titles. Upon acceptance of a claim the Board granted a Land Commission Award (LCA) to the individual. The awardee was then required to pay in cash an amount equal to one-third of the total land value or to pay in unused land. Following this payment, a Royal Patent was issued that gave full title of ownership to the tenant. But by 1850, the government of Hawaii was offering land for sale to both Native Hawaiians and foreigners. Such lands were referred to as Royal Patent Grants or as Grants.

A total of 13 land commission claims were made in Pulehū Nui and nine were awarded (Table 2). A portion of the 1889 Monsarrat and Dodge map of Kula shows that the area in which the current project area lies was awarded to Keaweamaahi as a part of LCA 5230 and supporting testimony given to the land commissioners indicate that the land of Pulehū (Pulehū Nui) was

given to Keaweamahi by the King in 1843 and never disputed (Waihona 'Aina 2000). The testimony given by Kaauwai and Kaiakekaua additionally maintained that there were a great many natives that lived within the *ahupua'a* of Pulehū Nui (Waihona 'Aina 2000). As indicated in Table 1, the majority of the lands that were awarded were *kula* lands used for potato (both sweet potato and Irish potato) cultivation and primarily located along the upper elevations of Kula Moku. Only one land claim, made by Kaponō (LCA 9018), made mention of fishing rights and access to a *loko*. Land commission claim # 9018 was not awarded.

Table 2. Land Commission Awards Within Pūlehu Nui and Pūlehu Iki Ahupua'a

LCA	Royal Patent Number	Claimant	Award Type	Acreage
0327B	7691	Preveer, John	Apana	6.03
9671	2202	Kekahuna	2 kula, 1 Irish potato	5.78
9019	6330	Helehua	3 kula	9.08
4672	6560	Poonui	6 kula, 3 sweet potato plots, 1 Irish potato	4.09
9672	5190	Napoko	2 kula, 3 Irish potato	12.56
9673	6329	Lonoaea	2 kula	4.06
8866	5168	Kaniho and Pakeau	2 kula, 1 house lot, 1 mala of Irish potatoes	14.90
4567	7484, 7896	Wahine	11 kula, 10 sweet potato	20.53
5230	8140	Keaweamahi	ahupua'a	1668.78

By the time John Halstead closed shop in 1876, the boom years of Kalepolepo had passed. By 1880 the government survey of the Kula area showed the demarcation of only a few Land Commission Awards and who had received awards had replaced them with grants. Lower Kula consisted primarily of pastureland for ranching (Wong Smith in Donham 1990b:B-6). Kennedy (1992:7) notes that at this point *kiawe* was imported to feed cattle and provide wood.

Regarding the settlement at Kalepolepo and the impact of the changes associated with the change to ranching on the general area known as Kīhei, Clark comments:

Halstead finally closed his store in 1876, as demands for his goods had steadily decreased, and moved to Ulupalakua . . . By this time the once thriving Hawaiian village at Kalepolepo had been almost totally abandoned as well. The slopes of Haleakala had gradually become denuded of their forests and torrential rains had caused heavy soil runoffs into the Kalepolepo shoreline. Cattle had trampled down the brush and grassy fields, causing sand dunes to drift and fill up the pond. Clouds of dust filled the air instead of cooling winds. Except for a handful of fishing families, Kalepolepo (and likely the Kīhei area in general) was deserted. (Clark 1980:48).

Sugar would soon fill the void and in 1898 the Kīhei Plantation Company (KPC) was founded. The KPC began sugar operations in Kīhei and the plain above.

3.1.5 Early to Mid-1900s

The Kihei Plantation Company, Ltd. was organized late in 1898 with a capitalization of 60,000 shares at \$50 par value. Water was the most critical component in the decision to locate sugar cultivation along the leeward shores of Maui's arid coastline. The discovery of an ample supply of irrigation water early in 1898 led to the drilling of a large, successful well, but the supply of water was limited (Stearns 1942). Over the next four years, two ditches were developed to supplement the water needs of the 4,873 acres of sugar under cultivation at Kīhei (Gilmore 1936).

The history of the Kihei Plantation Company begins with the annexation of the Hawaiian Islands by the United States in 1898. With annexation came political stability for Hawai'i. Worldwide sugar prices were rising due to the outbreak of war between the United States and Spain over her colonies in Cuba, Puerto Rico and the Philippines. Henry P. Baldwin, of the Maui plantation of HC&S, entered into a partnership with O'ahu businessman Benjamin F. Dillingham to convert Lorrin A. Thurston's landholdings in Kīhei into a sugar enterprise.

Up to that time, sugar cultivation within the central isthmus of Maui was centered around the main towns of Wailuku and Kahului. Water tunneled from springs in the West Maui Mountains flowed through ditches in Wailuku to irrigate fields as far away as Mā'alaea. Water from the windward rain belt of Kailua ran through a network of ditches from East Maui to Pā'ia, to irrigate fields in Pu'unēnē.

The McCandless Brothers drilled a successful Maui-Type well (U.S. Geological Survey Well 14 / Hawaiian Commercial & Sugar Well K1) in 1899. It was located just inland from the coast in North Kīhei, between Keālia Pond and the Waiakoa Homestead Lands. This well was drilled vertically to approximately 60 feet through the Honomanū basalts, and tunneled laterally over 1,500 feet in order to skim 10 million gallons of fresh irrigation water per day from sources beneath the Kīhei plains (McCandless 1936).

The Kihei Plantation Company had the McCandless Brothers drill two or three additional Maui-Type wells on the north side of reservoir K2 at the discharge end of the existing pipeline of Well 14. The plantation in Kīhei failed in 1908 before the well site was able to be developed. It would have been named the HC&S K2 well, and would have included a large pumping station (Stearns 1942).

The plantation company in Kīhei built bridges to span streams and gulches flowing through the company fields. The plantation had planned the construction of a mill in North Kīhei, and ordered a plant to be built. It was decided that the new HC&S mill under construction at Pu'unēnē would have more than enough capacity to mill all the cane from the Kīhei fields. The order for the mill was transferred to the 'Ōla'a Sugar Company in Hawai'i, in exchange for a supply of steel rails for new railway requirements at Pu'unēnē. A large scale Kona storm hit the plantation on November 15th, 1900, and caused immense damage to both Kīhei and the HC&S fields in Pu'unēnē (Dean 1950). Bridges were knocked out, buildings were flattened, and washouts filled irrigation ditches with silt. Repairs were effected immediately, with the new HC&S mill at Pu'unēnē commencing operations January 29, 1902.

3.1.5.1 Railway Operations

The Kihei Plantation Company planned to construct a railway to move their cane. The sugar agency of William Dimond & Company placed an order for a locomotive from the Baldwin Locomotive Works in Philadelphia. The order was placed April 1899, and the plantation locomotive “Haleakala” was built and sent on to Maui (Conde 1973).

By March of 1900, the first annual report of the Kihei Sugar Company stated, “It was our intention to complete the main [rail]road only as far as Camp #2, or for about 2 miles, but as the development of Camp #3 required pushing on of the [rail]road one and a half miles further, this has been done, having been completed the 15th of February.” An additional six miles of track connected the Kīhei wharf to the various well pumping stations, and jogged north to meet up with existing HC&S track (Conde 1973). Establishing the railroad at Kīhei made it possible to harvest and transport over two thousand tons of sugar in a single year (Dean 1950).

The laying of the railroad and the cultivation of the sugar cane in Kīhei was performed primarily by Japanese field labor; the new Maui plantation employing a small part of some 19,908 immigrants from Japan who arrived in Hawai'i in 1899. Kīhei's plantation Camp #1 was set up inland of the Kīhei wharf and mooring pier. Two stables and a plantation store were located at Camp #1. Hospital services were provided by HC&S in Pu'unēnē. Kihei Camp #3 was located 2 ½ miles north of Kihei Camp 1 at Kolaloa Gulch, along the North Kīhei line of the HC&S railroad and south of the current project area.

The 3-foot gauge track for the Kihei Plantation Company railroad was built to the same specifications as the railway linking the HC&S mill at Spreckelsville to its fields; and to the sugar warehouses at the Kahului wharf. By 1902, with the new Pu'unēnē mill completed, a new milling contract with HC&S provided that all cane loaded by the Kihei Plantation Company was to be ground and manufactured into sugar by HC&S (Figure 9).



Figure 9. Cane from the Kīhei fields to the Puunene Mill, circa 1905. (photo from Conde 1973)

3.1.5.2 Water Source Development

The Lowrie Ditch project, named for former HC&S manager William J. Lowrie, brought an additional source of water to the Kīhei plains. His plan was to begin the ditch at the Pāpa'a'ea Reservoir, at the 1,000 ft. elevation, and maintain a four-foot drop per mile following the ditch's initial plunge from the Kailua reservoir. Steep mountain gulches were traversed using the force of the constant weight of water flowing in a series of siphons. The Halehaku Gulch, at 250 feet deep, and the Māliko Gulch, at over 350 feet deep, were both crossed by giant siphons fabricated of three-eighths-inch iron, and set in place by Japanese laborers. At a weir located above Pā'ia, the allocation of water began. The first tenth of the water flow in the Lowrie Ditch was divided out to the Pā'ia Plantation (an 11/20ths share) and the Haikū Plantation (a 9/20ths share). The distance traveled, from Kailua to the plantation's Kīhei boundary, was 21.9 miles (Thrum 1900).

More water was required, both from wells and from the East Maui water shed. The manager for the Kihei Plantation Company, W.F. Pogue, asked the management of HC&S for an even larger allocation of water for the Kīhei lands. In 1901, Samuel T. Alexander ordered the construction of a new ditch, tapping the water sources from Nāhiku to Honomanū. It was determined that the Kihei Plantation Company would receive 2/9ths of the capacity from the enterprise (Dean 1950).

The Kihei Plantation Company failed to live up to the expectations of its promoters with an inadequate water supply as the key difficulty. With the waters of the Ko'olau Ditch flowing to the Kīhei fields, production appeared to have hit its peak. Although 5,609 tons of sugar was delivered in 1903, high costs required a change of managers in Kīhei, and a reduction of the HC&S milling charge to \$7 per ton. The incoming HC&S manager, Frank Fowler Baldwin, determined that the best course of action was to buy out the company for \$375,000 (Conde 1973).

In 1908, the lands of the Kihei Plantation Company were divided up between five new major business entities of HC&S. The Kahului Railroad, which had already been absorbed by HC&S, acquired the rail lines to Kīhei and the rolling stock of the plantation. The Kailua Plantation Company (994 acres), the Kalialinui Plantation Company (923 acres), the Kula Plantation Company (996 acres), the Makawao Plantation Company (982 acres), and the Pulehu Plantation Company (978 acres) acquired the remaining acreage not included in the railroad right-of-way. Water rights reverted to HC&S, and were reapportioned between the new plantations (Dean 1950).

In 1912, HC&S began to modernize the existing plantation camps. Between a huge influx of immigrant workers in 1909, and the burning of village areas of Paia and Kahului to control smallpox in 1910, changes to the camp system were in full swing. The plantation workforce continued to expand until 1917, when the United States declared war on Germany, and the accompanying draft seriously depleted the labor pool. By 1919, postwar requirements for sugar had driven the price to \$471.40 per ton: an all-time high (Burns 1991).

The postwar years saw HC&S add electricity to some villages. HC&S completed the Waikapu Well [Well 7] in 1926; one of the largest deep wells in the world. The additional capacity of 40 million gallons per day (mgd) was instrumental in planning more sugar and industry within

Maui's central plains. In November 1929, commercial inter-island airplane flights commenced, using both Kahului Harbor and Ma'alaea Bay as landing areas for the amphibious aircraft of the day. Eventually, a small airport was built on the mudflats of Ma'alaea, to accommodate aircraft which taxied along a concrete ramp, leading from the waters of Ma'alaea Bay to a roadway serving Wailuku (Saito 2000).

Harold T. Stearns traversed the island of Maui between 1932 and 1942, conducting studies of the geology and ground-water resources. Gordon A. Macdonald spent between 1939 and 1940 completing geologic maps for the study. Their work highlighted the then-recent explorations for water in Pūlehu Nui, both as a source of drinking water, and for dust control during construction of the airport (Stearns 1942). They reported that the isthmus of Maui, "was without trees and covered with drifting sand prior to the planting of cane. Old residents report that red dust storms were nearly a daily occurrence. It seems possible that very little water existed under the Maui isthmus, prior to irrigation. If so, the annual pumpage of 45.500 million gallons (average over the past 10 years) represents mostly return flow from the 78.271 million gallons of surface water imported for irrigation. [This measurement establishes that] recovery from wells is about 58% of surface water deliveries."

The Stearns and Macdonald study calculated the mean monthly rainfall on Maui through 1938, and gave specific numbers for Pūlehu Nui at the Kihei Well Site #1 (elevation 45 feet) as 11.29 inches annually, averaged over eight years. Mean monthly rainfall for Pu'unēnē (elevation 73 feet) was calculated as 21.42 inches annually, averaged over ten years. In a separate study, water supplies for various towns and villages of Maui were listed. The East Maui Plantation water system included Hawaiian Commercial & Sugar Co., as the "parent" system for the Airport Division: Airport Village. The Airport Village population (226), and consumption (24.9 mgd) were given for 1941. In contrast, the population of Camp 7, at Pu'u Hele, (64) had a 7 mgd average consumption rate (Stearns 1942).

Records of "Maui-type" wells (Stearns 1942: 216-17) lists both a U.S. Navy (System 45) well site at Pu'unēnē, and a Maui Airport (System 16) Lowrie Ditch and Wailoa Ditch site. Test holes at Pu'u Hele [upper Mā'alaea] were described as encountering water 6.5 feet above sea level, after drilling 325-foot deep shafts (1.5-inch diameter test drillings). The narrative reporting the U.S. Navy Maui-type well, stated:

A 6 x 9-foot vertical shaft was under construction by the U.S. Navy in January 1941, at about 50 feet altitude at the Pu'unēnē Airport. Two tunnels, each 45 feet long, one of which encountered a lava tube full of water, exist at the bottom of the shaft. A deep-well turbine with a capacity of 2,000 gallons per minute and 150 hp electric motor will be installed. The shaft penetrated soil 0-5 feet; dense basalt 5-35 feet; loose black lapilli fire-fountain debris 35-41 feet; basalt 41-53 feet. The aquifer is probably *pahoehoe* of the Honomanū volcanic series (Stearns 1942).

3.1.5.3 Pre-World War II Aviation History

The Civil Aviation Authority (CAA) for the Territory recommended an airport for Pu'unēnē to accommodate the growth of commercial service in the early 1930's. The site was approved by the U. S. Army, Inter-Island Airways (later Hawaiian Airlines), HC&S, the Kahului Railroad Company, and the CAA (Territory of Hawaii 1938). Three intersecting runways were designed

alongside the existing government roadway and railway lines connecting Kīhei to the HC&S mill and village at Pu'unēnē.

By the mid-1930's, it was clear that Japanese aggression against mainland China was jeopardizing the political stability of the Pacific region (Morison 1951). The Pacific Naval Air Bases (PNAB) construction engineers began reinforcing United States military outposts across the Pacific. In Hawai'i, the construction of new civilian airports at Kane'ohe, (O'ahu) and Pu'unēnē (Maui) was assigned to U.S. Engineer Department (USED) civilian contractors. Prior to 1940, thirteen separate defense-related construction projects were begun in the Hawaiian Islands, primarily at Pearl Harbor (Woodbury 1946).

The Hepburn Board, a commission of six officers and engineers reporting to the United States Navy, authorized the immediate military-backed expansion of an existing design for a civilian airfield at Pu'unēnē. Quarters for a permanent Utility Squadron, as well as for rotating Carrier Air Service Units (CASU) crews, were hastily approved (Woodbury 1946). U.S. Engineer Department and Pacific Naval Air Base construction crews began work June 17, 1940, building quarters and messing facilities for 500 men (Table 3). Two 50,000-gallon above-ground gasoline tanks were erected, and railroad spurs were laid to facilitate a direct supply line with the Kahului Harbor. As work progressed, a slew of change orders added bombproof revetments for aircraft storage, as well as bomb and ammunition magazines. By the time Pearl Harbor, on the island of O'ahu was attacked, Naval Air Station Puunene was an active training base (U.S. Government Printing Office 1947).

Table 3. Facilities at Maui Airport, Pu'unēnē. List dated 30 June, 1941, from microfilm roll MA-NI-109 (Naval Historical Center 2003)

Number	Use	Number	Use
1.	50 Men Barracks	18.	200 Men Barracks
2.	50 Men Barracks	19.	Caretaker's House
3.	50 Men Barracks	20.	Bachelor Officer's Quarters
4.	Latrine	21.	Shops Building
5.	Latrine	22.	Storage Building
6.	Mess Hall and Galley	23.	Recreation Hall
7.	C.P.O. Quarters	24.	Operations Tower
8.	Storage Building	25.	5-Ton Crane
9.	Shops Building	26.	Small Arms and Pyro Magazine
10.	Office and Garage	27.	Transformer Building
11.	Paint and Oil Storage Building	28.	Boiler House
12.	Deep Well and Pump House	29.	Boiler House
13.	10,000 Gal Brackish Water Sewage	30.	Hangar

	Tank		
14.	10,000 Gal Brackish Water Sewage Tank	31.	Gas Tanks (25,000 Gal. each)
15.	7,000 Gal (2 Tanks) Drinking Water Storage	32.	Office and Storehouse
16.	Deep Well and Pump House	33.	Swimming Pool (under construction)
17.	Sentry Box	34.	160 Man Barracks

The location of Utility Squadron Three (VJ-3) at the Pu'unēnē airfield was found to be ideal for operations involving the use of radio-controlled aircraft for anti-aircraft training (Figure 10). The development of radio-controlled full-scale aircraft was code-named "Project Dog", and began as a military program located on the east coast of the United States in the mid 1930's (Fahrney 1982). "Project Dog" was moved to San Diego in 1938, and finally to the Navy's Maui Airport at Pu'unēnē early in 1940, in order to prove the practicality of radio-controlled assault drones. These were the earliest experiments leading towards the development of the guided missile.



Figure 10. An N2C-2 drone aircraft operated by Utility Squadron Three, crash-landed on Maui during gunnery training (Foundation 2002).

Full-scale military fortification of the Hawaiian Islands began immediately after President Franklin D. Roosevelt cancelled all trade agreements with Japan, in January of 1940. On May 7, 1940, The U.S. Pacific Fleet was ordered out of the Port of Los Angeles, to be based at Pearl Harbor, in the Territory of Hawai'i. This action was designed as a deterrent against further aggression by Japan in the Pacific region (Morison 1951).

Lieutenant Robert F. Jones commanded VJ-3 at Puunene, and advanced the syllabus of testing radio-controlled aircraft to the point where a radio-controlled aerial torpedo was thought to be possible. By April 1941, the Navy's efforts to develop a practical way to control drone aircraft from greater distances was in full swing (Foundation 2002). In the midst of this research program, Navy Fighting Squadron VF-2 landed at the Pu'unēnē aerodrome for training purposes in April, 1941.

Based aboard the aircraft carrier U.S.S. Lexington, the "Bounty Hunters" of VF-2 trained on Maui for approximately two months, returning to sea with the U.S.S. Lexington to take part in operations to ferry aircraft and supplies to Midway Island. The training regime of VF-2 included the use of "unrestricted air space for gunnery and tactics and many nearby bombing and strafing targets" (Lacouture 1989). The target range was located at lower 'Ulupalakua, and the aircraft used "bombs" filled with lime powder and beach sand to mark their accuracy.

The 1st Battalion of the Army's 299th Infantry Regiment was assigned to establish defensive positions along the exposed coastal areas of Maui, in May, 1941. Tents housing the administrative section for the Army's 24th Infantry Division, and the Fourth Platoon Signal Company, Aircraft Warning Air Corps Detachment, were located at the Maui Airport at Pu'unēnē (Allen 1950).

3.1.6 World War II (1941-1945)

With the outbreak of war between Japan and the United States, NAS Puunene became the command headquarters for both Navy and Army units on the island of Maui. Plantation heavy equipment and plantation operators worked side by side with U.S. Engineering Department personnel to accelerate construction of defensive positions and immediately lengthen runways at the base. The call for an immediate extension of the runways to military specifications involved extensive engineering to reroute miles of irrigation culverts for HC&S. The dispersion of facilities planned for NAS Puunene would come to utilize over 2,500 acres of land, and involve housing for over 5,000 men (Command History 1945).

The attack on Pearl Harbor, December 7th, 1941, forced the "Project Dog" program at NAS Puunene to assign its research to safer bases in the mainland United States. Wartime operations for VJ-3 would concentrate exclusively on providing radio-controlled aircraft as realistic targets for fleet anti-aircraft gunnery training exercises (Foundation 2002). Under wartime conditions, responsibilities for VJ-3 included maintaining an intense schedule of weather flights, rescue flights, and anti-submarine reconnaissance flights in the waters surrounding Maui.

Early in 1942, the first Carrier Air Service Unit, CASU-4, was commissioned, and the utility squadron personnel of VJ-3 were reinforced by Naval Air Station Officers. In June, 1942, Navy Fighting Squadron 72, the first of over 150 squadrons of U.S. Navy fighter, bomber, and scout aircraft, arrived for advanced training prior to moving into forward combat areas (Wilcox 2004). For four days in early June, 1942, as the Battle of Midway raged 600 miles to the northwest, NAS Puunene personnel were ordered into shelters and revetments, expecting bombing raids by Japanese aircraft sweeping across the Hawaiian archipelago (Vint 2000). With the success of American naval forces at Midway, the threat of imminent invasion vanished, and efforts to outfit military bases in the Hawaiian Islands for wartime training were redoubled.

Anti-aircraft gun emplacements and protective aircraft revetments were given top construction priority by the U.S. Pacific Naval Air Bases supervisors. Heavy equipment and civilian operators from Wailuku Sugar Company and Hawaiian Commercial & Sugar Company were employed at NAS Puunene, with their pay charged back to the U.S. government. Milling at the plantation sugar mills was confined to daylight hours until “blackout” procedures were approved (HC&S Archives).

U.S. Engineering Department civilian construction contractors were entirely replaced at NAS Puunene by military PNAB personnel by July, 1942. Domestic water pipelines were laid by HC&S to supply military camps being constructed at ten separate locations across the central Maui plains, including the Camp 6 location proximate to NAS Puunene. The main government road and the railroad line that served the wharf at North Kīhei were rerouted, as NAS Puunene expanded. The Army National Guard’s 108th Regiment, 27th Infantry Division, took up defensive duties along Maui’s coastlines beginning March, 1942, and occupied formal headquarters at NAS Puunene. On November 16, 1942, 400 men forming an advance echelon of the Navy’s 39th Construction Battalion arrived at NAS Puunene, to begin construction of underground fuel bunkers, bombproof buildings, ammunition magazines and an aviation ground school.

The establishment in 1943 of NAS Puunene as a “Top Gun” school for fighter-aircraft tactics was based on the Navy’s use of highly-decorated veteran fighter pilots, such as Commanders Edward “Butch” O’Hare, James “Jimmy” Flatley, and James Thach; to relay the latest intelligence from the front lines to new pilots rotating into combat (Feightner 1996). “Maui Group Local Naval Defense Forces”, based at NAS Puunene, controlled the training airspace over the Kaho‘olawe aerial bombing ranges, and administered the training schedule (Lundstrom 1990). Aircraft carriers were modified for combat in the Pacific Ocean at the Pearl Harbor Navy Yard, while their air groups were flown to one of nine Navy airfields in Hawaii for advanced training – NAS Puunene being the premiere airfield (Morison 1953).

Army National Guard Divisions were assigned to occupation, guard, and training stations in the Hawaiian Islands during World War II. Shoreline defenses held by the 27th Infantry Division on Maui were replaced by men of the 40th Infantry Division. As elements of both the 27th and 40th Divisions were combined and sent to the South Pacific for combat duty, they were replaced on Maui by regiments from the 33rd Infantry Division. A resident of Maui during WWII said, “It was common to see groups of soldiers wearing their unit insignias all over Maui: the “Sunshine” [40th Division], and “Golden Cross” [33rd Division], and the last ones stationed here were the “Mohawks” [98th Division]” (Sandford 2006).

As of March 6, 1943, the 48th Construction Battalion replaced the 39th “Seabees”, and immediately began construction of a new sewer and water system for NAS Puunene (Turner 1946). Newsletters published by the 39th Seabees (Shore Lines) and the 48th Seabees (Trade Wind) were joined by an official NAS Puunene newspaper, “To All Hands” (Later renamed “The Island Breeze”). Although military news in these papers was censored, personnel changes, “scuttlebutt” gossip columns, and sports highlights featuring teams organized within military leagues on Maui attracted the largest readership (Figure 11).

The 127th Construction Battalion relieved the 48th Seabees in May of 1944, and finished an extensive network of ammunition magazines located toward Kīhei of the main air base. The completion of expanded housing areas (Figure 12), a second CASU area, and additional Seabees

housing was accomplished before the end of 1944. Two Mobile Construction Battalion Units, CBMU 563 and CBMU 575, arrived to maintain the existing refrigeration and water purification systems.

On July 1, 1945, NAS Puunene personnel numbered 565 officers and 2,798 enlisted men, including seven Navy nurses, eight WAVES (Women Accepted for Volunteer Emergency Service) officers, and 92 WAVES enlisted personnel (Monthly Station Report of On-Board Personnel, NAS Puunene, Confidential, 1 July 1945). Total aircraft on board numbered 271 (Monthly Station Report of On-Board Aircraft, Confidential, 1 June 1945). The total number of structures built numbered over 300 (Figure 12) (Building Schedule 1945¹).



Figure 11. Torpedo Squadron 6 (VT-6) football team, fall of 1943, Puunene, Maui (Photo courtesy of the Naval Historical Center, Washington Navy Yard).

Immediately following the August 1945 surrender of Japan to the military forces of the United States, facilities essential to the operation of Naval Air Station Kahului began to be removed from Pu'unēnē (Figure 13). The bowling alley, bakery, and other specialized structures at NAS Pu'unēnē were relocated to NAS Kahului, only to be partially or entirely destroyed by a series of tidal waves that struck NAS Kahului facilities April 1, 1946 (*Flyer* 1946).

During 1946, Mauians were allowed to rent residential structures in Housing Area "A", the area closest to the *punawai* (Reservoir 6) known as "Airport Village". The cost was reportedly \$36.00 per month (Cabos 2000). By 1947, postwar use of the airstrip at Pu'unēnē for civilian aviation led some Mauians to believe that the site might be further expanded (Belknap 1947). But, by the end of 1948, the site of the former Naval Air Station at Kahului had been chosen to replace the Puunene site for all future civilian flight operations.

By quitclaim deed dated December 31, 1948, the lands of the former air base were transferred from the United States back to the Territory of Hawai'i. The remaining base facilities, most of which were wooden structures, had, by that time, been abandoned or demolished. In May, 1951,

the operations of Hawaiian Airlines and Trans-Pacific Airlines (Aloha Airlines) were moved to the new civilian airport at Kahului, which utilized the runways of the former Naval Air Station Kahului. Thereafter, Pu'unene airfield was placed on "caretaker status", and sugar cultivation reclaimed much of the land area formerly dedicated to the aerodrome

3.1.7 Modern Land Use

In 1955, a *Honolulu Star-Bulletin* article reported that Maui farmers were raising alfalfa on some of the land at the old Maui Airport. Until the late 1960's, most of the land immediately surrounding the runways remained in *kiawe* scrub. By the mid-1970's, sugar cultivation operations had demolished all but one of the main runways, and had retaken most of the land area (over 1,400 acres) previously given up for the original prewar Maui Airport. Over the past 50 years, portions of the abandoned airfield area have been used for both ranching and racing. Sanctioned drag races began in 1963, when the Valley Isle Timing Association was organized to regulate drag racing at the former airfield.

The present project area is located within lands that, until June 30, 2003, were subject to a general lease between Alexander & Baldwin, Inc. (the parent company of HC&S), and the State of Hawai'i. The terms of General Lease S-419, negotiated June 17, 1968, allowed HC&S to grow sugar cane on the 1,875.273 acre parcel formerly occupied by the air base.

Prior to the termination of the lease, parcels within a 273-acre section of the property governed by the lease were reapportioned for use by various government and civic agencies under a County of Maui study by Helber Hastert and Fee, Planners, Inc. (Helber 1995). Approximately 1,500 acres under cultivation by HC&S remained in sugar, under new agreements held by A&B Hawaii, Inc. The Hawaii Army Air National Guard developed a 10-acre parcel of property within the former air base for use as an armory, which included facilities for helicopter landings and military vehicle maintenance.

Under Executive Order No. 4024, the State of Hawai'i transferred 222.626 acres, including the acreage of the project area, to the County of Maui, December 08, 2003. Access to the acreage is accomplished by way of "Access Easement A", which connects the public, recreational, and Army Air National Guard sites to Mokulele Highway.

The present project area borders a 14.5-acre parcel of open land, which then abuts the main recreational area on Maui for drag racing, radio-controlled model racing, motorcycle dirt track racing and automobile "demolition" racing. Access to the project area is provided by the same road right-of-way as discussed above.

¹For complete plans of Naval Air Station Puunene, refer to the oversized map in the pocket at the end of this report. The Building Schedule, which identifies each structure of NAS Puunene by a number, provides the basis for assigning SIHP feature numbers to SIHP 50-50-09-4164



Figure 12. Navy archive NA-24249-A, August 3, 1945, showing NAS Puunene facilities. Note proximity of project area (red outline) to Housing Area "B" structures, located to the right (Photo courtesy of the Naval Historical Center, Washington Navy Yard).



Figure 13. U.S. Air Forces oblique photograph taken 2-12-47. A number of the base buildings are dismantled, and a portion of the base is planted in sugar (photo courtesy of the Naval Historical Center, Washington Navy Yard, Washington, D.C.).

Section 4 Previous Archaeological Research

The proposed project area has been previously described in “*Fire on the Land: Archaeology, Architecture, and Oral History of Former Naval Air Station Puunene, Pulehunui, Maui*” prepared by Myra Tomonari-Tuggle, *et al*, for the International Archaeological Research Institute, Inc., November 2001. The Tomonari-Tuggle *et al* 2001 report identified historic structures constructed for the former Naval Air Station Puunene during World War II (1941-1945).

The majority of archaeological reconnaissance and inventory surveys in the North Kīhei area (Figure 14 and Table 4) have produced relatively little significant information in the way of archaeological data. While this may be due in large measure to changes on the land associated with sugar cane cultivation, ranching, and military use, as well as resort and housing construction, it still seems inescapable that there are only few areas in the Hawaiian Islands abutting sandy beaches that have less in the way of documented Hawaiian cultural deposits than Kīhei. While only a few projects in areas back from the coast have identified both pre-contact and post-contact agricultural features (Donham 1989 and 1990; Chaffee *et al.* 1997; Kennedy 1987, Cordy 1977), enclosures and deposits with a posited pre-contact and post-contact habitation function (Cox 1976; Cordy 1977; Donham 1990; Fredericksen *et al.* 1993 and 1994; and Fredericksen and Fredericksen 1995, McDermott *et al.* 2000 and 2001), pre-contact burials (Kennedy 1990) and military sites (Fredericksen *et al.* 1994; Tomanari-Tuggle *et al.* 2000), a number of archaeological studies have identified no archaeological sites at all (Hill 2005; Hommon 1981; Borthwick *et al.* 2002; Burgett and Spear 1997; Chaffee 1999; Burgett *et al.* 1998; Kennedy 1986 and b, 1988 a and b, and 1989).

During a large scale archaeological reconnaissance and salvage project for the then proposed Pi'ilani Highway road corridor, located directly east and adjacent to the current project area, Cox (1976) identified a total of six archaeological sites from Pūlehu Nui to Kama'ole Ahupua'a. The archaeological findings included one miscellaneous alignment (-0220), two historic house complexes (-0221 and -0222), an *ahu* (-0219), and two pre-contact temporary shelter sites (-0223 and -0224). Subsequent work by Cordy (1977) identified a total of 32 additional single component and multi-component archaeological sites within the same road corridor. Including the Cox study, 23 archaeological sites were identified as pre-contact sites representing temporary habitation (n=13), agriculture (n=6), and aquaculture (n=2). Only two out of the twenty-three sites identified as pre-contact was of an indeterminate function. The remaining 15 archaeological sites were determined to be of the historic era and represent railroad and transportation remnants (n=6), ranching (n=3), water control (n=1), and habitation (n=1). Four wall features that were identified as historic were also recorded but function could not be determined.



Figure 14. A portion of the 1998 Pu'u o Kali and Mā'alaea 7.5-minute USGS topographic quadrangles, showing the project area relative to areas of previous archaeology.

Table 4 .Summary of Previous Archaeology of the North Kīhei Vicinity.

Date	Author	Ahupua'a	Nature of Study	Findings
1931	W. Walker	Entire Island	Reconnaissance	three <i>heiau</i> in the uplands of Pūlehu Nui
1973	W. Kikuchi	State-wide fishpond survey	Fishpond survey	Notes 3 fishponds in the Kalepolepo area
1976	D. Cox	Pūlehu Nui to Kama'ole	Surface Survey	Identified 6 sites
1977	R. Cordy	Pūlehu Nui to Paeahu	Reconnaissance	Identified 38 sites: 30 in Waiohuli, 0 in Ka'ono'ulu and 8 in Kēōkea
1981	R. Hommon	Coastal Waiakoa	Reconnaissance	No archaeological findings
1982	R. Bordner & D. Cox	Coastal Waiohuli & Kēōkea	Reconnaissance	Reports 9 sites
1986c	J. Kennedy	Coastal Waiohuli	Reconnaissance	No archaeological sites were found
1988 (a)	J. Kennedy	Coastal Waikapū	Testing & Monitoring	No archaeological findings
1988 (b)	J. Kennedy	Coastal Ka'ono'ulu	Reconnaissance	No archaeological findings
1988 (c)	J. Kennedy	Coastal Waiohuli	Reconnaissance	No archaeological Findings
1988 (d)	J. Kennedy	Coastal Waiohuli	Reconnaissance	No archaeological Findings
1989	T. Donham	Waiohuli	Inventory Survey	Identified 4 sites in a portion of the Miura 1982 study area and recommended data recovery
1989	W. Fredericksen <i>et al.</i>	Coastal Kama'ole	Inventory Survey	No archaeological findings
1989 (c)	J. Kennedy	Coastal Pūlehu	Inspection	No archaeological findings
1989 (d)	J. Kennedy	Coastal Waiohuli	Subsurface Testing	No archaeological findings
1990 (a)	T. Donham	Coastal Waiohuli	Data Recovery	Site 2475 was excavated
1990 (b)	T. Donham	Coastal Kēōkea	Inventory survey	Part of Miura 1982 study area. 16 sites were identified
1990 (a)	W. Fredericksen & D. Fredericksen	Coastal Kēōkea	Monitoring	No archaeological findings

Date	Author	Ahupua'a	Nature of Study	Findings
1990 (b)	W. Fredericksen & D. Fredericksen	Coastal Kēōkea	Survey & Monitoring	No archaeological findings
1990a	J. Kennedy	Coastal Waiakoa	Survey	No archaeological findings
1990 (a)	A. Sinoto	Coastal Waiakoa	Survey & Testing	No archaeological findings (other than 2 pieces of midden)
1991	J. Kennedy & M. Breithaupt	Coastal Kēōkea	Inventory survey	No archaeological findings
1992	J. Kennedy	Coastal Kama'ole	Inventory survey	Identified 4 sites including a permanent pre-contact habitation/religious site
1992	J. Kennedy <i>et al.</i>	Coastal Kama'ole	Inventory survey wt Subsurface Testing	Identified 4 sites all believed to be historic; two military and 2 ranching
1992	Sinoto & Pantaleo	Coastal Pūlehu Nui	Inventory Survey	No archaeological findings other than a bridge foundation (site -3131)
1993	D. Fredericksen <i>et al.</i>	Coastal Waiohuli	Inventory Survey/Data Recovery	A rock shelter excavation yielded lithic artifacts, midden and a date of A.D. 1560 to 1800
1994c	E. Fredericksen <i>et al.</i>	Ka'ono'ulu, mauka of Pi'ilani Highway	Inventory Survey	21 sites were identified, some military and some pre-contact
1994	W. Fredericksen <i>et al.</i>	Coastal Waiohuli	Inventory Survey	22 backhoe test trenches were excavated but there were no significant archaeological findings
1995a	E. Fredericksen & D. Fredericksen	Waiohuli	Inventory Survey	one rock shelter site was identified as a pre-contact temporary habitation site
1995b	E. Fredericksen & D. Fredericksen	Waiohuli	Data Recovery	Four carbon dates were obtained suggesting late pre-contact use.
1997	Chaffee <i>et al.</i>	Waiohuli (120' elevation)	Archaeological Inventory Survey	3 sites were identified, all interpreted as agricultural
2000	Pepalis, J. & Michael J. Kolb	Waiohuli	Archaeological Excavations	Found evidence of a stream-fed pond near Kalepolepo Church

Date	Author	Ahupua'a	Nature of Study	Findings
2000	McDermott, Shideler, and Hammatt	Waiohuli, adjacent to the Kalepolepo Church	Additional Archaeological Inventory Survey (Backhoe Testing)	Document Site 50-50-09-4981, former inland pond that contains evidence of early occupation at coastal Kīhei--approximately A. D. 600-900. An elaboration on Pepalis and Kolb's work, described below.
2001	Tomonari-Tuggle, D. Tuggle, Duensing, Magnuson, and Prasad	Pūlehu Nui	Archaeological Inventory Survey And Oral History Project	Documented WWII facilities and structures of former Naval Air Station Puunene with recommendations for preservation for 16 of 63 remnant structures.
2001	M. McDermott	Waiohuli Kīhei	MA Thesis	Historical ecological study of Kīhei utilizing pollen, soil, and ¹⁴ C analysis as evidence to document an early habitation sequence for coastal Kīhei
2002	Pepalis and Kolb	Waiohuli Ahupua'a	Sub-Surface Testing	Documented highly stratified cultural deposits of an inland pond.
2005	Hill <i>et al</i>	Waiohuli-Keokea Homesteads	Sub-Surface Testing	Investigation of extent of shoreline dune system.
2006	Lee-Greig <i>et al</i>	Pūlehu Nui	Inventory Survey	Documented historical ranching and sugar plantation infrastructure.

Bordner (1980) conducted an archaeological investigation south of the present project area and identified primarily historic era properties. Bordner's study area covered the residential subdivision currently known as the Hale Pi'ilani Subdivision located *mauka* or west of the Pi'ilani Highway, as well as, a section *makai* or east of the Pi'ilani Highway that was later developed into the Kihei Villages Condominium Complex. During the course of the inventory survey, Bordner relocated SIHP #'s -0219, -0220, and -0221, originally identified by Cox (1976), as well as six new historic properties within the *mauka* section of the study area. The six new sites consisted of historic era *ahu*, two remnant alignments of an indeterminate age, a historic stacked stone wall and an elongate basalt mound with an upright slab of an indeterminate age. Bordner reports no surface findings in the *makai* portion of the project area. In 1987, Kennedy revisited the *makai* portion of the Bordner project area in anticipation of the Kihei Villages development and identified six new early Hawaiian pre-contact era archaeological sites. These sites consisted of a stacked *ahupua'a* boundary wall approximately 300m long, two rock

mounds, one upright, a series of low parallel rock alignments attributed to sweet potato agriculture, and one large mound or dune with possible burials.

Sinoto and Pantaleo (1992) conducted an archaeological inventory survey of approximately 38.5 acres south of the present project area near the former location of Kihei Camp One. Only one historic property, the remains of concrete footings from a bridge crossing Waiakoa Gulch, was recorded. Due to the considerable ground disturbances, which included several bulldozing events, Sinoto and Pantaleo did not undertake a subsurface testing program.

Lee-Greig and Hammatt (2006) conducted an archaeological inventory survey of approximately 100 acres including the gulch created by the intermittent flow of the Waiakoa Stream. The parcel, located alongside the existing Hale Pi'ilani neighborhood, included farm lands currently utilized by the Monsanto Global Seeds Corporation. Two historic properties were recorded, consisting of a set of concrete bridge footings similar to those recorded by Sinoto and Pantaleo in 1992, and the remains of a ranching-era well.

Tomonari-Tuggle and others (2001) conducted an extensive archaeological inventory survey of the area that encompassed the former location of Naval Air Station (NAS) Pu'unene, that includes the present project area. This inventory survey resulted in the recordation a total of four multi-component archaeological complexes (50-50-09-4164, -4801, 4803, and 4800), as well as one single component site noted as the Kihei Railroad Bed (SIHP # -4802). SIHP # -4164 consists of 165 features, all of which are associated with NAS Pu'unene. SIHP numbers -4800 and -4803 were representative of the sugar plantation use of the central isthmus and consisted of seven plantation era features for the former site number and remnants of the Haiku ditch and reservoir (n=5) for the latter. Historic properties reflecting post-war ranching activities (SIHP # -4801) were also recorded during the course of this inventory survey.

Xamanek Researches (Fredericksen et al. 1994) conducted an inventory survey in Ka'ono'ulu Ahupua'a at an elevation slightly lower than the current project area. A total of 21 archaeological features reflecting pre-contact use of the area, as well as, post-contact military and ranch use were recorded. The pre-contact or Early Hawaiian archaeological features included five stone piles possibly representing agricultural use, five surface scatters representing pre-contact temporary habitation and one petroglyph. Military use of the area is represented by five stone cairns, three alignments, and one enclosure. A single feature, interpreted as an erosion containment area, was recorded in association with ranching activities.

Also south of the project area, Chaffee and others (1997) identified three historic properties that were interpreted as agricultural features. Donham (1989, 1990) identified 16 sites, including nine terraces, seven enclosures, four C-shapes, four rock piles, two platforms, an alignment, and a modified outcrop. Most features were interpreted as agricultural features, while a few were considered temporary habitations. Donham concluded that these agricultural and habitation features likely indicated a more extensive use of the "transitional" or barren zone than some settlement models suggested. Donham's (1989, 1990) work took place within a portion of the Bordner and Cox (1982) project boundaries and found similar archaeological features.

The inventory surveys for the then proposed "Pi'ilani Residential Community - Phases I and II" (Bordner and Cox 1982; Donham 1989, 1990b) identified only rock alignments and no further research was conducted related to the proposed phased subdivision. A single site (50-50-

10-2475) near Pi'ilani Highway. and Līpoa Street was subjected to data recovery (Donham 1990a) and interpreted as an agricultural terrace complex. Following this data recovery, no further research was recommended and the commercial and residential subdivision was subsequently constructed.

The chronological timeline for settlement of the Kīhei area however, is still being debated. Based on McDermott's (et al. 2000, McDermott 2001) results, habitation in the coastal areas may date to as early as A.D. 600-900. Without a doubt, coastal habitation along with more populous inland/upland settlement was firmly established by A. D. 1400-1500. The majority of permanent habitation would have been in the uplands, concentrated in the well-watered and fertile agricultural areas. Coastal permanent habitations were likely less numerous and centered around the ceremonial structures and fish ponds at Kalepolepo. The fish ponds are thought to date to the 1500s (Kolb et al. 1997:66).

Until recently, the few available radiocarbon dates from the Kīhei area were consistent in their rather broad, later prehistoric age determinations, most commonly post-A.D. 1500 (Fredericksen and Fredericksen 1995b; Fredericksen 1994; Fredericksen et al. 1993). This fits with the model that the more intensive use of the Kīhei area was a later prehistoric development that corresponded with the expansion of upland permanent habitation, ceremonial constructions, and agricultural clearing after A.D. 1400-1500 (Kolb et al. 1997:281-282).

Evidence of earlier coastal habitation in the Kīhei area has recently come to light at excavations adjacent to the site of the Kalepolepo Church. The recent excavations described in McDermott et al. (2000) and McDermott (2001), in conjunction with those of Pepalis and Kolb (2002), provide evidence in the form of charcoal concentrations, midden deposits, Carbon-14 dates, and palynomorph identification, indicating settlement in the vicinity of an inland pond features by (circa) A. D. 600-900.

4.1 Background Summary and Predictive Model

Previous archaeological studies have led to archaeological site interpretations based on the division of the settlement pattern for Maui into three zones: 1. coastal; 2. barren or transitional; and 3. inland (Cordy 1977; Walton 1972; Cox 1976). The coastal zone is a ¼ mile wide band running along the shoreline. The inland zone begins approximately five to seven miles from the shore and is characterized by heavier rainfall accumulation and lush vegetation. The transitional or barren zone is classified as the area between the edge of the coastal zone and beginning of the inland zone and characterized by brush/scrub vegetation and low annual rainfall accumulation.

Based on available archaeological evidence and interpretations, the following settlement pattern and site type expectability is proposed. Temporary habitations related to marine exploitation, such as stacked-stone enclosures, and possibly smaller ceremonial structures, such as stacked-stone fishing shrines, may have been scattered along the coastline. It is likely that human burials would have been interred in the coastal sand dunes (where present) and immediately back from the coast. *Mauka-makai* trails would have connected the coastal settlements with the mauka permanent habitation areas, and coastal or *alanui* trails would have connected different coastal habitation areas between Mākena and Kīhei (Kolb et al. 1997:33). The upland areas, with a larger water supply and good soil, would have sustained a larger

population. Subsistence in this zone would have revolved around dry-land agriculture. High occurrences of agricultural fields and larger structures and cultural deposits representing permanent habitation would be expected. Larger *heiau* or ceremonial structures would occur in the inland regions that were more heavily populated.

However, the barren or intermediate zone, where the current project area lies, is broad in this portion of Maui. Inventory surveys of portions of this transitional/barren zone of Waiohuli and Ka'ono'ulu Ahupua'a have found pre-contact remnants of dispersed, low-intensity, dry-land agricultural features, such as mounds and alignments, as well as temporary habitations (Chaffee et al. 1997; Donham 1990; Miura 1982).

Given that the project area is located in the transitional or barren settlement zone for this area of Maui, it is postulated that pre-contact archaeological sites representing temporary habitation or campsites could have occurred within the project area, prior to modern disturbance, in addition to mounds and/or small terraces related to small scale agriculture. After further review of the historic literature and the occurrence of historic agriculture in the immediate vicinity of the project area, historic properties associated with early plantation infrastructure (e.g. water control features and transportation features) as well as military assets of the former NAS Puunene, were also probable.

Section 5 Community Consultations

Throughout the course of this evaluation, an effort was made to contact and consult with Hawaiian cultural organizations, government agencies, and individuals who might have knowledge of, and/or concerns about traditional cultural practices related to the specific project area. This effort was made by letter, e-mail, telephone, and by personal interviews. Community contacts were mailed a letter of introduction outlining the type of information being sought, as well as maps and photographs of the project area. The following text was sent to fourteen (14) organizations and/or individuals:

At the request of SSFM International, Cultural Surveys Hawai‘i Inc., (CSH) is conducting a Cultural Impact Evaluation (CIE) for an approximate 14.5-acre parcel at Pūlehu Nui Ahupua‘a. The site is located in the area of the Maui drag strip, in lands once used by the U.S. Navy for a WWII-era airport. I have enclosed a USGS Map, TMK Map and an aerial photograph of the project area.

Cultural Surveys Hawai‘i, a Hawai‘i-based archaeological company, is performing a Site Inspection and Literature Review in support of this project. Maui County’s Office of Public Works will administer the site, where abandoned vehicles and related items, such as tires, batteries, and oil, will be prepared for recycling, crushed, baled and shipped.

The purpose of the cultural impact evaluation is to assess potential impacts to traditional cultural practices as a result of the proposed project.

We are seeking your *kōkua* or help and guidance regarding the following aspects of our study:

General history and present and past land use of the project area.

Knowledge of cultural sites which may be impacted by the abandoned automobile project area - for example, historic sites, archaeological sites, and burials.

Knowledge of traditional gathering practices in Pūlehu Nui – both past and ongoing.

Cultural associations of the Pūlehu Nui project area, such as legends and traditional uses.

Referrals of *kūpuna* or elders who might be willing to share their cultural knowledge of the Pūlehu Nui project area and the surrounding *ahupua‘a* lands.

Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the abandoned automobile project area.

The individuals, organizations, and agencies attempted to be contacted are presented in Table 5.

Table 5. Alphabetical Listing of Individuals Contacted for Interviews.

Name	Background/ Affiliation	Comments
Ms. Sunny Greer	Department of Land and Natural Resources, State Historic Preservation Division, Oahu Island	Letter sent 17 March 2006.
Mr. Lui Hokoana	President, Central Maui chapter of the Association of Hawaiian Civic Clubs	Letter sent 17 March 2006.
Ms. Hokulani Holt-Padilla	Cultural Historian, Maui Arts & Cultural Center	<p>Ms. Holt-Padilla referred to the coastal region of Pūlehu Nui as the region referred to in Kamakau's "Ruling Chiefs of Hawaii" (Kamakau 1992) known as Kiheipuko'a. She spoke of references to Kiheipuko'a as a portion of the route used by the forces of Kalani'opu'u about 1776, during his planned conquest of Maui. She explained that the ruling chief of the Big Island, Kalani'opu'u, landed his army along the coastline of Maui, at Kiheipuko'a in the Kealia area, with his war canoes visible at Kapa'ahu, and maneuvered his army inland across the central isthmus; possibly close to the present project area. In this way, the army of Kalani'opu'u crossed over the areas of Kama'oma'o and Pu'u 'ainako to engage Kahekili's forces on the sandhills of Kalua, ending in a slaughter of the Big Island army known as "Ahulau ka Pi'ipi'i i Kakanilua".</p> <p>She went on to briefly explain that the outcome of the battle for Kakanilua was not yet decided. The day following the "Slaughter of the Pi'ipi'i at Kakanilua", the remaining forces of Kalani'opu'u were again sent to battle Kahekili's forces, which were expected to be in Wailuku. The Big Island army was ambushed at an area close to Waikapū, and was destroyed by the army of Kahekili on the plains of Kama'oma'o .</p> <p>Ms. Holt-Padilla explained that the central</p>

		isthmus was a dry, hot place with trails leading west toward Waikapū, and east along the Kīhei coastline. She stated that the guardian spirits of men: the 'aumakua spirits, were known to wander on the lower, sandy plains of Waikapū. She explained that this place was a special place for the souls of the soldiers killed at Kakanilua. .
Mr. Micah A. Kane	Department of Hawaiian Home Lands	Letter of response received at CSH Wailuku 24 March, 2006. No cultural concerns were cited (Appendix A).
Ms. Melissa Kirkendall, Ph.D.	State Historic Preservation Division, Maui Archaeologist	Letter sent March 17, 2006.
Mr. Gaylord Kubota	Manager, HC&S "Sugar Museum" located at the Puunene Mill.	Mr. Kubota stated that Randall Moore, of HC&S, had assisted with previous archaeological studies [Tomonari-Tuggle 2001] regarding the history of Naval Air Station Puunene. Mr. Kubota referred this researcher to Mr. Moore.
Mr. Leslie Kuloloio	Recognized <i>Kupuna</i> of Maui Island	Letter sent 17 March, 2006. Telephone calls made 06 and 10 April, 2006. No contact was made.
Ms. Roslyn Lightfoot	Director, Maui Historical Society	Contacted. She had asked the employees and volunteers at the Bailey House Museum about the traditional uses of the Pūlehu Nui area. She reported that a unumber of her co-workers agreed that the area of the Mokulele Highway was an area believed to be inhabited by "night-walkers", and that some remembered hearing this story over 60 years ago, in their childhood.
Mr. Charles Maxwell	Recognized <i>Kupuna</i> of Maui Island	Mr. Maxwell stated that the Pūlehu Nui project area had possibly been used for the cultivation of sweet potatoes in pre-contact times. He further stated that the project area was known as a place of transit and trails. He

		<p>expressed his belief that human burials were probable, and to be aware of that possibility during the excavation and grading of the project area.</p> <p>Mr. Maxwell believed that the armies of Kalani'opu'u did use the central isthmus in their advance across the island, but that they made for a crossing at the Waikapu River in a manner that would have not taken them close to the project area.</p>
Mr. Randall Moore	Manager, Water and Engineering Services, Hawaiian Commercial & Sugar Company, Ltd.	Interviewed personally. Mr. Moore provided this researcher with HC&S maps showing the location of HC&S Camp Six. Prior to WWII, Camp Six was located less than half a mile from the boundary of the civilian Maui Airport. With the rapid military expansion of the base following the December 1941 attack on Pearl Harbor, residents of Camp Six were removed from the camp housing and relocated closer to the Pu'unēnē Mill area. illustrates the original location of Camp Six, at the intersection of railroad tracks linking Kīhei, Mā'alaea, and the Pu'unēnē Mill.
Mr. Clyde W. Nāmu'o	Administrator, Office of Hawaiian Affairs	Mr. Nāmu'o sent a letter of response dated 6 April, 2006. He asked that Lui Hokoana, of the Central Maui Chapter of the Hawaiian Civic Clubs, and Thelma Shimaoka of OHA's Maui office, be contacted for assistance in this regard. He further stated that OHA would like the opportunity to comment on the final CIE completed by Cultural Surveys Hawai'i, Inc., regarding this project area (Appendix A).
Mr. John Otto	Historian, U.S. Naval aviation operations in Hawai'i	Contacted by telephone. Mr. Otto described the use of Ma'alaea as the earliest commercial aviation site for Maui. He discussed his work in studying the various factors leading up to the construction of NAS Puunene, and the various WWII-related activities conducted at NAS Puunene. He made available for this report

		the official Command History for NAS Puunene.
Mr. Ki'ope Raymond	Maui Community College	Contacted by telephone. Mr. Raymond stated that he did receive the request from Cultural Surveys Hawai'i, Inc., for information, and that he was not able to provide any further cultural or traditional information about the project area.
Mr. Hinano Rodrigues	Cultural Historian Department of Land and Natural Resources, State Historic Preservation Division, Maui Island.	Mr. Rodrigues interviewed his parents about the plantation camp located just north of the airport at Pūlehu Nui, and about the use of the area by the sugar plantation prior to the construction of the Maui airport. Mr. Rodrigues stated that his parents knew residents of the plantation Camp 6, who had been relocated during WWII. They remembered hearing rumors after the end of WWII that military equipment may have been buried within the boundaries of the former air station. Mr. Rodrigues further commented on the pre-contact use of the central valley area as an area containing trails.
Ms. Mary Cameron Sanford	Former owner/publisher: <i>The Maui News</i>	Ms. Sanford recalled, as a young girl, the opening of the Maui Airport at Pu'unene. Prior to that, she remembered traveling to Mā'alaea and boarding a Sikorsky S-43 amphibious aircraft using a gangplank ladder and stepping through a hatch in the roof and climbing down steps into the passenger cabin. She said, "The trip took about an hour and fifteen minutes to Honolulu. Not bad, compared to the overnight boat trips we usually had to take. The airplane had pontoons for water landings." "The civilian airport at Puunene was pretty simple, as I recall, just a modest building and parking." After the Navy built an auxiliary air station at Pu'unēnē, Inter-Island Airlines bought new DC-3 airplanes. "The flight to Honolulu still took an hour and was often bumpy. The stewardesses

		<p>passed out Chiclets [chewing gum] to equalize the pressure in your ears, and the seat pockets held “barf” bags which you really sometimes needed.”</p> <p>“After World War Two, the military gave up the Naval Air Station Puunene property, and the Navy’s runway at Kahului was offered to the Territorial government.”</p>
Mr. Benjamin Schlapak	Manager, Honolulu International Airport	Contacted by telephone. No comment regarding the use of the project area for the proposed abandoned vehicle storage and processing facility. Mr. Schlapak provided maps and information for the archaeological inventory survey phase of this investigation
Ms. Thelma Shimaoka	Office of Hawaiian Affairs	<p>Ms. Shimaoka was concerned about the proximity of the storage and processing operations to the Maui Raceway Park. She felt that a site for storing and processing vehicles would be better situated on Waiko Road [Waikapū] where other similar industrial projects were located. She felt the proposed project would attract rodents, a condition not compatible with existing, family-oriented uses at the Raceway Park.</p> <p>Ms. Shimaoka also felt strongly against the use of the Pu‘unēnē site for the storage of abandoned motor vehicles because Hawaiian Homes Lands are situated <i>mauka</i> of the project area. She said that the storage area would be a visual eyesore from homes built within the Hawaiian Home Lands, and that the recycling processes would lead to chemicals contaminating the area set aside for families at Maui Raceway Park.</p>
Mr. Stan Solamillo	Long-Range Planner, Maui County Cultural Resources Commission.	Mr. Solamillo stated that the project area was located in the central region of Maui, and that he did not know of any references describing pre-contact use of the project area for agriculture or habitation. Mr. Solamillo was familiar with the archives of the Alexander & Baldwin “Sugar Museum” located at the Puunene Mill, and requested

		that this researcher contact Gaylord Kubota, manager of the museum, for his comments.
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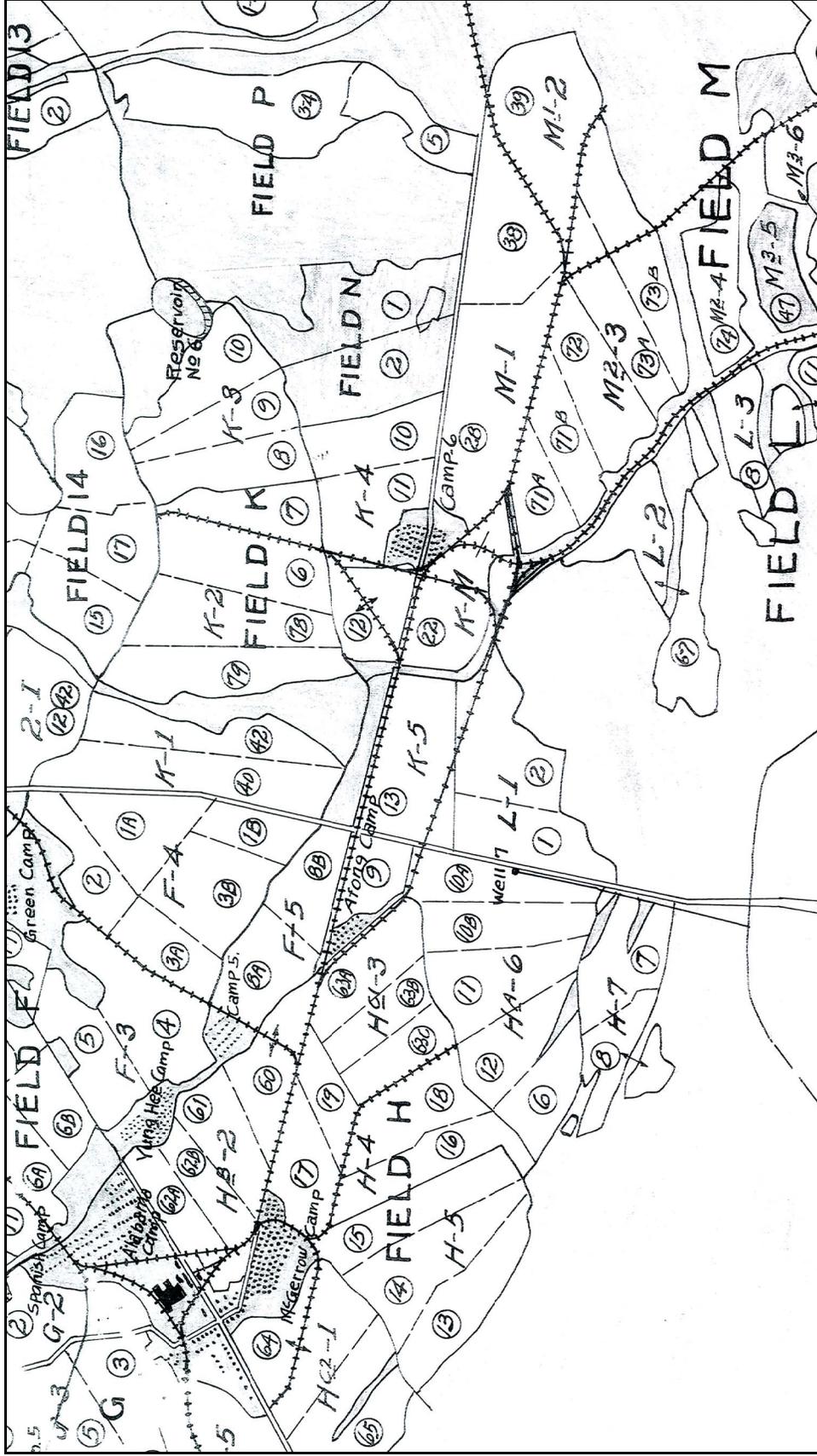


Figure 15. Portion of HC&S Field Map, Dated 1931, showing the original, prewar location of plantation Camp 6. The wartime expansion of NAS Puunene required the relocation of Camp 6. The area formerly occupied by the camp became the north gate entrance to the Naval Air Station, and the residents of Camp 6 occupied housing constructed for them at Camp 5, located closer to the Pu'unenē Mill.

Section 6 Traditional Cultural Practices

Traditional cultural practices are based on a profound awareness concerning the harmony between man and his surrounding natural resources. Native Hawaiian populations depended on these cultural practices for their very survival. A familiarity with specific environments allowed Hawaiian populations to devise systems that fostered sustainable uses for resources. Many of these cultural practices have been passed down from generation to generation. Some Hawaiian communities continue to observe traditions and preserve their culture, to maintain the continuity of these practices.

This Cultural Impact Evaluation (CIE) seeks to assess traditional cultural practices as well as resources pertaining to the project area within Pūlehu Nui Ahupua'a. This section will list the different types of traditional practices and cultural resources associated with the vicinity.

Cultural specialists and practitioners of traditional Hawaiian culture who were contacted to comment on traditions associated with the Pūlehu Nui Ahupua'a were unanimous in associating pre-contact references to the "Battle of Kakanilua" to the vicinity of the project area. The movement of Kalani'opu'u's forces across the central isthmus of Maui is a well-known account of an event which occurred just prior to contact between British explorer James Cook, and the population of the Hawaiian Islands.

Samuel Kamakau also makes reference to the area of Kama'oma'o as a place where guardian spirits dwell. "The 'aumakua and kumupa'a ancestral deities were the "guardian angels" of men, *anela kia'i kino*. When a man died, his 'aumakua or kumupa'a took charge of him after death...There are many who have died and have returned to say that they had no claim to an 'aumakua [realm] (*kuleana 'ole*). These are the souls, it is said, who only wander upon the plain of Kama'oma'o on Maui, or on the plain at Pu'uokapolei on O'ahu. Spiders and moths are their food" (Kamakau 1870). Those contacted for this cultural impact evaluation retold this belief that the central isthmus of Maui, known traditionally as Kama'oma'o, was a place where the spirits dwelled.

Known traditional accounts of the use of the central valley region of Maui for purposes other than transit were not indicated by most of the individuals contacted for this project. One practitioner of Hawaiian culture, however, did feel strongly that sweet potatoes were cultivated in the broad region of the project area, primarily because the growing conditions represented in the region are perfect for growing sweet potatoes. While there is certainly a probability of sporadic pre-contact *kula* (dryland) agriculture in the area, very little is actually known of habitation and agricultural activities of pre-contact populations that may have resided on this arid plain. Surface evidence of any possible pre-contact settlement in this region has probably been destroyed by the extensive agricultural development of the isthmus. By 1878, the Hamakua Ditch supplied water for thousands of new acres of sugar along the Paia coastline. Additional ditches pushed the fields southward, past Pu'unēnē. Within twenty years, sugar fields fanned out along the Kīhei shoreline, and were extensively developed northward. By 1910, sugar covered the central plains from Kanahā Pond to Keālia Pond, and any surface evidence that the lower reaches of the Waikapū Stream or the Pūlehu Stream had been inhabited, was demolished.

In areas set aside by the large ranch holdings of Ka'ono'ulu, archaeologists have found evidence of pre-contact habitation, agricultural, and activity areas. Although these findings are scant, they do represent evidence that pre-contact archaeological sites exist in the barren lands away from the shoreline.

Section 7 Summary and Recommendations

Reviewing the information provided by the elements of this cultural impact evaluation – historical documentation, archaeological research, and community contacts – there emerges a more detailed picture of the traditional landscape of Pūlehu Nui Ahupua‘a and the present project area. Nineteenth-century documents – Land Commission Award records and historic maps – indicate parcels containing house sites, *kula* lands, and Irish potato patches located in the upper reaches of the *ahupua‘a*, at about 2,000 feet in elevation. Kirch (1985) presumed that agricultural sites for this area of Maui would have occurred in the “upland zone of this region”, and not in the transitional/ barren zone of the project area. In addition, the Land Commission Award map for the Pūlehu Nui Ahupua‘a indicates that the barren lands of the *ahupua‘a* were *konohiki* lands (Alexander 1880): 1668 acres having been awarded to one Keaweamaahi.

The Land Commission Award parcels of the upland areas of Pūlehu Nui are likely the remnants of a traditional Hawaiian settlement, located within surrounding ranch, dairy, and farm lands of the 1880’s. The early Hawaiian settlements of the upcountry Maui region appear concentrated along streams. With the project area located in the transitional/barren zone of the pre-contact settlement pattern accepted for this region of Maui, pre-contact site density was expected to be low. The lands in and surrounding the current project area have undergone heavy landscape modifications by historic sugar cultivation, ranching, and military construction operations. These activities effectively eliminated any surficial pre-contact archaeological sites.

None of the community contacts queried for this evaluation identified any cultural resources in the project area, or recalled anyone entering the project area – either in the past or present – for any traditional cultural practice. Based on the evidence gathered, at present, no contemporary or continuing cultural practices occur within the project area.

Based on the findings of this evaluation, the Pūlehu Nui abandoned vehicle storage and processing facility will have minimal impact upon Native Hawaiian cultural resources and practices within the project area. There was concern; however, regarding the negative impact that the abandoned vehicle facility may have on the view plain from homes built on Hawaiian Home Lands by creating a visual eye-sore on the landscape. It should also be noted that there were additional concerns regarding the location of the facility proximate to existing recreational areas popular with Maui families. As a precautionary measure, the visual impact of the facility to motorists utilizing the access roadway to Maui Raceway Park should be considered. Due to the concerns raised, it would appear that the image of a “clean” operation would be an image desired by the management of the facility, to enhance public relations.

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1997 *Architecture and Archaeology at Naval Air Station Kahului, Kahului Airport, Island of Maui*, Spencer Mason Architects and International Archaeological Research Institute, Inc., Honolulu.

Appendix A

PHONE (808) 594-1665

FAX (808) 594-1665



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

HRD06/2320 A&B

April 6, 2006

Ronald Sato
SSFM International, Inc.
501 Sumner Street, Suite 620
Honolulu, HI 96817

RE: Cultural Impact Evaluation (CIE) and Draft Environmental Assessment (DEA) Pre-Consultation for an Abandoned Vehicle Storage and Processing Facility within the lands of the former Naval Air Station Pu'unēnē, TMK (2) 3-8-008:001

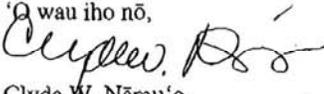
Dear Mr. Hill,

The Office of Hawaiian Affairs (OHA) is in receipt of your March 21 and March 24, 2006 request for comments on the above listed proposed projects, TMK (2) 3-8-008:001. Our staff asks that the applicant contact Lui Hokoana, President of the Central Maui chapter of the Association of Hawaiian Civic Clubs, and Thelma Shimaoka of OHA's Maui office. Both individuals will be able to assist you in your consultation effort and will likely be able to recommend other individuals to confer with in the central Maui area.

OHA has no further comment on the CIE at this time, but looks forward to the receipt of and opportunity to comment on the final report completed by your office. On a general note, however, OHA requests that future correspondence include the relevant TMK number(s) in the subject line of the letter, as well as an indication, where appropriate, that only a portion of the lot is under consideration (i.e., TMK (2) 3-8-008:001 (por.)). OHA also requests a 30-day standard response time, and that all future correspondence be addressed to me at the above O'ahu address.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Koa Kaulukukui at (808) 594-0244 or koalanik@oha.org.

'O wau iho nō,


Clyde W. Nāmu'o
Administrator

cc: ✓ Robert R. Hill
Cultural Surveys Hawai'i
P.O. Box 1114
Kailua, HI 96734

Thelma Shimaoka
OHA Community Affairs Coordinator (Maui)
140 Hoohana St., Ste. 206
Kahului, HI 96732

LINDA LINGLE
GOVERNOR
STATE OF HAWAII



MICAH A. KANE
CHAIRMAN
HAWAIIAN HOMES COMMISSION

BEN HENDERSON
DEPUTY TO THE CHAIRMAN

KAULANA H. PARK
EXECUTIVE ASSISTANT

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P.O. BOX 1879
HONOLULU, HAWAII 96805

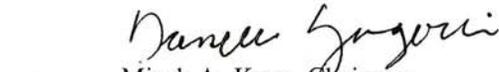
March 23, 2006

Mr. Robert R. Hill
Cultural Surveys Hawaii Inc.
16 S. Market Street, #2N
Wailuku, Hawaii 96793

Dear Mr. Hill:

Thank you for the opportunity to comment on the cultural impact evaluation report concerning a parcel located in the Ahupuaa of Pulehu Nui near lands of the former Naval Air Station in Puunene, Maui. The Department of Hawaiian Home Lands has no comments to offer.

Aloha and mahalo,


Micah A. Kane, Chairman
Hawaiian Homes Commission