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ALFREDO A. LEE
Executive Director

STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION
235 S. Beretania Street, Room 205
Honolulu, HI 96813
Phone: (808) 586-0186 Fax: (808) 586-0189

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OFC. OF ENVIRONMENTAL QUALITY CONTROL

November 8, 2011

Mr. Gary Hooser
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment for BASF 10-Acre Site Kekaha, Kauai, Hawaii

Dear Mr. Hooser:

Agribusiness Development Corporation has reviewed the Draft Environmental Assessment (EA) for the subject project and anticipates a Finding of No Significant Impact. Please publish notice in the November 23, 2011 publication of the OEQC Environmental Notice.

We have enclosed a completed OEQC Publication Form and one copy of the document in pdf format on a CD; and one hard copy of the Draft EA. Should you have any questions, please contact the applicant's consultant at URS Corporation Ms. Robyn Goong at 808-593-1116 or robyn.goong@urs.com.

Sincerely,

Alfredo Lee
Executive Director

Attachments:
OEQC Publication Form
BASF 10-Acre Site Draft EA (pdf format on a CD and one hard copy)

Publication Form
The Environmental Notice
Office of Environmental Quality Control

Name of Project:	BASF Corporation Field Office
Applicable Law:	Hawaii Revised Statutes Chapter 343
Type of Document:	Environmental Assessment
Island:	Kauai
District:	Waimea
TMK:	(4) 1-2-002-001 (portion)
Permits Required:	**Potential Permits, Approvals, and Consultations Associated with the Proposed Action** • **FEDERAL** National Historic Preservation Act, Section 106 Consultation • **STATE of HAWAII** Chapter 343, HRS Environmental Review and Determination National Pollutant Discharge Elimination System Permit Community Noise Permit Application Application for Permit Modification Individual Wastewater System (IWS) Permit • **LOCAL** Building Permit
Name of Applicant or Proposing Agency:	BASF Corporation
Address	8315 Kekaha Road
City, State, Zip	Kekaha, Kauai, Hawaii 96752
Contact and Phone	Steven Lupkes, 808-337-2065
Approving Agency or Accepting Authority:	State of Hawaii Agribusiness Development Corporation
Address	235 South Beretania Street, Room 205
City, State, Zip	Honolulu, Hawaii 96813
Contact and Phone	Matthew Rose, 808-586-0181
Consultant	URS Corporation
Address	615 Piikoi Street, Suite 900
City, State, Zip	Honolulu Hawaii 96814
Contact and Phone	Robyn Goong, 808-593-1116

Project Summary:

BASF Corporation proposes to develop a field office including a research station, seed handling area, and machine storage area. Small bench top equipment would be used to thresh and clean small quantities of seed. The field office would consolidate and centralize agricultural productions to decrease time lost during travel between the field and current location of the building/office site.

The site will consist of seven interconnected buildings with an office attached to a seed handling building in the back area with a canopy for two dryer buildings, machine shed, equipment storage, employee pavilion, and shadehouse (hoop structure next to small head house (small concrete block building).

The Proposed Action would have no significant impacts to any environmental resource areas. The implementation of standard Best Management Practices will ensure no significant impacts occur to geological and soil resources and water resources. Shielding of exterior lighting will ensure that no significant impacts occur to biological

resources. The Proposed Action would not contribute to any significant cumulative impacts or reasonably foreseeable direct or indirect effects on any coastal use or resource of the State's coastal zone.

The Proposed Action would have no indirect, secondary, or cumulative impacts to any environmental resource areas.

R E P O R T

DRAFT ENVIRONMENTAL ASSESSMENT

BASF CORPORATION FIELD OFFICE KEKAHA, KAUAI, HAWAII

Prepared for:

BASF Corporation
8315 Kekaha Road
Kekaha, Hawaii 96752

November 2011

Prepared by:

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814

Cover Sheet

Proposed Action	Construct and Operate a BASF Corporation Field Office on State-owned Lands Near Kekaha, Kauai, Hawaii
Type of Document	Draft Environmental Assessment

Summary

This Draft Environmental Assessment (EA) was prepared in accordance with Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200 (Chapter 11-200), Hawaii Administrative Rules (HAR).

The Proposed Action would have no significant impacts to any environmental resources areas. The implementation of standard Best Management Practices will ensure no significant impacts occur to geological and soil resources and water resources. Shielding of exterior lighting will ensure that no significant impacts occur to biological resources. The Proposed Action would not contribute to any significant cumulative impacts or reasonably foreseeable direct or indirect effects on any coastal use or resource of the State's coastal zone.URS Corporation submitted the Archaeological Literature Review and Field Inspection report for review by the State of Hawaii Preservation Division per the National Historic Preservation Act Section 106. Although a response is pending as of September 29, 2011, the Proposed Action is not anticipated to adversely affect historic properties.

EXECUTIVE SUMMARY **1**

Section 1 PURPOSE OF AND NEED FOR ACTION **1-1**

1.1 SUMMARY OF THE PROPOSED ACTION 1-1
1.2 PURPOSE AND NEED 1-1
1.3 PROJECT LOCATION 1-1
1.4 REGULATORY OVERVIEW 1-1
1.4.1 Chapter 343, Hawaii Revised Statutes 1-2
1.4.2 Historic Sites Act of 1935 (16 USC §§ 461-467) 1-2
1.4.3 National Historic Preservation Act (16 USC § 470 et seq.) 1-3
1.4.3.1 Section 106 of the Federal Guidelines (16 USC §106) 1-3
1.4.4 Federal Coastal Zone Management Act (16 USC §1456 (c)(1)) 1-3
1.4.5 Hawaii Coastal Zone Management Program (Chapter 205A, HRS) 1-3
1.4.6 Endangered Species Act of 1973 (16 United States Code § 1531 et seq.; 50 Code of Federal Regulations Parts 17 and 222) 1-4
1.4.7 Hawaii Endangered Species Law (HI ST §195D -1 - 32) 1-4
1.4.8 Clean Air Act (42 U.S.C. § 7401 et seq.) 1-4
1.4.9 Hawaii Department of Health, Clean Air Branch 1-4
1.4.10 Federal Clean Water Act of 1977 (33 United States Code §§ 1251-1376; 30 Code of Federal Regulations § 330.5(a) (26)) 1-5
1.4.11 Kauai General Plan and Comprehensive Zoning Ordinance 1-5
1.4.12 Noise Regulatory Setting 1-5
1.4.13 Environmental Permits and Required Approvals 1-6

Section 2 ALTERNATIVES INCLUDING THE PROPOSED ACTION **2-1**

2.1 INTRODUCTION 2-1
2.2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES 2-1
2.2.1 Proposed Action 2-1
2.2.2 Project Location 2-1
2.2.2.1 Project Site 2-2
2.2.2.2 Project Site Access 2-3
2.2.3 Alternatives 2-3
2.2.3.1 Alternative 1 2-3
2.2.3.2 No Action Alternative 2-3
2.3 ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION AND ALTERNATIVES 2-4

Section 3 AFFECTED ENVIRONMENT **3-1**

3.1 AIR QUALITY 3-1
3.1.1 Definition of Resource 3-1
3.1.2 Affected Environment 3-1
3.2 NOISE 3-1
3.2.1 Definition of Resource 3-1
3.2.2 Affected Environment 3-3
3.3 INFRASTRUCTURE 3-3

3.3.1 Definition of Resource 3-3
3.3.2 Affected Environment 3-3
3.4 CLIMATE 3-4
3.4.1 Definition of Resource 3-4
3.4.2 Affected Environment 3-4
3.5 VISUAL RESOURCES 3-4
3.5.1 Definition of Resource 3-4
3.5.2 Affected Environment 3-5
3.6 HAZARDOUS MATERIALS AND WASTE 3-5
3.6.1 Definition of Resource 3-5
3.6.2 Affected Environment 3-6
3.7 RECREATIONAL RESOURCES 3-6
3.7.1 Definition of Resource 3-6
3.7.2 Affected Environment 3-6
3.8 GEOLOGY AND SOILS 3-7
3.8.1 Definition of Resource 3-7
3.8.2 Affected Environment 3-7
3.9 WATER RESOURCES 3-8
3.9.1 Definition of Resource 3-8
3.9.2 Affected Environment 3-9
3.9.2.1 Surface Water 3-9
3.9.2.2 Groundwater 3-9
3.9.2.3 Wetlands 3-10
3.9.2.4 Nearshore Water 3-10
3.10 BIOLOGICAL RESOURCES 3-11
3.10.1 Definition of Resource 3-11
3.10.2 Affected Environment 3-11
3.10.2.1 Botanical Resources 3-11
3.10.2.2 Mammalian and Avian Resources 3-12
3.10.2.3 Special Status Species 3-13
3.11 CULTURAL RESOURCES 3-13
3.11.1 Definition of Resource 3-13
3.11.2 Affected Environment 3-13
3.11.2.1 Historical Context 3-13
3.11.2.2 Historical Research and Field Check 3-15
3.12 LAND USE 3-16
3.12.1 Definition of Resource 3-16
3.12.2 Affected Environment 3-16
3.13 SOCIOECONOMIC RESOURCES 3-17
3.13.1 Definition of Resource 3-17
3.13.2 Affected Environment 3-17

Section 4 ENVIRONMENTAL CONSEQUENCES 4-1

4.1 AIR QUALITY 4-1
4.1.1 Proposed Action 4-1
4.1.2 Alternative 1 4-1
4.1.3 No-Action Alternative 4-2

4.2 NOISE 4-2
4.2.1 Proposed Action 4-2
4.2.2 Alternative 1 4-3
4.2.3 No-Action Alternative 4-3
4.3 INFRASTRUCTURE 4-3
4.3.1 Proposed Action 4-3
4.3.2 Alternative 1 4-3
4.3.3 No-Action Alternative 4-4
4.4 CLIMATE 4-4
4.4.1 Proposed Action 4-4
4.4.2 Alternative 1 4-4
4.4.3 No-Action Alternative 4-4
4.5 VISUAL RESOURCES 4-4
4.5.1 Alternative 1 4-5
4.5.2 No-Action Alternative 4-5
4.6 HAZARDOUS MATERIALS AND WASTE 4-5
4.6.1 Proposed Action 4-5
4.6.2 Alternative 1 4-5
4.6.3 No-Action Alternative 4-6
4.7 RECREATIONAL RESOURCES 4-6
4.7.1 Proposed Action 4-6
4.7.2 Alternative 1 4-6
4.7.3 No-Action Alternative 4-6
4.8 GEOLOGY AND SOILS 4-6
4.8.1 Proposed Action 4-6
4.8.2 Alternative 1 4-7
4.8.3 No-Action Alternative 4-7
4.9 WATER RESOURCES 4-7
4.9.1 Proposed Action 4-7
4.9.2 Alternative 1 4-8
4.9.3 No-Action Alternative 4-8
4.10 BIOLOGICAL RESOURCES 4-8
4.10.1 Proposed Action 4-8
4.10.2 Alternative 1 4-8
4.10.3 No-Action Alternative 4-8
4.11 CULTURAL RESOURCES 4-9
4.11.1 Proposed Action 4-9
4.11.2 Alternative 1 4-9
4.11.3 No-Action Alternative 4-9
4.12 LAND USE 4-9
4.12.1 Proposed Action 4-9
4.12.2 Alternative 1 4-10
4.12.3 No-Action Alternative 4-10
4.13 SOCIOECONOMIC RESOURCES 4-10
4.13.1 Proposed Action 4-10
4.13.2 Alternative 1 4-10
4.13.3 No-Action Alternative 4-11
4.14 CUMULATIVE IMPACTS 4-11
4.14.1 Proposed Action 4-11

4.14.2 Alternative 1 4-11
4.14.3 No-Action Alternative 4-11
4.15 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES....4-11
4.16 RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY 4-12

Section 5 COMPLIANCE WITH CHAPTER 343, HAWAII REVISED STATUTES....5-1

5.1 ANTICIPATED DETERMINATION 5-1
5.2 FINDINGS AND REASONS SUPPORTING THE ANTICIPATED DETERMINATION 5-1

Section 6 LIST OF AGENCIES, ORGANIZATIONS AND INDIVIDUALS CONSULTED..6-1

6.1 CHAPTER 343, HRS PRE-ASSESSMENT CONSULTATION....6-1
6.2 CHAPTER 343, HRS PRELIMINARY DRAFT EA DISTRIBUTION 6-3
6.3 CHAPTER 343, HRS DRAFT EA DISTRIBUTION 6-5
6.4 NATIONAL HISTORIC PRESERVATION ACT, SECTION 106 CONSULTATION 6-8

Section 7 REFERENCES....7-1

Section 8 LIST OF PREPARERS 8-1

Tables

Table 1-1 Potential Permits, Approvals, and Consultations Associated with the Proposed Action
Table 2-1 Summary of Environmental Effects of the Proposed Action and Alternatives
Table 6-1 List of Agencies and Organizations Receiving Pre-Assessment Consultation
Table 6-2 List of Agencies and Organizations Receiving the Draft Environmental Assessment

Figures

Figure 1 Site Area
Figure 2 Site Location and Alternative Site
Figure 3 Site Plan
Figure 4 Flood Zone Map
Figure 5 Soil Map
Figure 6 Land Use Map

Photographs

Photograph 1 Proposed Site
Photograph 2 Vegetation on Project Site

Appendices

Appendix A Biological Resources Survey Report
Appendix B Cultural Resources Survey Report
Appendix C Pre-Assessment Consultation: Project Kickoff Information for Stakeholders
Appendix D Pre-Assessment Consultation: Project Kickoff Information for Stakeholders - Comments and Responses
Appendix E Preliminary Draft Environmental Assessment - Comments and Responses

AAQS	Ambient Air Quality Standards
ac	acre(s)
ADC	Agribusiness Development Corporation
BMPs	Best Management Practices
CAA	Clean Air Act
CFR	Code of Federal Regulations
CZM	Coastal Zone Management Program
DLNR	State of Hawaii Department of Land and Natural Resources
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
ft	feet/foot
ft^2	square feet/foot
ha	hectare(s)
HAR	Hawaii Administrative Rules
HDOH	State of Hawaii Department of Health
HRS	Hawaii Revised Statutes
KIUC	Kauai Island Utility Cooperative
KSC	Kauai Sugar Company
m	meter(s)
m^2	square meter(s)
mi	mile
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OEQC	Office of Environmental Quality Control
PAH	Polycyclic Aromatic Hydrocarbons
PMRF	Pacific Missile Range Facility
SHPD	State Historic Preservation Division

SMA	Special Management Area
SPCP	Spill Prevention and Control Plan
SSA	Shoreline Setback Area
U.S.	United States
USDOT	United States Department of Transportation
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

EXECUTIVE SUMMARY

Project Name:	Draft Environmental Assessment (EA) for BASF Corporation Field Office near Kekaha, Kauai, Hawaii
Proposed Action:	Construct and operate a field office on State-owned land near Kekaha, Kauai, Hawaii
Applicant:	BASF Corporation
Contact Information:	Steven Lupkes BASF Corporation 8315 Kekaha Road Kekaha, Hawaii 96752 Telephone: 808-337-2065
Action Required:	Compliance with Chapter 343, Hawaii Revised Statutes (HRS)
Chapter 343, HRS Trigger:	Proposing the use of State-owned lands
Alternatives Considered:	Proposed Action, Alternative 1 - Alternate location, and Alternative 2 - No Action
Location:	Kekaha, Kauai, Hawaii
Project Schedule	Construction starting May 2012; Develop field office by January 2013
Project Area:	Approximately 10 acres (4.05 hectares)
Tax Map Key Parcel:	4-1-2-002-001 (portion)
Kauai County Zoning:	Agriculture
Special Designations:	None
Anticipated Determination:	Finding of No Significant Impact and Negative Declaration (Chapter 343, HRS)

This EA analyzes the environmental consequences of the Proposed Action and reasonable alternatives in accordance with Chapter 343, Hawaii Revised Statutes and Title 11, Chapter 200 (Chapter 11-200), Hawaii Administrative Rules (HAR). This EA demonstrates that construction and operation of the Proposed Action would not result in any significant effects to the environment. Pursuant to Chapter 343, HRS, should a Finding of No Significant Impact be determined, an Environmental Impact Statement would not be required.

Proposed Action. BASF Corporation (BASF) proposes to construct a field office on a 10-acre site that is located on a 13,000-acre parcel of State-owned land near Kekaha, Kauai, Hawaii. The field office would include a research station, seed handling area, and a machine storage area. Small bench top equipment would be used on the site to thresh and clean small quantities of seed.

Purpose and Need. The Proposed Action would consolidate and centralize BASF field office operations on the Mana Plain. Current field office operations are dispersed over a large area as far west as the Mana Drip Station (five miles from the proposed site) and as far east as Kekaha (three miles from the proposed site). By consolidating field office operations into one centralized facility, the Proposed Action will decrease time lost during travel from the field to current field office locations, improve worker safety, promote seed purity and quality control, and provide secure storage areas for machinery, tools, and equipment.

Alternatives. Reasonable alternatives to the Proposed Action include an alternate location on the same 13,000-acre State-owned property (Alternative 1) and the No-Action Alternative. The alternate location considered under Alternative 1 is a nine-acre site located two miles northwest of the Proposed Action. The environmental consequences of the No Action Alternative are evaluated as a baseline for comparison with the environmental consequences of Alternative 1 and the Proposed Action.

Environmental Consequences. The Proposed Action would not result in significant impacts to any environmental resource. Significant cumulative impacts would not occur for any environmental resource. Moreover, this EA demonstrates that the Proposed Action would not have reasonably foreseeable direct or indirect effects on any coastal use or resource of the State's coastal zone.

SECTION 1 PURPOSE OF AND NEED FOR ACTION

1.1 SUMMARY OF THE PROPOSED ACTION

BASF Corporation (BASF) proposes to construct and operate a field office (the Proposed Action) on State-owned land near Kekaha, Kauai (Tax Map Key [TMK] Parcel 4-1-2-002-001) (Figures 1 and 2). The field office would include a research station, seed handling area, and a machine storage area. Small bench top equipment would be used on the site to thresh and clean small quantities of seed.

1.2 PURPOSE AND NEED

BASF is a diversified agricultural company that has been present on Kauai since 2006. BASF licences approximately 900 acres on the Mana Plain, though not all licenses land is used for production (Van Voorhis 2011). The vast majority of this land is licensed from the State. BASF primarily grows corn, but its crops also include rice, soybeans, sunflowers, and canola. All crops are used for agricultural purposes. Current field office operations are dispersed over a large area. As shown on Figure 2, operations are performed as far west as the Mana Drip Station (five miles from the proposed site) and as far east as the eastern side of the town of Kekaha (three miles from the proposed site).

The Proposed Action would consolidate and centralize BASF field office operations on the Mana Plain. By consolidating field office operations into one centralized facility, the Proposed Action will decrease time lost during travel from the field to current field office locations, improve worker safety, promote seed purity and quality control, and provide centralized secure storage areas for machinery, tools, and equipment. In addition to its central location, BASF selected the proposed site for its generally level terrain and minimal environmental resources.

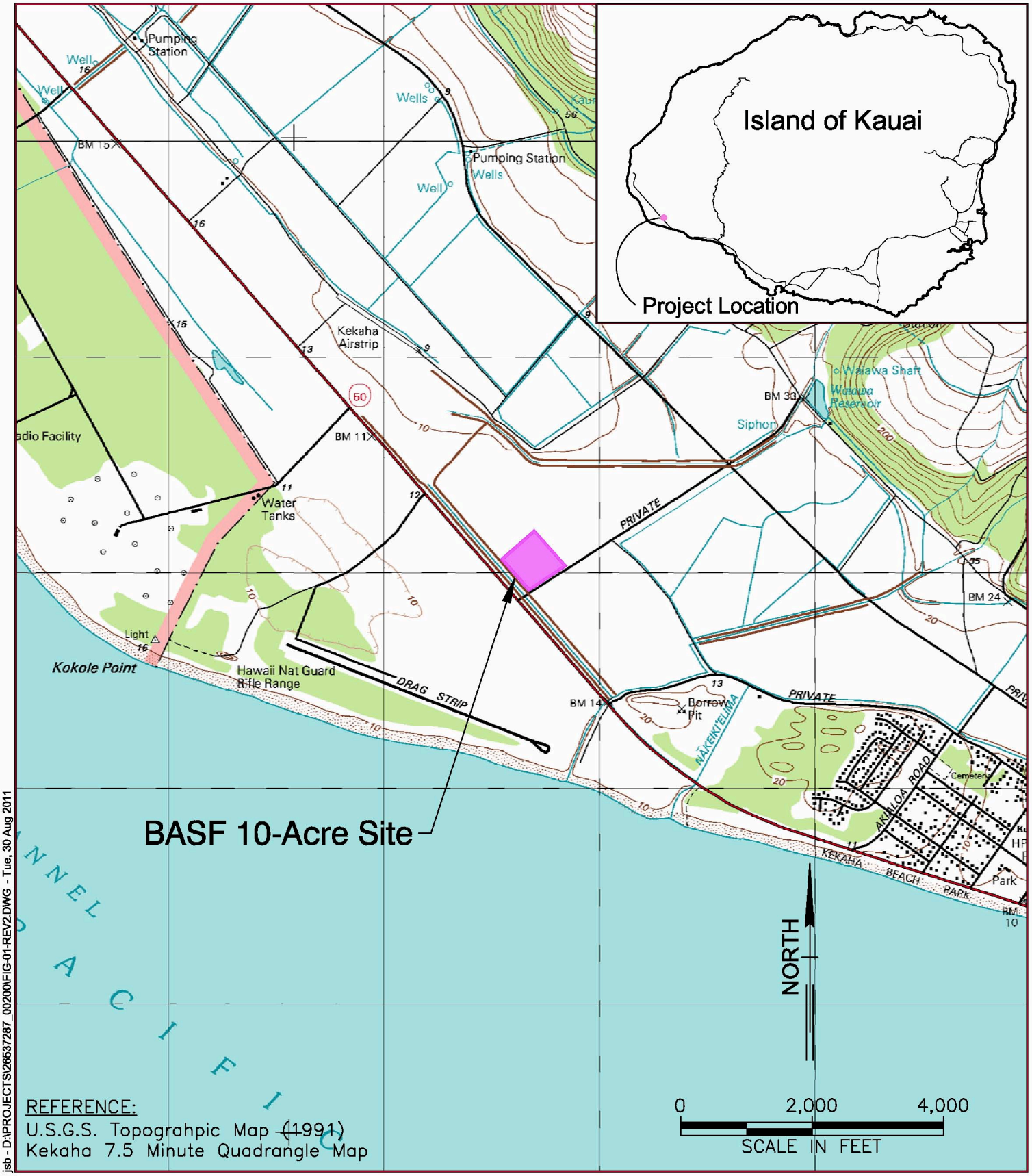
The Proposed Action would occur on State-owned land licensed to BASF by the State of Hawaii Department of Agriculture through the Agribusiness Development Corporation (ADC). As a result, the Proposed Action is subject to State Environmental Impact Statement (EIS) Law (Chapter 343, Hawaii Revised Statutes [HRS]). BASF prepared this Environmental Assessment (EA) to assess the environmental impacts of the Proposed Action in accordance with Chapter 343, HRS. The ADC is the approving agency for this EA.

1.3 PROJECT LOCATION

The proposed site is located approximately one mile northwest of the town of Kekaha on the Mana Plain in southwestern Kauai. The Proposed Action will be located on an approximately 10-acre site (proposed site) within a larger 13,000-acre (5,261-hectare [ha]) property owned by the State of Hawaii. The 10-acre site is licensed to BASF by the ADC. The 13,000-acre property is denoted by TMK Parcel 4-1-2-002-001 and the 10-acre site is located on a portion of an area identified as Field 309 (Figure 2).

1.4 REGULATORY OVERVIEW

The Proposed Action is subject to the following State and Federal laws and consultations. Compliance of the Proposed Action with applicable laws and consultations is discussed in Sections 4 through 6.



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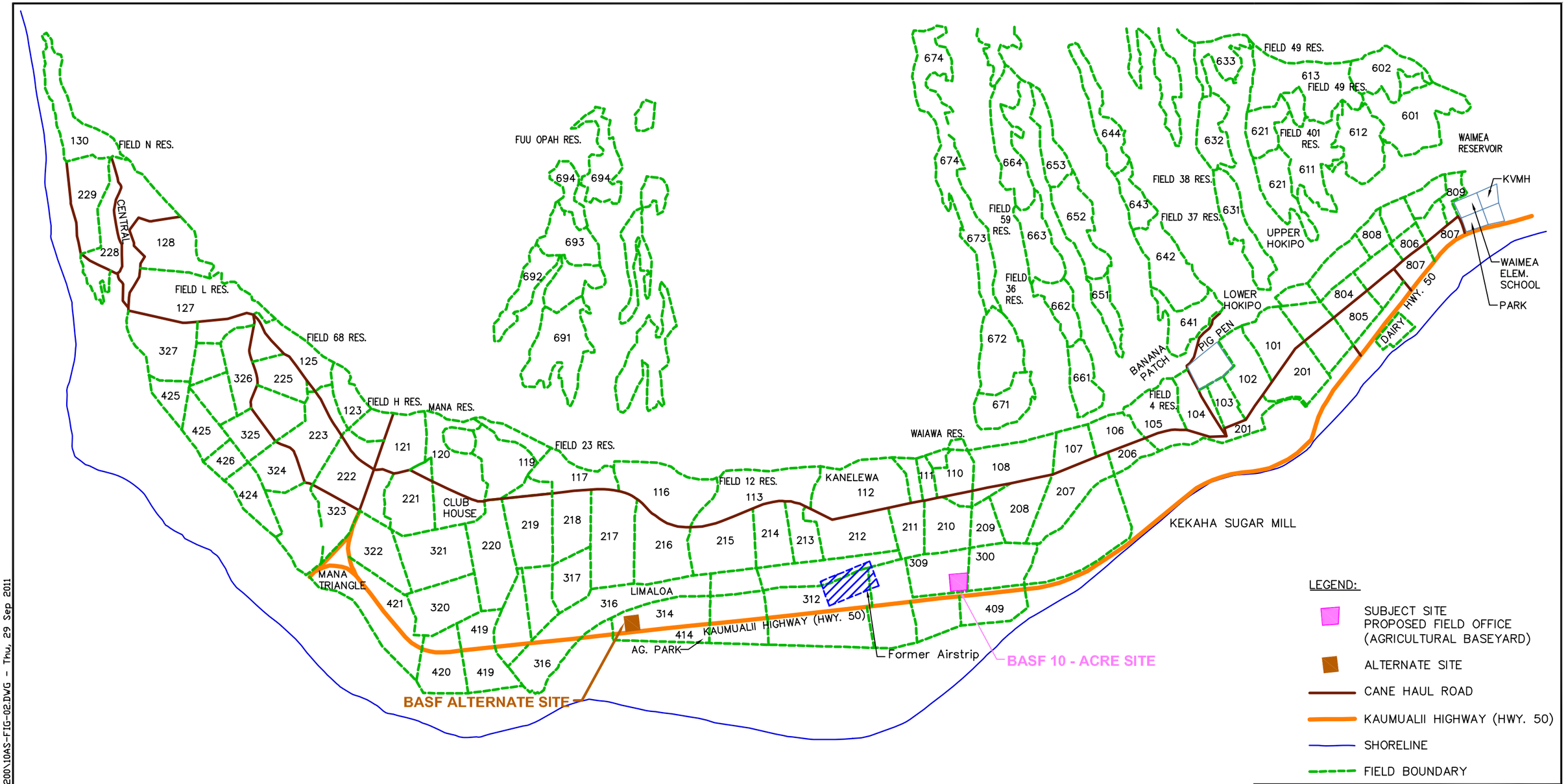
SITE AREA

10–Acre Site
TMK: (04) 1–2–2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

URS

FIGURE 1



REFERENCE:
Clayton, 2003

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SITE LOCATION AND ALTERNATIVE SITE

10–Acre Site
TMK: (04) 1–2–2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

FIGURE 2

1.4.1 Chapter 343, Hawaii Revised Statutes

Chapter 343, Hawaii Revised Statutes (HRS), establishes a system of environmental review at the state and county levels, which shall ensure that environmental concerns are given appropriate consideration in decision making along with economic and technical considerations (State of Hawaii 2011b). The law requires that government give systematic consideration to the environmental, social, and economic consequences of proposed development projects prior to allowing construction to begin. An applicant must comply with Chapter 343, HRS, when its proposed action requires a discretionary consent or approval that meets one or more of nine types of actions that constitute the triggers identified in the law (OEQC 2004). Proposed actions meeting one of the triggers cannot receive discretionary approval and proceed until one of the following takes place:

(1) The agency with the authority to grant approval makes a finding that the proposed action falls within a certain class of activities that are routine and minor in scope and exempt from the law because it will probably have minimal or no significant effects on the environment;

(2) If not exempt, an EA must be prepared to determine whether an EIS is required. The agency with the authority to grant approval reviews the EA and issues a Finding of No Significant Impact (FONSI) and negative declaration if the action is not likely to have a significant effect on the environment, after which the proposed action may proceed without further study; or

(3) If the agency with the authority to grant approval reviews the EA and determines that the action may have a significant effect on the environment, the agency must issue an Environmental Impact Statement Preparation Notice stating that an EIS will be required. The final EIS must be acceptable to the agency with the authority to grant approval before the action can proceed.

Title 11, Chapter 200 (Chapter 11-200), Hawaii Administrative Rules (HAR) provides agencies and persons with procedures, specifications of contents of EAs and EISs, and criteria and definitions of statewide application (State of Hawaii 2011a).

The Proposed Action triggers the requirements of Chapter 343, HRS, by proposing the use of State-owned lands. This EA has been prepared in accordance with Chapter 343, HRS, and Chapter 11-200.

1.4.2 Historic Sites Act of 1935 (16 USC §§ 461-467)

The Historic Sites Act of 1935 establishes a national policy to preserve for public use, historic sites, buildings, and objects of national significance for the inspiration and benefit of the American people (USACE 2011). The act authorizes the designation of national historic sites and landmarks, authorizes interagency efforts to preserve historic resources, and establishes a maximum fine for violations of the act. It authorizes surveys of historic and archaeological sites, buildings, and objects to determine which are significant, and provides for the restoration, reconstruction, rehabilitation, preservation, and maintenance of historic or prehistoric properties of national significance. The Secretary of the Interior, through the National Park Service, is authorized to conduct surveys and studies, collect information, and purchase significant historic properties. The Secretary also is authorized to restore, preserve, maintain, and rehabilitate structures and sites.

The act led to the eventual establishment within the National Park Service of the Historic Sites Survey, the Historic American Building Survey, Historic American Engineering Record, and the National Historic Landmarks Program.

1.4.3 National Historic Preservation Act (16 USC § 470 et seq.)

The National Historic Preservation Act (NHPA) establishes the nation's policy for historic preservation, and sets in place a program for the preservation of historic properties by requiring Federal agencies to consider effects to significant cultural resources (i.e., historic properties) prior to undertakings.

1.4.3.1 Section 106 of the Federal Guidelines (16 USC §106)

Section 106 of the NHPA requires Federal agencies to take in to account the effects of projects on historic properties (resources included in or eligible for the National Register of Historic Places [NRHP]). Section 106 also gives the Advisory Council on Historic Preservation (ACHP) and State Historic Preservation Offices (SHPOs) an opportunity to consult. In most cases, the Hawaii Department of Land and Natural Resources, Historic Preservation Division acts for the Advisory Council to undertake this review process. The Historic Preservation Division must concur that the proposed action will have no effect on historic properties.

1.4.4 Federal Coastal Zone Management Act (16 USC §1456 (c)(1))

The Federal Coastal Zone Management Act was enacted to ensure that Federal agencies undertaking an activity within or outside the coastal zone, which affects any land or water use or natural resource of the coastal zone, shall be carried out in a manner consistent with the enforceable policies of state approved management programs. Federal activities, permits, and financial assistance in Hawaii are required to be consistent with the Hawaii Coastal Zone Management Program.

1.4.5 Hawaii Coastal Zone Management Program (Chapter 205A, HRS)

Hawaii enacted the Hawaii Coastal Zone Management (CZM) Program in 1977. The entire State is considered a coastal zone under the CZM Program, including all marine waters seaward to the extent of the State's policy power and management authority. The CZM Program focuses on policy objectives for: recreation resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection, and marine resources.

The CZM establishes a permit system to control development within Special Management Areas (SMAs) managed at the county level. Shoreline Setback Areas (SSAs) serve as buffers against coastal hazards and erosion, and protect viewsheds and marine and coastal resources. SSAs extend not less than 20 feet (6 meters [m]) and not more than 40 feet (12 m) from the shoreline. Additionally, SSAs prevent mining of sand or removal of coral or rubble from the shoreline and within 1,000 feet (305 m) seaward from the shoreline or within waters up to 30 feet (9 m) deep.

1.4.6 Endangered Species Act of 1973 (16 United States Code § 1531 et seq.; 50 Code of Federal Regulations Parts 17 and 222)

The Endangered Species Act (ESA) provides broad protection for species of fish, wildlife, and plants listed as threatened or endangered and their determined critical habitats. The U.S. Fish and Wildlife Service (USFWS) is the Federal agency responsible for administering this act, designating critical habitat, and determining if a change in listing status should occur with a particular species.

1.4.7 Hawaii Endangered Species Law (HI ST §195D -1 - 32)

Under the Hawaii Endangered Species Law, any aquatic, wildlife, or land plant species listed as endangered pursuant to the ESA is considered an endangered species in Hawaii. Any indigenous aquatic, wildlife, or land plant species listed as threatened under the ESA is considered threatened in Hawaii. Additionally, Hawaii endangered species law empowers the State of Hawaii to determine whether any indigenous species of aquatic life, wildlife, or land plant should be listed as endangered or threatened species to protect Hawaii's unique ecosystem. Hawaii endangered species law prevents removal, possession, or sale of endangered or threatened species. The State of Hawaii Department of Land and Natural Resources is the agency responsible for enforcement of the Hawaii Endangered Species Law.

1.4.8 Clean Air Act (42 U.S.C. § 7401 et seq.)

The Clean Air Act (CAA) is the comprehensive Federal law that regulates air emissions from stationary and mobile sources (USEPA 2011a). Among other things, the CAA authorizes the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of criteria air pollutants as well as hazardous air pollutants. The CAA requires all areas of the country to meet or strive to meet NAAQS for sulfur dioxide (SO_2), carbon monoxide (CO), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}) and 2.5 microns ($PM_{2.5}$), nitrogen dioxide (NO_2), lead (Pb), and ozone (O_3).

The New Source Review (NSR) program is one of the key programs designed to achieve NAAQS. The NSR program is a preconstruction review process for new and modified stationary sources. The Prevention of Significant Deterioration (PSD) program for attainment areas typically requires new or modified sources to install state-of-the-art pollution controls to ensure that the ambient air quality will not be degraded. Different requirements apply to non-attainment areas. Permits are required for new construction or major modifications that substantially increase a facility’s emissions of regulated pollutants.

1.4.9 Hawaii Department of Health, Clean Air Branch

The Hawaii Department of Health, Clean Air Branch administers the Hawaii Administrative Rules for Air Pollution Control (Title 11, Chapter 60.1). The following Rules area applicable to the Proposed Action:

- §11-60.1-32 Visible emissions – Presents visible emission restrictions for stationary sources.
- §11-60.1-33 Fugitive dust – Prohibits visible fugitive dust to become airborne without taking reasonable precautions.

- §11-60.1-76 Applications for modifications – Provides guidance on the process to modify a noncovered permit.

1.4.10 Federal Clean Water Act of 1977 (33 United States Code §§ 1251-1376; 30 Code of Federal Regulations § 330.5(a) (26))

The Clean Water Act of 1977 (CWA) protects wetlands, regulates discharges of pollutants, sets water quality standards for individual pollutants, and provides a framework for permitted pollutant discharge from a point source. The administering Federal agencies for the CWA are the EPA and United States Army Corps of Engineers (USACE). The CWA authorizes the EPA to issue National Pollutant Discharge Elimination System (NPDES) permits and to set pretreatment standards for the purpose of regulating discharges to surface waters. The CWA charges states with setting specific water quality criteria appropriate for their water and developing pollution control programs to meet them. In Hawaii, oversight lies with the Hawaii State Department of Health (HDOH). The HDOH reviews and certifies NPDES permit applications and the EPA coordinates, drafts, and issues NPDES permits for storm water and point source pollution discharges.

1.4.11 Kauai General Plan and Comprehensive Zoning Ordinance

The Kauai General Plan is a direction-setting policy document that is intended to serve as a guide to help plan and improve the physical environment and quality of life for the people of Kauai, and to address the overall development of the island (County of Kauai 2000). The General Plan also states the County's vision for Kauai and establishes the strategies to help achieve that vision. The Comprehensive Zoning Ordinance provides regulations and standards for land development and the construction of buildings and other structures in the County of Kauai.

1.4.12 Noise Regulatory Setting

Title 11, Chapter 46 (Community Noise Control) of the Hawaii Administrative Rules (HAR) sets maximum permissible dBA levels on sound emission from stationary sources and agricultural, construction, or industrial activities (State of Hawaii 2011a). These thresholds depend on the property zoning designation A, B, or C and are 55 dBA Leq daytime (7 a.m. to 10 p.m.) / 45 dBA Leq nighttime (10 p.m. to 7 a.m.), 60 dBA (day) / 50 dBA (night), and 70 dBA (day or night), respectively. Limits on impulsive noises are 10 dBA higher than these thresholds.

Construction projects that are anticipated to exceed these limits are expected to have approved community noise permits and limit construction to specified daytime hours (Monday through Friday between 7 a.m. and 6 p.m. and Saturday between 9 a.m. and 6 p.m.). Special equipment or activities like pile-driving and impact hammers are limited to Monday through Friday, 9 a.m. to 5:30 p.m. The Kauai edition of the Noise Reference Manual states that an approved community noise permit may be required for construction projects exceeding 78 dBA (DOH 2008). Construction noise anticipated to occur outside of these daytime hours, or on Sundays or holidays, requires application and approval of a variance.

Occupational exposure to noise is regulated by Title 29, CFR, Part 1910.95, which describes that protection against the effects of noise exposure shall be provided when the sound levels exceed an average of 90 dBA for an 8-hour period. When employees are subjected to sound exceeding this limit,

feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels within 90 dBA, personal protective equipment (PPE) shall be provided and used to reduce sound levels within the limits. The employer shall administer a continuing, effective hearing conservation program whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level of 85 dBA (measured via slow response). For purposes of the hearing conservation program, employee noise exposures shall be computed in accordance with 29 CFR 1910.95 Appendix A (noise exposure computation) without regard to any attenuation provided by the use of PPE.

1.4.13 Environmental Permits and Required Approvals

Table 1-1 lists potential Federal and State environmental permits, approvals, and consultations that are associated with the Proposed Action.

Table 1-1. Potential Permits, Approvals, and Consultations Associated with the Proposed Action

Permit/Approval/Consultation	Lead Agency(ies)/Groups
FEDERAL	
National Historic Preservation Act, Section 106 Consultation	State Historic Preservation Officer Office of Hawaiian Affairs
STATE of HAWAII	
Chapter 343, HRS Environmental Review and Determination	Agribusiness Development Corporation
National Pollutant Discharge Elimination System Permit	State of Hawaii Department of Health
Community Noise Permit Application	State of Hawaii Department of Health, Indoor and Radiological Health (IRH) Branch
Application for Permit Modification	State of Hawaii Department of Health, Clean Air Branch
Individual Wastewater System (IWS) Permit	State of Hawaii Department of Health, Wastewater Branch
LOCAL	
Building Permit	Kauai County Planning Department

SECTION 2 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 INTRODUCTION

This section describes the Proposed Action and a reasonable alternative selected based on the criteria of meeting the project's purpose and need, as described in Section 1.2. The No Action Alternative is also described in this section.

2.2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.2.1 Proposed Action

BASF proposes to construct and operate a field office (the Proposed Action) near Kekaha, Kauai. The Proposed Action would occur on State-owned land licensed to BASF by the ADC. The field office would include a research station, seed handling area, and a machine storage area (Figure 3). Specifically, the field office will consist of seven interconnected buildings, including an office attached to a seed handling building with a canopy for two dryer buildings, a machine shed, an equipment storage area, an employee pavilion, and a shade house. Small bench top equipment would be used on the site to thresh and clean small quantities of seed. No crops would be cultivated on the proposed site.

In addition to the buildings and equipment, the Proposed Action also would develop driveways and parking areas on the proposed site. The Proposed Action would install a fence around the perimeter of the proposed site. Potable drinking water will be provided by the Kekaha-Waimea system, which is managed by the Kauai County Department of Water. An Individual Wastewater System (IWS) approved by the State Department of Health will be installed for wastewater treatment and disposal.

The Proposed Action would consolidate and centralize BASF field office operations on the Mana Plain. Current field office operations are dispersed over a large area. Operations are performed as far west as the Mana Drip Station (five miles from the proposed site) and as far east as the eastern site of the town of Kekaha (three miles from the proposed site). The Proposed Action is three miles closer to the field. An average of ten trucks will make 1.5 trips per day from the project site to the field. Furthermore, the proposed site is both accessible and visible from Kaumualii Highway and is located within 200 feet. By consolidating field office operations into one centralized facility, the Proposed Action will decrease time lost during travel from the field to current field office locations, improve worker safety, promote seed purity and quality control, and provide secure storage areas for machinery, tools, and equipment. In addition to its central location, BASF selected the proposed site for its generally level terrain and minimal environmental resources.

2.2.2 Project Location

The proposed site is located approximately one mile northwest of the town of Kekaha on the Mana Plain in southwestern Kauai. The Proposed Action would be located on an approximately 10-acre site (proposed site) within a larger 13,000-acre (5,261-hectare [ha]) property owned by the State of Hawaii (Figure 2). The 10-acre site is licensed to BASF by the ADC. The 13,000-acre property is denoted by

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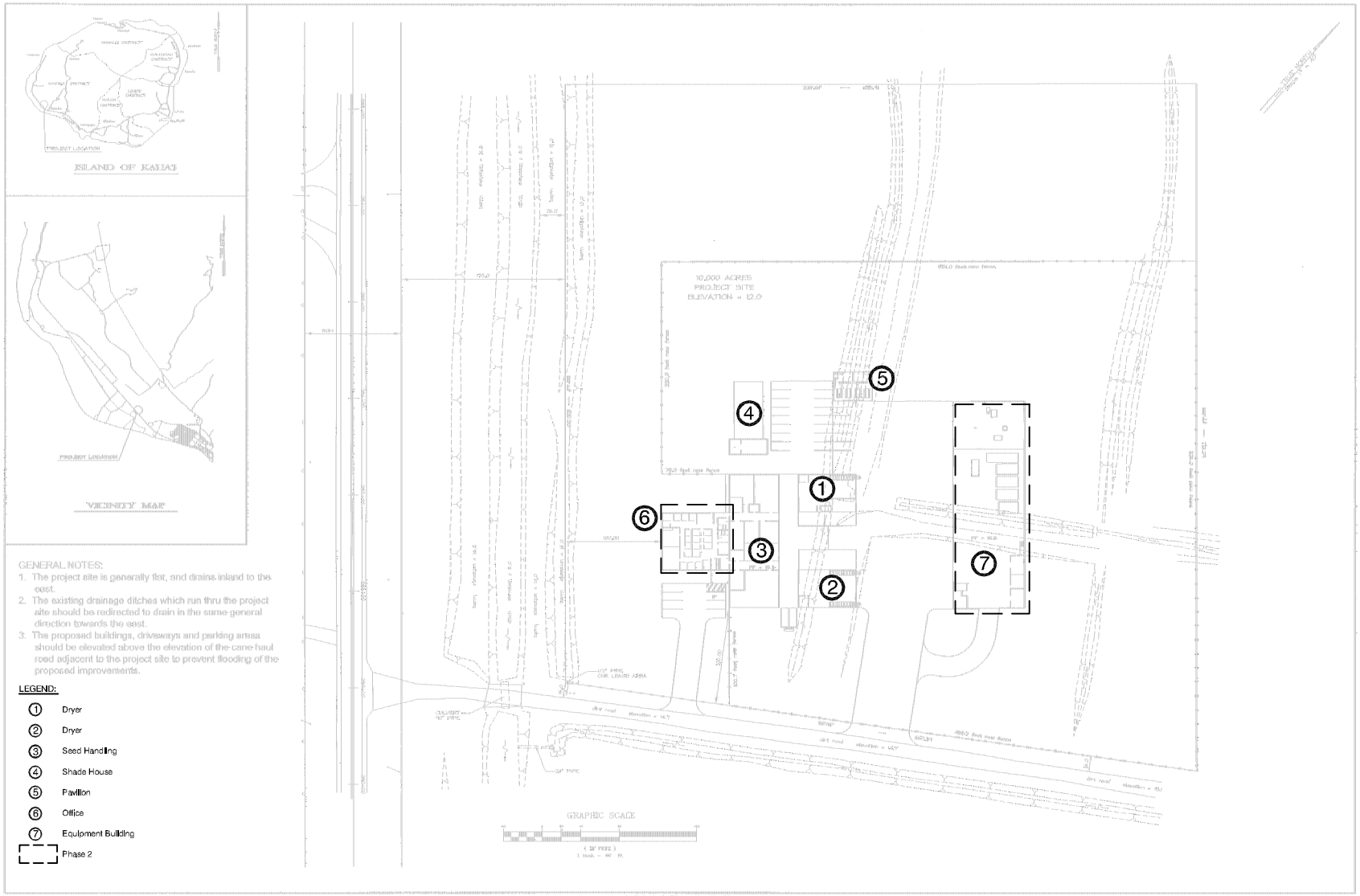

REFERENCE:
Esaki Surveying and Mapping, Inc.
Job. No. 10–09

SITE PLAN

10–Acre Site
TMK: (04) 1–2–2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

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FIGURE 3

TMK Parcel 4-1-2-002-001, and the 10-acre site is located on the portion of an area identified as Field 309.

The proposed site is bounded by an unnamed paved road to the southeast and a drainage canal approximately 43 feet to the southwest. Berms two feet in height are located on either side of the drainage canal. Kaumualii Highway (State Route 50) runs parallel with the shoreline approximately 200 feet (61 meters) to the southwest of the site. The proposed site is located approximately 2,450 feet (747 meters) northeast of the Pacific Ocean at an elevation of 12 feet above mean sea level (amsl). The proposed site is generally level and drains inland to the east.

2.2.2.1 Project Site

The Proposed Action would be located on a vacant, approximately 10-acre site (proposed site) that is cleared of vegetation (Photograph 1). In addition to its central location, BASF selected the proposed site for its generally level terrain and minimal environmental resources. The proposed site is characterized by fill land. Fill land consists mostly of areas filled with bagasse and slurry from sugar mills. A few areas are sometimes filled with material from dredging and from soil excavations. Generally, these materials are dumped and spread over marshes, low-lying areas along coastal flats, coral sand, coral limestone, or areas shallow to bedrock (Foote D. et al 1972).

Photograph 1. Proposed Site

2.2.2.2 Project Site Access

The unnamed dirt road bordering the 10-acre site to the southeast provides access from Kaumualii Highway. As shown on Figure 3, two driveways would be constructed to provide access from the unnamed paved road to the site. The elevation of the segment of the access road adjacent to the site ranges from 14.7 to 15.1 feet amsl. Kaumualii Highway runs northwest to southeast parallel with the shoreline approximately 200 feet (61 meters) to the southwest of the proposed site.

2.2.3 Alternatives

An EA must consider alternatives to the Proposed Action in accordance with Chapter 343, HRS. However, detailed analysis is only required for those alternatives determined to be reasonable. Reasonable alternatives are alternatives that could attain the purpose and need of the Proposed Action, regardless of cost. This EA identifies and evaluates the environmental impacts of an alternative location on the same 13,000-acre property (Alternative 1) capable of attaining the purpose and need of the Proposed Action. Other than using another site in the vicinity of the Proposed Action, there are no other alternatives capable of attaining the purpose and need of the Proposed Action and enhancing environmental quality or avoiding, reducing, or minimizing adverse environmental effects, costs, and risks relative to the Proposed Action. Other sites considered by BASF were eliminated from further consideration because they were not located in close enough proximity to existing roads and utilities, and consequently, would have resulted in impacts to a relatively greater land area at a relatively higher expense. Additionally, this EA evaluates environmental consequences of the alternative of no action as a baseline for comparison with the environmental effects of Alternative 1 and the Proposed Action.

2.2.3.1 Alternative 1

Under Alternative 1, the field office would be constructed and operated on a nine-acre site located two miles northwest of the Proposed Action (Figure 2). Alternative 1 would be located on the same 13,000-acre property owned by the State of Hawaii (TMK Parcel 4-1-2-002-001). Alternative 1 would be located on Field 314. The layout of the field office, including the research station, seed handling area, machine storage area, parking areas, and driveways under Alternative 1 would not be substantially different from the Proposed Action. Only minimal alterations would be made where necessary due to the alternate location. For example, the orientation of the proposed buildings may be different under Alternative 1, but building height, floor area, and relation to each other would be the same as the Proposed Action. Alternative 1 would use the same small bench top equipment to thresh and clean small quantities of seed. Construction activities and long-term operations would be the same.

2.2.3.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be developed. BASF field office operations would continue to be dispersed over a large area on the Mana Plain in southwestern Kauai. Time would continue to be lost due to travel from the field to current field office locations and worker safety would not be improved.

2.3 ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION AND ALTERNATIVES

Table 2-1 summarizes the environmental effects of the Proposed Action, Alternative 1, and the No-Action Alternative. This table summarizes the conclusions of the environmental impact analysis provided in Section 4, Environmental Consequences.

Table 2-1. Summary of Environmental Effects of the Proposed Action and Alternatives

Environmental Resource	Proposed Action	Alternative 1	No-Action Alternative
Air Quality Noise Infrastructure Climate Visual Resources Hazardous Materials and Waste Recreational Resources Cultural Resources Socioeconomic Resources	No Significant Impact	No Significant Impact	No Impact
Geology and Soils	No Significant Impact with implementation of Best Management Practices (BMPs)	No Significant Impact with implementation of Best Management Practices (BMPs)	No Impact
Water Resources	No Significant Impact with Implementation of BMPs	No Significant Impact with implementation of BMPs	No Impact
Biological Resources	No Significant Impact with shielding of exterior lighting	No Significant Impact with shielding of exterior lighting	No Impact
Land Use	No Significant Impact	No Significant Impact, but greater impacts than the Proposed Action	No Impact

SECTION 3 AFFECTED ENVIRONMENT

This section describes the existing environmental setting and baseline conditions in the areas that would be affected by the Proposed Action and alternatives under consideration. The description of the affected environment serves as the basis of comparison for analysis of potential environmental effects of the Proposed Action.

3.1 AIR QUALITY

3.1.1 Definition of Resource

Air quality is defined by ambient air concentrations of specific pollutants of concern with respect to the health and welfare of the general public. Air quality can be affected by air pollutants produced by mobile sources, such as vehicular traffic, aircraft, or non-road equipment used for construction activities; and by fixed or immobile facilities, referred to as "stationary sources." Stationary sources can include combustion with industrial stacks and/or exhaust vents.

The USEPA, under the requirements of the CAA, as amended in 1977 and 1990 (CAA Amendments), has established National Ambient Air Quality Standards (NAAQS) for six contaminants, referred to as criteria pollutants (40 Code of Federal Regulations [CFR] 50): carbon monoxide (CO), nitrogen dioxides (NO_2), ozone (O_3) (with nitrogen oxides [NO_x] and volatile organic compounds [VOCs] as precursors), particulate matter (PM) (PM_{10} – less than 10 microns in particle diameter; $PM_{2.5}$ – less than 2.5 microns in particle diameter), lead (Pb), and sulfur dioxide (SO_2). Areas where concentration levels are below the NAAQS for a criteria pollutant are designated as being in "attainment." Areas where a criteria pollutant level equals or exceeds the NAAQS are designated as being in "nonattainment."

In addition to NAAQS, the HDOH established state ambient air quality standards (SAAQS) to further protect human health. AAQS exist for the following pollutants: CO, NO_2, O_3, PM_{10}, Pb, hydrogen sulfide (H_2S), and SO_2.

3.1.2 Affected Environment

Based on air quality data collected and published by the HDOH, the State of Hawaii complies with the standards of the CAA, including the NAAQS and SAAQS. The air in Kekaha, and all of Hawaii, is clean and low in pollutants, and Kauai is in attainment for all ambient air quality criteria pollutants (USEPA 2008). Consistent trade winds and fewer sources of large industrial pollutants also contribute to the clean air in the vicinity of Kekaha. The affected environment for the Proposed Action and Alternative 1 are the same from an air quality perspective.

3.2 NOISE

3.2.1 Definition of Resource

Noise is generally defined as loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity and that interferes with or disrupts normal activities. Although prolonged exposure to

high noise levels has been demonstrated to cause hearing loss, the principal human response to environmental noise is annoyance. The response of individuals to similar noise events is diverse and influenced by the type of noise; the perceived importance of the noise, and its appropriateness in the setting; the time of day and the type of activity during which the noise occurs; and the sensitivity of the individual.

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air, and are sensed by the human ear. Sound is generally characterized by several variables, including frequency and intensity. Frequency describes the pitch of the sound and is measured in Hertz (Hz), while intensity describes the sound's loudness and is measured in decibels (dB). Decibels are measured using a logarithmic scale. A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. The minimum change in the sound level of individual events that an average human ear can detect is about 1 to 2 dB. A 3 to 5 dB change is readily perceived. A change in sound level of about 10 dB is usually perceived by the average person as a doubling (or if -10 dB, halving) of the sound's loudness.

Sound level is usually expressed by reference to a known standard. This EA refers to sound pressure level (SPL, or Lp), with a reference value of 20 micropascals (µPa). Most sounds one hears in the environment do not consist of a single frequency and instead are composed of a broad band of frequencies differing in sound level. The method commonly used to quantify environmental sounds consists of evaluating all frequencies of a sound according to a weighting system that reflects the typical frequency-dependent sensitivity of average healthy human hearing. This is called "A-weighting," and the decibel level measured is called the A-weighted sound level (dBA). Although sound level value may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a mixture of noise from distant sources that creates a relatively steady background noise in which no particular source is identifiable. A single descriptor called the equivalent sound level (Leq) may be used to describe sound that is changing in level. Leq is the energy-mean dBA during a measured time interval. It is the "equivalent" constant sound level that would have to be produced by a given source to equal the acoustic energy contained in the fluctuating sound level measured.

Construction noise is generated by the use of heavy equipment and portable powered tools on job sites and is generally considered temporary, but can vary greatly in overall duration and aggregate magnitude depending on the construction processes or activities being conducted, the type and condition of equipment used, the layout of the construction site and the proximity of sensitive receptors. Generally, construction noise levels primarily represent the acoustical contribution of two categories of dominant sources: impact devices (e.g., jackhammers, pile drivers) that produce high amplitude impulsive or intermittent noise, and large fossil-fueled engine-driven equipment and vehicles (e.g., bulldozers, backhoes, dump trucks) that produce noise as they idle, move, or utilize engine power to perform a function.

Operation and maintenance noise refers to the sounds produced by the completed project (i.e., post-construction) under typical conditions and includes activities, equipment, and building systems that may occur either during the day, night, or continuously.

3.2.2 Affected Environment

Located approximately one mile northwest of Kekaha, a small town comprised of residences and small businesses, the Proposed Action and its adjacent vicinity is generally level, rural, and consistent with active or abandoned agricultural use. Several identified nearby land uses include the facilities of Syngenta Seeds, Inc. on the opposite side of State Route 50 immediately to the south of the project site, the Kekaha Landfill one half-mile to the west of the project site, and the Garden Isle Racing Association's occasional use of Kauai Raceway Park, a drag strip located approximately one half-mile southwest of the project site. The Barking Sands Pacific Missile Range Facility (PMRF) is approximately 0.75 miles west of the site, and approximately five miles further northwest is the PMRF Airport.

Although sanctioned events at Kauai Raceway Park would produce considerable noise, the greatest source of typical day and nighttime noise is generated by regular vehicular traffic on Kaumualii Highway (State Route 50, or SR-50). Assuming this two-lane surface transportation route would be considered an "other roadway" per Table 5-7 of the Federal Transit Administration (FTA) guidance manual *Transit Noise and Vibration Impact Assessment* (FTA, 2006), the existing ambient sound level in the vicinity of the project site is likely to be 50 to 60 dBA Leq during the day and 40 to 50 dBA at night, depending on proximity to SR-50.

The affected environment for the Proposed Action and Alternative 1 are similar from a noise perspective. Alternative 1 is located two miles to the northwest of the Proposed Action, and therefore, is located in closer proximity to the PMRF, including the PMRF Airport. Alternative 1 is located relatively farther away from the Syngenta Seeds facilities, Kekaha Landfill, and the Kauai Raceway Park. The Proposed Action and Alternative 1 are both located in close proximity to vehicle traffic along State Route 50, which is expected to be the dominant source of noise in the affected environment. Ambient noise levels of the affected environment for the Proposed Action and Alternative 1 are generally the same.

3.3 INFRASTRUCTURE

3.3.1 Definition of Resource

Infrastructure is the basic structure of the affected environment, including utilities, transportation facilities, drinking water, and wastewater systems.

3.3.2 Affected Environment

Kaumualii Highway (State Route 50) serves the southern and western parts of the island. It is one of two major highways serving Kauai. The highway begins at its intersection with Kuhio Highway (Route 56) in Lihue and ends at Mana on the west shore. Kaumualii Highway is classified as a two-lane State arterial road and it has adequate level of service. Kaumualii Highway runs northwest to southeast through the 13,000-acre property (TMK Parcel 4-1-2-002-001) parallel with the shoreline. Various paved and unpaved roads connect the property to Kaumualii Highway.

The Department of Water (DOW) of the County of Kauai is responsible for the island's 13 separate municipal water systems. The Proposed Action and alternatives would be served by the Kekaha-Waimea system. According to the DOW Water Plan 2020, the Kekaha-Waimea system will have adequate water

supply and storage to meet existing and projected water demands through 2020 (Department of Water Resources 2001). Individual Wastewater Systems (IWS) (i.e., cesspools and septic tank systems) are used to treat wastewater in the surrounding area. The project is located in a critical wastewater disposal area as determined by the Kauai Wastewater Advisory Committee. The County manages stormwater runoff and flood hazards through Department of Public Works Drainage Standards and the Flood Control Ordinance. Electric power is provided by Kauai Electric and LP-Gas is available from the Gas Company (GASCO). Solid waste is recycled or disposed of at Kekaha Landfill. Hazardous waste and materials are discussed in Section 3.6. The affected environment for the Proposed Action and Alternative 1 are the same from an infrastructure perspective.

3.4 CLIMATE

3.4.1 Definition of Resource

Climate refers to meteorological conditions, such as the temperature range, precipitation levels, and wind conditions in a particular region. Due to their connection with precipitation levels, flooding hazards are addressed under climate for purposes of this EA.

3.4.2 Affected Environment

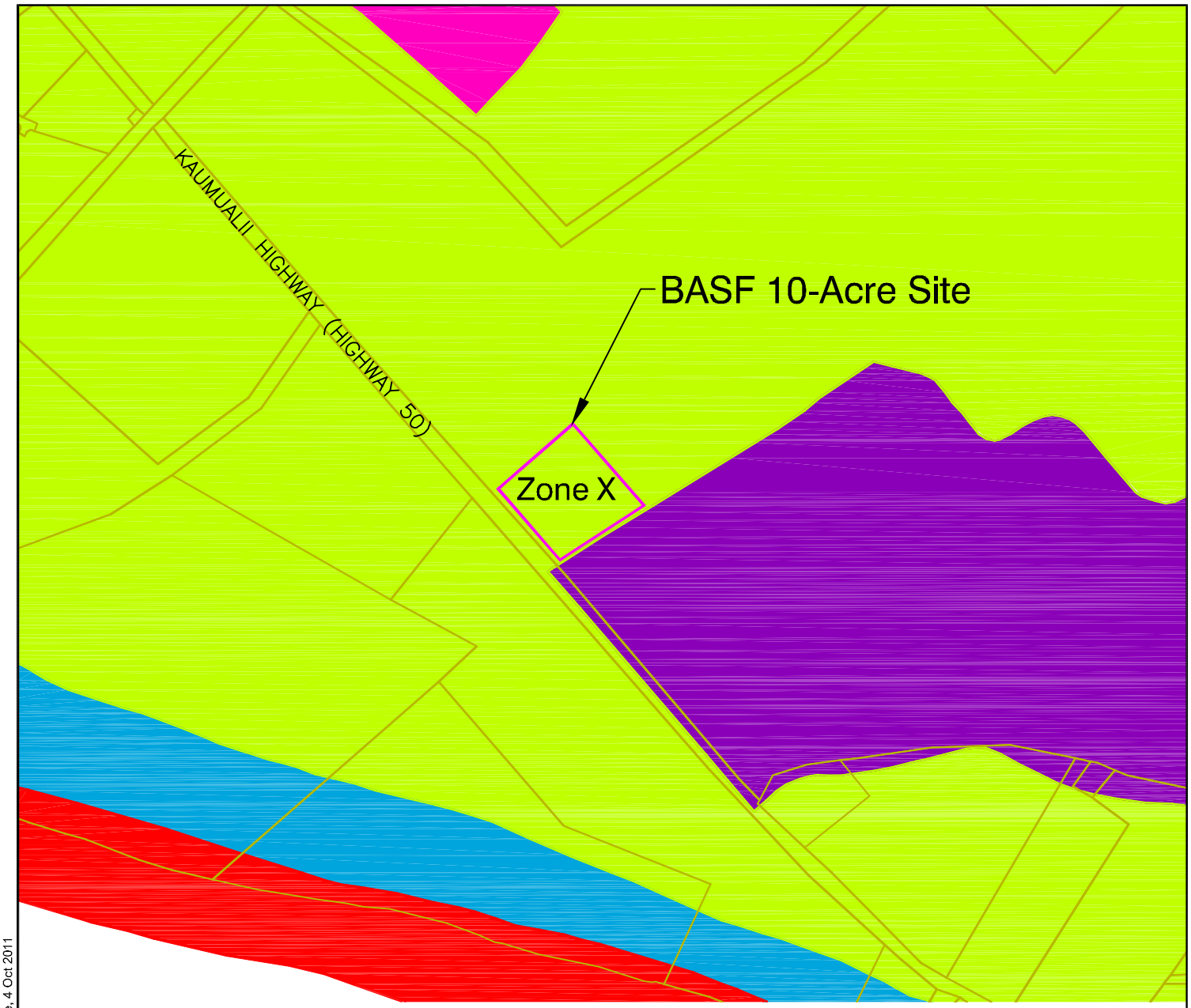
Kauai lies just south of the Tropic of Cancer in the belt of the northeast trade winds. Its climate is generally mild and consistent. The annual average temperature is 75 degrees Fahrenheit (ºF), although temperatures occasionally exceed 80 ºF. With annual rainfall less than 20 inches near the coast, the west side of Kauai is known as the dry side of the island. In comparison, average annual rainfall is 45 inches on the North Shore and 450 inches on Mount Waialeale in the center of the island (Kauai.com, 2011). Trade winds prevail about 80 percent of the time and generally blow from the northeast at 5 to 15 miles per hour. Departures from normal trade wind weather, known as kona storms, tend to occur during winter months. Such storms are characterized by several day variable winds blowing from the south and west.

According to the Hawaii-National Flood Insurance Program Flood Hazard Assessment Tool, the areas that would be affected by the Proposed Action and alternatives under consideration are designated Zone X, which denotes areas located outside of 100-year flood plains (Hawaii National Flood Insurance Program, 2011) (Figure 4). Additionally, these areas are located outside of tsunami hazard zones identified by the Kauai Civil Defense Agency (County of Kauai Civil Defense Agency 2011). The affected environment for the Proposed Action and Alternative 1 are the same from a climatic perspective.

3.5 VISUAL RESOURCES

3.5.1 Definition of Resource

Visual resources are public in nature and include views of a project to and from neighboring scenic resources. When evaluating scenic quality, both natural and manmade components of the existing visual environment should be collectively considered. These components may be evaluated in terms of whether each contributes or detracts to the overall scenic landscape character. In turn, this evaluation contributes to the assessment of scenic quality levels, which are established by evaluating the distinctiveness and



REFERENCE:
Hawaii – National Flood Insurance Program
http://www.hidlnr.org/eng/nfip
State of Hawaii GIS
http://hawaii.gov/dbedt/gis

0 500 1,000
SCALE IN FEET

NORTH

LEGEND:

- A Zone
- AE Zone
- AH Zone
- VE/V Zone
- X Zone

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FLOOD ZONE MAP

10–Acre Site
TMK: (04) 1–2–2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

URS

FIGURE 4

diversity of a particular landscape setting. Public concern over adverse visual impacts is also an important part of the visual impact assessment process. Public concerns over the visual impacts associated with a project are often directly connected to the size and scale of a project. Additionally, the number and presence of people or activities nearby will further inform the level of concern for impacts to the existing scenic quality of the area. Visual impacts associated with a project can be evaluated in the following objective terms: form, line, color and texture. Such terms are used to measure the existing scenic quality and proposed scenic quality with the addition of the project. This methodology allows for an objective assessment of visual resources. The visibility of a project determines how the Project will be seen from particular viewing areas, which directly relates to the level of concern nearby viewers will have. In general, however, perception of details relating to form, line, color, and texture diminishes with increasing distance.

3.5.2 Affected Environment

The project site is currently used for agricultural purposes, though significant portions of the fields are presently fallow. As a result, vegetation within the site boundaries is sparse. Brown to reddish colored topsoil is predominately visible throughout the project site. Currently the project site is used to grow wild cane. Areas surrounding the project site are dominated by weedy vegetation. Views to the northeast of the project site include some of the most striking natural landforms. Undulating, steep hillsides, with relatively flat ridges form an elevated mesa landscape. The faces of the hillsides are characterized by dark brown to black soils, which are visibly grainy in texture. The tops of the mesas are predominantly verdant shades of green, indicative of native tropical vegetation found throughout the Hawaiian Islands. Views to the west, south, and southeast are less visually interesting than those to the northeast. Views to the west, south, and southeast are visually interrupted by intermittent residential development, transmission lines, drainage canals, and dirt roads. Additionally, the Kaumualii Highway is located adjacent to the southwestern side of the project site. Such anthropogenic influences serve to disrupt the natural scenic character of the project area. As a result, the scenic intactness of the visual environment is largely fragmented. The affected environment for the Proposed Action and Alternative 1 are the same from a visual perspective.

3.6 HAZARDOUS MATERIALS AND WASTE

3.6.1 Definition of Resource

In general, materials and waste are considered hazardous when they pose a threat to human health or the environment. The federal Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) defines hazardous substances as substances that are severely harmful to human health and the environment. Many substances defined as hazardous are harmless in their normal uses but dangerous when released. Hazardous waste is defined under the federal Resource Conservation and Recovery Act (RCRA) as a solid waste which, because of its quality, concentration, or other characteristic, may cause or contribute to serious impacts to human health or the environment that are specified in the law. Substances are defined as hazardous under CERCLA, RCRA, and other federal laws.

3.6.2 Affected Environment

Hazardous substances are controlled in the United States (U.S.) primarily by laws and regulations administered by the EPA, the U.S. Occupational Safety and Health Administration (OSHA), and the U.S. Department of Transportation (USDOT). Each agency incorporates hazardous substance safeguards according to its unique Congressional mandate. EPA regulations focus on the protection of human health and the environment. OSHA regulations primarily protect employee and workplace health and safety. USDOT regulations promote the safe transportation of hazardous substances used in commerce.

According to a Phase 1 Environmental Site Assessment prepared by Clayton Group Services of the 13,000-acre property on which the Proposed Action and alternatives under consideration would be located, hazardous materials may be present on the sites or surrounding areas due to past uses of the property, such as herbicide/pesticide mixing and storage, electrical transformers, flow meters containing mercury, and a dump area (Clayton Group Services 2003). However, a field visit performed on August 9, 2011 indicated that no physical evidence of these conditions or other hazardous materials leaks, use, or storage is present on the Proposed Action and Alternative 1 sites. There are no hazardous materials sites designated as Superfund sites by the EPA Superfund Program in Kauai (USEPA 2011b).

There is a 500-gallon mobile diesel tank located on an adjacent property to the northeast of the proposed site. This tank is located approximately 500 feet (150 m) east of the proposed site. This area is occupied by Shredco, a green waste processing company that performs on-site screening and mulching, green waste removal and disposal, and recycled landscape and garden products such as mulch and compost. According to Danford Kaeo, owner of Shredco, a 15-acre portion of Field 309 used by Shredco is for composting and machine storage. Composting of green waste is performed onsite. The 500-gallon mobile diesel tank for various machinery is usually stored offsite at project locations, but may also be stored at the Field 309 site as needed. The affected environment for the Proposed Action and Alternative 1 are the same from a hazardous materials and waste perspective.

3.7 RECREATIONAL RESOURCES

3.7.1 Definition of Resource

Recreational resources offer opportunities for residents and visitors to engage in leisurely activities. Recreational resources include parks and open space as well as other infrastructure facilitating leisurely activities on land or water, such as piers and harbors. Recreational resources offer opportunities such as hiking, fishing, beachcombing, spelunking, and boating. Recreational opportunities and resources are important to economic activity and quality of life.

3.7.2 Affected Environment

Recreational resources in the vicinity of the Proposed Action and alternatives under consideration include the following parks and other recreational infrastructure within the nearby towns of Kekaha and Waimea and along the shoreline (distances provided are relative to the Proposed Action):

- MacArthur Park (0.75 miles southeast);

- HP Faye Park (1.75 miles to the east);
- Kikiaola Small Boat Harbor (3.0 miles to the southeast);
- Kekaha Beach Park (1.25 miles to the east);
- Waimea Athletic Field (4.5 miles to the east);
- Hapokele Park (4.75 miles to the east);
- Captain Cook Memorial Park (4.75 miles to the east);
- Waimea State Recreation Pier (5.0 miles to the east); and
- Waimea River Park (5.0 miles to the east).

The Kauai General Plan emphasizes outdoor recreation and cultural tours of the mountains and ocean as part of Vision 2020 for the west side of Kauai. The affected environment for the Proposed Action and Alternative 1 are the same from a recreational resources perspective. However, the distances to recreational resources provided above vary slightly for Alternative 1 since Alternative 1 is located two miles to the northwest of the Proposed Action.

3.8 GEOLOGY AND SOILS

3.8.1 Definition of Resource

Geology refers to the surface and subsurface materials of which a land area is composed, including soils and rocks. Important geologic characteristics of soils and underlying rocks include stability, slope, compatibility, shear strength, and productivity. Discussions of geology and soils typically identify existing conditions and determine how the Proposed Action and alternatives under consideration would likely affect, and be affected by, geology and soils.

3.8.2 Affected Environment

Kauai is the northernmost and geologically oldest of the main Hawaiian Islands (MacDonald et. al., 1960). The island is roughly circular in shape, with a maximum elevation of 5,170 feet and a mean diameter of about 32 miles (Stearns, 1966). The island is composed of lavas in two stratigraphic groups:

(1) older Waimea Canyon Basalt, comprised of mainly tholeiitic lava flows; and

(2) rejuvenated or post-erosional Koloa Volcanics, comprised of highly alkalic lavas and related volcanic rocks (Macdonald et al., 1960; Clague and Dalrymple, 1988). The rejuvenated-stage Koloa Volcanics represent the latest volcanism on Kauai, and consist of alkalic basalt, basanite, nephelinite, and melilitite lavas and tuffs (Macdonald et al., 1960).

The Proposed Action and alternatives under consideration lie on Koloa Volcanic Series strata. On the surface, the Proposed Action site is characterized by fill land, which consists mostly of areas filled with bagasse and slurry from sugar mills (Figure 5). Fill land also can include materials from dredging and soil excavations. Generally, fill materials are dumped and spread over marshes, low-lying areas along coastal flats, coral sand, coral limestone, or areas shallow to bedrock (Foote D. et al 1972).

LEGEND:

Fd Fill Land

REFERENCE:
Aerial from ESRI and USGS
http://websoilsurvey.nrcs.usda.gov/app/homepage.htm

NORTH

0 500 1,000
SCALE IN FEET

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SOIL MAP

10–Acre Site
TMK: (04) 1–2–2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

URS

FIGURE 5

The Proposed Action site consists of sedimentary rocks that are younger calcareous sediments. Specifically, it is unconsolidated alluvium along the stream valleys and coastal plains, graded approximately to present base load. A drainage ditch runs south of the Waiawa Reservoir and ends approximately 800 feet north of the site.

Soil is uniform across the Proposed Action site, consisting of soft, dry, reddish brown sandy silt, and approximately five percent gravel. Pieces of black irrigation tubing were observed in the soil throughout the site. For additional information refer to the Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii issued August 1972 (Foote D. et al 1972).

The site is in an area zoned Agriculture. According to the Kauai General Plan, lands included within the Agriculture designation shall be predominantly used for or held in reserve to be used in the future for agricultural activities. These activities include the breeding, planting, nourishing and caring for, gathering, and processing of any animal or plant organism, including aquatic animals and plants, for the purpose of producing food or material for non-food products; the commercial growing of flowers or other ornamental plants; the commercial growing of forest products; and the commercial breeding and caring for domestic animals and pets.

The primary intent of the Agriculture designation is to conserve land and water resources in order to insure an excellent resource base for existing and potential agricultural uses; assure a sufficient supply of land available for sale or lease at a cost that is economically feasible for agricultural enterprise; and promote and preserve open agricultural lands as a key element of Kauai's rural character and lifestyle, essential to its image as "The Garden Island" and to the continued viability and development of Kauai's visitor industry. In administering zoning and subdivision regulations, the County shall seek to preserve important agricultural lands. Important agricultural lands include those with an "A" or "B" productivity rating by the Land Study Bureau (LSB) evaluation or designated "Prime" or "Unique" by the Agricultural Lands of Importance State of Hawaii (ALISH) evaluation; provided that these ratings shall be superseded at such time as the State of Hawaii officially maps and designates Important Agricultural Lands, as mandated in the State Constitution.

The Proposed Action site is not designated prime or unique by the ALISH evaluation; however, the site has a productivity rating of "B" in the LSB evaluation. The "B" productivity rating is the second highest on the LSB scale of A to E. The Alternative 1 site is not designated prime or unique and is designated "C" by the LSB evaluation.

Except for the agricultural designations described above, the affected environment for the Proposed Action and Alternative 1 are the same from a geology and soils perspective.

3.9 WATER RESOURCES

3.9.1 Definition of Resource

Water resources is a broad term that encompasses surface water, groundwater, nearshore water, wetlands, and other sources of water that support a variety of human activities, plant and wildlife species, habitats, and ecosystems. Surface water resources typically include stormwater, lakes, streams, and rivers, while water located beneath the ground surface within soil pore spaces or the fractures of rock formations is

known as groundwater. Nearshore water is generally considered the area extending seaward from the shoreline beyond the surf zone. A wetland is an area of land that is saturated with water either permanently or seasonally. Water within wetlands can be saltwater, freshwater, or brackish. Examples of wetlands include marshes and swamps. Services performed by wetlands include water purification, shoreline stability, and habitat for plant and wildlife species.

3.9.2 Affected Environment

3.9.2.1 Surface Water

The Proposed Action is within the Hoea subbasin, part of the Kekaha watershed, which is 15.2 square miles, with a maximum elevation of 3,153 feet (Kauai Watershed Alliance 2005). The direction of runoff is towards the southwest. The percent of the watershed in the different land use districts is as follows: 84.2% agricultural, 13.2% conservation, 0% rural, and 2.6% urban.

There are no water bodies located onsite. The site is located approximately 4,650 feet (less than 1 mile) southwest of the Waiawa Reservoir, which has a siphon that runs northeast of the project site, but not onto the project site. The siphon runs adjacent to the southwestern border of the site as it ultimately drains to the Pacific Ocean. The project site is approximately 2,450 feet (0.5 mile) north of the Pacific Ocean.

The Proposed Action lies within the Federal Emergency Management Agency (FEMA)'s Federal Insurance Rate Map (FIRM) Panel 1500020251F, effective date November 26, 2010. The FIRM Panel illustrates that the Proposed Action is in "Other Areas" Zone X, which is designated as "areas determined to be outside the 0.2% annual chance floodplain" (500-year floodplain) (Figure 4). The adjacent property to the south is in a Zone AH, which is a "special flood hazard area subject to inundation by the 1% annual chance flood (100-year flood) with flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined". The Base Flood Elevation (BFE) is 12 feet.

Flooding, stream habitat degradation, and coral reef impacts are just some of the water resource issues in the Kekaha-Waimea watershed. The area is characterized by fallow lands left by the former sugarcane agriculture and development primarily along the shoreline. Current degraded conditions seem to have resulted in high erosion rates, a decline in native aquatic resources, flooding in the low lying areas, and damages to coral reefs.

The affected environment for the Proposed Action and Alternative 1 are the same from a surface water perspective.

3.9.2.2 Groundwater

The Proposed Action is underlain by two aquifers classified as the Waimea Sector Kekaha Aquifer System. The upper aquifer is unconfined (the aquifer is not confined under pressure beneath relatively impermeable rocks or soil), basal (fresh water in contact with seawater), and is a sedimentary aquifer. This aquifer has potential use and is ecologically important. This aquifer is irreplaceable, has a moderate salinity (1,000-5,000 mg/l Cl-), and the aquifer is listed as having a high vulnerability to contamination (Mink and Lau 1992).

The lower aquifer is confined (the aquifer is confined under pressure beneath relatively impermeable rocks or soil), basal (fresh water in contact with seawater), and is a dike-type aquifer. This aquifer has potential use for drinking water. This aquifer is replaceable, has a low salinity (250- 1,000 mg/l Cl-), and the aquifer is listed as having a low vulnerability to contamination (Mink and Lau 1992).

The quality of the groundwater is very good and requires no treatment except for disinfection. The water supply for the Kekaha water system comes from the following sources:

- Kekaha, Waipoa Valley Well
- Kekaha, Paua Valley Well
- Kekaha Shaft 12

All of the water is chlorinated and pumped into the distribution system or stored in the two Kekaha 500,000 gallon tanks (County of Kauai, Department of Water 2011).

The affected environment for the Proposed Action and Alternative 1 are the same from a groundwater perspective.

3.9.2.3 Wetlands

Historically, the Mana Plain was primarily characterized by wetlands. However, marshes were drained in the 1920s and pumping stations are utilized to maintain present conditions and prevent the re-formation of wetlands on the Mana Plain. The former wetland areas of the Mana Plain are prone to flooding.

There are no wetlands on the Proposed Action or Alternative 1 sites. The nearest wetlands is a mitigation project overseen by the Department of Land and Natural Resources' Division of Forestry and Wildlife, Kawaiele Sand Mine Bird Sanctuary located approximately 2.5 miles (12,950 feet) northwest from the Proposed Action (approximately 0.5 miles from Alternative 1) and within the PMRF, which is designated as conservation land. This area is within 0.5 mi of the Pacific Ocean. A designated sub-tidal marine mollusk reef is located to the south of the Proposed Action. This area is considered a wetland. The drainage ditch adjacent to the Proposed Action site has potential to attract birds foraging for food. When present, other standing bodies of water also will have potential to attract birds foraging for food.

The affected environment for the Proposed Action and Alternative 1 are the same from a wetlands perspective.

3.9.2.4 Nearshore Water

Nearshore waters closest to the Proposed Action and Alternative 1 are classified as class A, Open Coastal Waters. It is the objective of class A waters that their use for recreational purposes and aesthetic enjoyment be protected. In addition, class A waters shall not act as receiving waters for any discharge that has not received the best degree of treatment of control compatible with the criteria established for class A water (Chapter 11-54-3, HAR). The affected environment for the Proposed Action and Alternative 1 are the same from a nearshore waters perspective.

3.10 BIOLOGICAL RESOURCES

3.10.1 Definition of Resource

Biological resources include species of vegetation, wildlife, and fisheries, and habitat. Biological resources discussed in this section include botanical, avian, or mammalian resources of special concern, particularly species listed under federal or state endangered species law. Also discussed are species considered sensitive, protected, or proposed for protection.

3.10.2 Affected Environment

The affected environment for biological resources described below is based on the biological resources survey report prepared for this EA unless otherwise noted (AECOS 2011).

3.10.2.1 Botanical Resources

The Proposed Action site supports only naturalized exotic species and is mostly an abandoned sugar cane (*Saccharum officinarum*) field that has recently been plowed (AECOS, 2011). Native flora are not present on the site. The margins of the field are not plowed and support tall Guinea grass (*Panicum maximum*), para grass (*Urochloa mutica*), and patches of the shrubby koa hoale (*Pluchea leucocepheala*). A total of 26 plant species were observed. Plants currently present on the site are primarily weedy species. Vegetation is sparse because of the plowing on the Proposed Action site (Photograph 2).

Photograph 2. Vegetation on Project Site

3.10.2.2 Mammalian and Avian Resources

A total of 21 species of bird and two species of mammal were observed or detected in the Proposed Action site. Avian densities were typical for the habitats present in the vicinity of the project site and the location on the Mana Plain of western Kaua‘i. Only two of the 21 species detected are native to the Hawaiian Islands. One of the native species detected is the Hawaiian Goose or Nēnē (*Branta sandvicensis*), which is an endangered species. All of the Nēnē recorded during the course of this survey were banded birds.

The other native species detected is the black-crowned night-heron (*Nycticorax nycticorax*), an indigenous resident breeding species, which was flushed from an adjacent, overgrown area during bird counts (AECOS 2011). Black-crowned night-heron are commonly encountered in close proximity to almost any water feature on Kauai. Zebra doves (*Geophila straiata*) were the most common species observed, and along with the house finch (*Carpodacus mexicanus*), nutmeg manikin (*Lonchura punctulata*), and red junglefowl (*Gallus gallus*), made up over 50 percent of the 288 birds observed. There are no nesting colonies, nor is there appropriate nesting habitat for Hawaiian Petrel (*Pterodroma sandwichensis*) or Newell’s Shearwater (*Puffinus auricularis newelli*) seabird species, within or in the vicinity of the site. No migratory shorebirds were recorded during the biological resources survey.

Mammal species observed were domestic cat (*Felis catus*) and domestic dog (*Canis familiaris*). Other mammals likely to be present on the Mana Plain include rats (*Rattus rattus, R. exulans*) and feral pigs (*Sus scrofa*), although neither were documented during the biological survey of the Proposed Action site and surrounding area (AECOS 2011).

3.10.2.3 Special Status Species

According to the biological resources survey report (Appendix A), the Proposed Action site does not contain any plant or mammal species protected or proposed for protection under either federal or state endangered species programs. No federally-designated critical habitat is present on or adjacent to the site. There is no equivalent statute designating critical habitat under state law (AECOS, 2011).

However, one avian species listed as endangered under federal and state endangered species statutes, the Hawaiian Goose or Nēnē (*Branta sandvicensis*), were recorded near the site.

The Hawaiian goose (*Branta sandvicensis*), commonly referred to as Nēnē in Hawaii, is a species of goose native to the Hawaiian Islands. Nine Hawaiian geese or Nēnē were observed flying over the site, seven in one group and two separately, landing adjacent to the Proposed Action site and entering the drainage ditch that lies between the Proposed Action area and the Kaumualii Highway.

In addition, the endangered Hawaiian petrel (*Pterodroma sandwichensis*) and the threatened Newell's shearwater (*Puffinus aricularis newelli*) have been recorded flying in the vicinity of the Proposed Action area but the site itself supports no suitable nesting habitats for these seabirds and they were not seen during surveys (AECOS 2011).

3.11 CULTURAL RESOURCES

3.11.1 Definition of Resource

Significant cultural resources are defined by the National Historic Preservation Act and Chapter 343 of the Hawaii Revised Statutes (HRS). According to the National Historic Preservation Act (NHPA), a historic resource is defined as, "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register…" According to Chapter 343 of the HRS, cultural resources are defined as "cultural beliefs, practices, and resources of native Hawaiians and other ethnic groups." Chapter 343 requires that the environmental assessment process account for cultural resources in determining the significance of impacts that could occur as a result of a proposed action.

3.11.2 Affected Environment

3.11.2.1 Historical Context

Kekaha, Pōki´i, Wai´awa and Mānā are *ahupua´a* [1] in the ancient district of Kona, Waimea *´okana* (a district or subdivision) on the southwest side of the island of Kaua´i. All of these *ahupua´a* are now *´ili*

[1] "In old Hawai'i, *ahupua'a* was the common subdivision of the land…The *ahupua`a* consisted most frequently of a slice of an island that went from the top of the local mountain (volcano) to the shore, often following the boundary of a stream drainage. Each *ahupua'a* included a lowland *mala* (cultivated area) and upland forested region. [2]

´āina (a further division of land within the *ahupua‘a*) of the *ahupua‘a* of Waimea. Waimea *Ahupua´a* is by far the largest on the island, comprising 92,646 acres and accounting for more than a quarter of the total land area of Kaua´i. It encompasses all of the Waimea River Canyon area, the uplands of Kōke´e, the high swampy plateau of Alaka´i, and the northwestern coastal valleys of Nu´alolo and Miloli´i (Gray 1875: 140-146). Waimea *ahupua´a* is composed of several regions, which are very different in climate and terrain. These differences essentially dictated the kinds of resources that were available, and hence had much to do with the way the *ahupua´a* was settled by pre-Contact Hawaiians. The well-watered valley and delta of the Waimea River were ingeniously developed and engineered for wetland agriculture, and represents the epitome of the typical Hawaiian and Kaua´i-type valley settlement (Handy and Handy 1972).

On the southwestern leeward coast, about three miles from Waimea Bay, a broad, flat plain stretches between the Waimea River delta and Polihale to the west (Handy and Handy 1972). It is here that Kekaha, Pōki´i, Wai´awa and Mānā are located, backed on the *mauka* (towards the mountain) side by steep low cliffs and a series of small valleys and gulches. Just below, *makai* (towards the ocean) of the ridges and valleys, lies the Kekaha Ditch, which winds its way down from the Waimea River in the mountains. From the edge of Kekaha Ditch to the ocean lie the former swamp lands of the Kekaha-Mānā plains, now planted in corn and truck produce, and previously in sugar cane. The project site is located on lands formerly within the eastern extent of the Kekaha Sugar Plantation. Between these former swamp lands and Kekaha Ditch is a strip of land that once housed many people in the villages of Pōki´i, Wai´awa, Kaunalewa, Mānā, and others. Between the villages were intermittent homes, with the Old and New Government Roads to Mānā (also called the Mānā Road) linking each community between Mānā and Kekaha.

The name, “Kekaha,” can be interpreted to mean “dry land” or an area near the shore that is not favorable for planting. The Kekaha region of Kauaihas low annual rainfall and no permanent streams. Despite the low rainfall, early visitors to Oahu in the late 1700s indicate that the Kekaha area was well-populated. Inhabitants manufactured cloth from *wauke* (Mulberry), and grew taro and sugarcane in the swampy ground. In the mid-1800s, Land Commission Awards (LCA) requests show that there was both dry land and irrigated agriculture occurring in the region along with salt beds and at least one fishery. Valdemar Knudsen settled in Wai´awa in 1854. His agricultural and pastoral lands covered much of the region and eventually he had control over the entire district. Knudsen made use of local labor by requiring residents to work for him three days each month as rental payment.

A Chinese immigrant, Leong Pah On, began growing rice commercially in the 1860s in the drained swamplands of the area, eventually cultivating 600 acres throughout Mānā, Kekaha, and Waimea for rice production. Pah On imported laborers from China to work the rice fields, presumably creating a significant Chinese population in the area. Rice cultivation continued until 1922 when the Kekaha Sugar Co. assumed ownership of the lands. The Kekaha Sugar mill closed in 2000 and the DLNR managed these lands until ADC was awarded them by the state in 2003. The land, including the current project and survey areas, is now classified as "Agricultural" by the State of Hawaii.

Ahupua‘a varied in size depending on the economic means of the location and political divisions of the area.” Source: http://en.wikipedia.org/wiki/Ahupua'a

Kekaha is located a short distance away of the project site to the south and southeast; it has become the "4th largest community on the island of Kaua´i" with about 2,000 residents currently living there. It is also the hometown of the largest group of "transplanted" Hawaiians from Ni´ihau Island in the state. Within its bounds are old neighborhoods that were once part of the original camp, Hawaiian Homelands Housing, vacation rental properties along Kaumuali´i Highway facing the beach, and a variety of buildings related to plantation times, which includes the old Kekaha Sugar Mill.

3.11.2.2 Historical Research and Field Check

Proposed Action

An Archaeological Literature Review and Field Inspection (LRFI) of the proposed project site was completed between July and August 2011 by Cultural Surveys Hawai‘i, Inc. A technical report was completed for this study and it is this report that serves as the primary source for summary information provided in this section (Coward and Hammatt 2011). The cultural resources survey report is attached to this EA as Appendix B. The purpose of the LRFI was to identify, as feasible, the presence of cultural resources within the defined project site as a result of historical research and a limited field investigation. Documents reviewed included archival sources, historic maps, LCA requests, and previous archaeological reports. A technical report was completed to present the results of the LRFI and to identify any sensitive areas within the project site that may need further investigation or mitigation.

A predictive model was developed as part of the LRFI to discuss and possibly define traditional Hawaiian settlement patterns in Kekaha. The application of this model to results of the historical research and the limited field investigation indicated that two types of archaeological resources are likely present within the project site and its environs: remnants of pre-Contact habitation and agricultural activities (e.g., terraces, mounds, and stacked walls) and infrastructure related to the plantation era (e.g., water control features, structures, roads, and field dividers). It was likewise noted that other resources potentially encountered include pre-Contact shell middens and artifacts, as well as historic-era trash deposits.

Results of the LRFI indicated that no previous archaeological studies had been completed in the project site, though 26 previous archaeological studies have been completed in the surrounding vicinity. Previous studies have identified burial caves, human burials, habitation features, agricultural features, and *heiau* (temples). No prehistoric or plantation-era sites were identified in the subject property as a result of the historical research and limited field inspection; nor were historic-period buildings or structures observed. Most of the project site had already been disturbed with recent activity for transportation or agricultural purposes. The combination of modern development and decades of previous cultivation has likely significantly impacted or destroyed any surface or subsurface materials that may have existed within the project site.

Alternative 1

Cursory online research of the general location of Alternative 1 did not identify any National Register of Historic Places (NRHP) eligible properties within the parcel or the immediate vicinity. The nearest NRHP property listed represents the Tsoong Nyee Society Cook House, located north of Alternative 1 near the Barking Sands Pacific Missile Range Facility. Other NRHP properties were likewise listed to the

south-southwest of the Alternative 1 site, approximately eight or more miles away, in Waimae. The State Historic Preservation Division (SHPD), Data Resource Internet Site, provided a general listing of previous cultural resource studies organized by TMK number as well as a demonstration GIS-portal showing the general location of recorded cultural resources (SHPD 2011).

A search of the SHPD Data Resource Internet Site resulted in the identification of nine previous studies having been completed for TMK Parcel 4-1-2-002-001 and in the identification of four recorded resources that are possibly in close proximity to the Alternative 1 location (Site 03650, Site 00754, Site 00012 and Site 00013). Using geographic landform association, Site 03650 appears to be in nearest proximity to Alternative 1. This site is associated with SHPD report K-00523, Draft: Burial Treatment Plan for State Site 50-30-05-3650 at Proposed Kekaha Pumping Station. Limaloa, Kekaha, Kaua`i. TMK 4-1-2-002:001 (1994). The remaining sites displayed on the SHPD Data Resource GIS-portal appear to flank the Alternative 1 location, with one to the south-southwest along the coastline (Site 00754) and the remaining two at the base of the mountains to the north-northeast (Sites 00012 and 00013). The report title associated with Site 03650 appears to indicate the presence and treatment of a human burial.

Access to reports listed by the SHPD was not available for this desktop research, nor could specific characteristics of recorded resources be defined. A formal record search for the Alternative 1 location is necessary to define previously recorded resources and to gain access to publications resulting from previous cultural resources investigations completed.

3.12 LAND USE

3.12.1 Definition of Resource

Land use includes the past, present, and planned land uses and government policies governing the preservation and development of land.

3.12.2 Affected Environment

The proposed site is zoned Agriculture by the Kauai County Planning Department (Figure 6). The Proposed Action and alternatives under consideration are located on the west side of Kauai on the Mana Plain. The Kauai General Plan defines the west side as the Waimea-Kekaha and Hanapepe-‘Ele’ele planning areas. This part of the island is characterized by low-key development, rural lifestyle, and diverse land uses including discrete small towns separated by open space, broad expanses of agricultural land, the unique resources of the Waimea Canyon and Koke’e State Parks and mauka wilderness areas, the Pacific Missile Range Facility (PMRF), and unique coastal sand dunes at Braking Sands and Polihale. The foothills of nearby mountains, which are used for hunting and gathering of maile and mokihana, are located approximately one mile north of the Proposed Action. Additional land uses include ancient Hawaiian sites, camping grounds, and beaches. The proposed site is located approximately 2,450 feet (747 meters) northeast of the Pacific Ocean. The Proposed Action and alternatives under consideration are not located within a SMA or SSA under the Hawaii CZM Program (see Section 1.4.5 for discussion of the Hawaii CZM Program).

The surrounding area is primarily cultivated agricultural land, much of which was once used by the Kekaha Sugar Company. Also present are commercial businesses and recreational resources including

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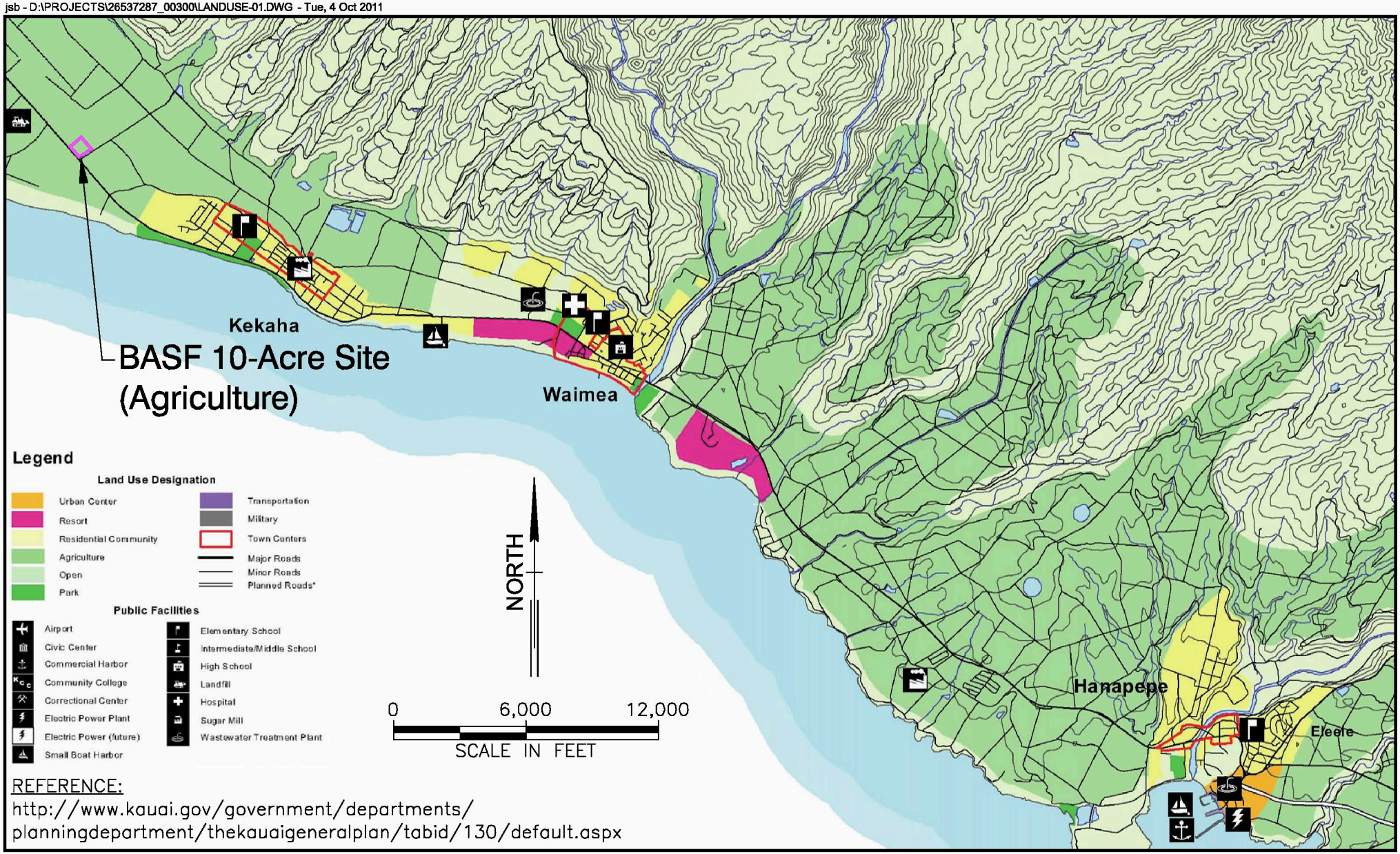

REFERENCE:
http://www.kauai.gov/government/departments/planningdepartment/thekauaigeneralplan/tabid/130/default.aspx

LAND USE MAP

10–Acre Site
TMK: (04) 1–2–2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

URS

FIGURE 6

shrimp farms, agricultural field offices operated by entities other than BASF, and a bird sanctuary. A Syngenta Seeds Inc. facility is located approximately 250 feet southwest of the proposed site. Pioneer Hi Bred is located approximately 0.5 mile southeast of the proposed site. The PMRF is located approximately 0.75 miles to the west of the Proposed Action site and immediately across Kaumualii Highway from Alternative 1. Kekaha Landfill is located 0.5 miles to the west of the proposed site. Waiawa Reservoir is located approximately 1.0 mile to the north. Approximately one mile to the southeast is Kekaha Town, with a population of 3,537 (U.S. Census 2010). Kekaha consists primarily of residential land uses and small businesses. Additional land uses of note in Kekaha include two schools, several churches, and parks. The nearest town after Kekaha is Waimea, located approximately 4.5 miles to the east. The nearest airport is approximately 30 miles to the east. Parks and other recreational resources in the surrounding area are discussed in Section 3.11. The affected environment for Alternative 1 is the same as the Proposed Action from a land use perspective.

3.13 SOCIOECONOMIC RESOURCES

3.13.1 Definition of Resource

Socioeconomic resources refer to the social and economic qualities of the human environment, such as demographic characteristics, employment and income-generating activities, and the ways in which people live, relate to one another, organize to meet their needs, and engage in leisurely activities.

3.13.2 Affected Environment

The population of Kauai was 67,091 in 2010 (U.S. Census 2010). The town nearest the Proposed Action and alternatives under consideration is Kekaha, located approximately one mile to the southeast. The population of Kekaha was 3,537 in 2010 (U.S. Census 2010). Approximately 25 percent of the population is 17 years or younger, and approximately 16 percent is 65 years or older. Median age is approximately 40 years. There are 1,286 total housing units in Kekaha, approximately 91 percent of which are occupied (1,165 units). Average household size is 3.03 persons.

Kekaha is racially diverse with no majority group. Asians represent 31.5 percent of the population, 18.6 percent are White, 15.7 percent are Native Hawaiian and other Pacific Islander, and 32.6 percent are two or more races. Black or African American, American Indian and Alaska Native, and Other Race represent the remaining 1.6 percent of the population. The affected environment for Alternative 1 is the same as the Proposed Action from a socioeconomic perspective.

SECTION 4 ENVIRONMENTAL CONSEQUENCES

This section evaluates the direct and indirect, short- and long-term impacts of the Proposed Action, Alternative 1, and the No-Action Alternative on the surrounding environment and community. Also evaluated are cumulative impacts that could result from the incremental effects of the Proposed Action or alternatives under consideration when considered together with similar effects from past, present, and reasonably foreseeable future actions. As explained in Sections 4.1 through 4.14, no direct, indirect, or cumulatively significant effects would occur as a result of the Proposed Action, Alternative 1, or the No-Action Alternative.

4.1 AIR QUALITY

4.1.1 Proposed Action

The Proposed Action's construction phase would temporarily impact air quality in the immediate area of the installation site by increasing vehicular and machinery emissions. These increased emissions would be short-term in nature as the construction of the field office buildings is expected to be less than 12 months in duration. Construction emissions would be limited to combustion exhaust from construction equipment and vehicles, and fugitive dust generated during ground disturbance activities. Use of water for dust control during construction will minimize the potential for visible emissions and satisfy HDOH Rules §11-60.1-32 and §11-60.1-33.

During operations air emissions would be generated from the two dryer buildings and from vehicles traveling between the office structures and fields. The dryer buildings contain seed dryers, which pass warm air through the harvested seed to reduce the seed moisture content. The air is heated to 100 degrees Fahrenheit by propane burners. All equipment associated with the dryer process is currently in use at an existing site and will be relocated to the new field office site. The heating equipment operates under valid permits from the HDOH, Clean Air Branch, which will be modified to incorporate the new location of the equipment. The proposed operation of the propane heaters will be the same as current operations, so no change in emissions is expected. The Applicant will submit an application for permit modification in accordance with HDOH Rule §11-60.1-76, Applications for Modifications. Current operations include about ten vehicles that travel between the fields and office buildings at an average of 1.5 trips per day. Due to the new location of the field office, the average trip distance between the field and the office will be reduced by roughly three miles. This reduction in vehicle miles driven will reduce the air emissions generated from combustion exhaust and fugitive dust.

The current operations do not exceed USEPA or HDOH air quality emissions limitations and the Proposed Action will potentially reduce future air emissions slightly. Therefore, the Proposed Action would have no significant impacts on air quality.

4.1.2 Alternative 1

Compared to the Proposed Action, Alternative 1 would generate the same amount of air emissions in the same general area. Therefore, air quality impacts under Alternative 1 will be the same as the Proposed Action. There would be no significant impacts to air quality under Alternative 1.

4.1.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. As a result, no impacts to air quality would occur.

4.2 NOISE

4.2.1 Proposed Action

Project construction activity would likely involve an assortment of equipment for typical construction phases such as grading or site clearing, concrete pours, steel erection and mechanical system installation, and site clean-up. On average, and for a project site of this size, it is assumed that no more than two pieces of equipment would be operating simultaneously at any one time and thus produce an hourly average sound pressure level of approximately 88 dBA Leq at a distance of fifty feet. Conservatively assuming that available natural sound attenuation is only from geometric divergence (i.e., roughly -6 dBA per doubling of distance from a source), the anticipated minimum distance at which 78 dBA (the benchmark sound level above which requires a community noise permit, as indicated in Section 3.2.2.3) or less could be met is 160 feet. Since the State Route 50 right-of-way (ROW) is 170' wide, the nearby Syngenta property would be expected to experience less than 78 dBA Leq of construction noise, thus not triggering the permit need. However, according to the Kauai Noise Reference Manual, due to the size of the project (i.e., exceeds $250,000) a community noise permit application is expected anyway.

Based on the above assumption for sound source level, construction noise would be expected attenuate to 70 dBA Leq at a distance of approximately 400' from the noise-producing equipment, to 60 dBA Leq at a distance of 1,250', and 55 dBA Leq at 2,250'. A portion of the Syngenta property is expected to be within the 400' distance, but the noise would be temporary (i.e., concludes with completion of project construction) and if approved by permit and/or variance would be considered a less than significant impact. Commercial "B" zoned properties do not appear within the 1,250' construction noise buffer. Similarly, residential land uses zoned "A" having 55 dBA Leq noise limits are located much farther away than the 2,250' distance value. Consequently, construction noise impacts are not expected for these two types of receptors.

Completion of the Proposed Action would create occupied buildings for administrative and agricultural/industrial functions that feature HVAC systems and, among other purposes, a seed drying operation. Assuming the former includes rooftop or other mechanical equipment exposed to the outdoors that does not emit more than 85 dBA Leq at a distance of five feet, the 100' setback distance between the nearest building exterior surface and the project site fenceline assures that this operation noise contributor would result in less than 60 dBA at the property line and thus comply with either "B" or "C" zoning categories for daytime sound limits. Assuming the seed drying and other noise-producing processes and typical activities are indoors and thus appropriately enclosed, operational noise is expected to result in a less than significant impact with respect to adjacent "C" zoned properties.

While the operating facility may add some daily volumes to the existing traffic counts, the increase to SR-50 is expected to be minimal; hence, the increase in ambient noise is expected to be less than 3 dBA and not considered a significant impact. This analysis assumes the seed drying operation and other project

activities would be OSHA compliant, either by demonstrating equipment and/or process sound levels that are below applicable thresholds for employee exposure without hearing protection, or by incorporating a hearing conservation program and appropriate controls (e.g., administrative, engineering, and application of PPE).

4.2.2 Alternative 1

Alternative 1 would situate the project site closer to PMRF Airport, but in an environment having similar ambient sound to that of the Proposed Action: generally rural land uses in the vicinity of State Highway 50, the expected dominant noise source. The construction and operation noise predictive analysis for the Proposed Action would also apply to Alternative 1, and similarly no significant impact from noise would be expected.

4.2.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. As a result, no impacts from noise would occur.

4.3 INFRASTRUCTURE

4.3.1 Proposed Action

The field office would include a research station, seed handling area, and a machine storage area. Small bench top equipment would be used on the site to thresh and clean small quantities of seed. A total of 16 full-time employees would operate the field office, in addition to seasonal workers on an as-needed basis. Workers also would be present on the proposed site during construction.

The proposed structures, equipment, site improvements, and workers will marginally increase vehicle trips, water and electricity consumption, and generation of wastewater and stormwater runoff on the site and in the surrounding area during the short-term construction period and long-term operation. As a result, the Proposed Action would marginally increase short- and long-term levels of demand on infrastructure in the surrounding area, including Kaumualii Highway, Kekaha-Waimea water system, the electricity grid, and Kekaha Landfill. The marginal increase in demand on transportation, water, electric, and solid waste infrastructure associated with the Proposed Action would not adversely affect any of these systems. These infrastructure systems have adequate capacity to accommodate construction and operation of the Proposed Action. In addition, wastewater would be treated through temporary facilities during construction and an IWS during operation constructed in accordance with applicable provisions of HAR, Chapter 11-62. Stormwater runoff would be managed in accordance with applicable standards. The Proposed Action would not result in any significant effects to infrastructure.

4.3.2 Alternative 1

The field office proposed under Alternative 1 would be substantially the same as the Proposed Action. Only minimal alterations to the layout would be made where necessary due to the alternate location on a nine-acre site located two miles northwest of the Proposed Action. Alternative 1 would use the same transportation, water, electric, and solid waste infrastructure. It would comply with County standards for

wastewater and stormwater. As a result, marginal increases in demand for infrastructure under Alternative 1 would be substantially the same as under the Proposed Action. Alternative 1 would not result in any significant effects to infrastructure.

4.3.3 No-Action Alternative

The No-Action Alternative would not change existing levels of infrastructure demand. Therefore, significant effects to infrastructure would not result. However, BASF field office operations on the Mana Plain would not be consolidated and centralized under the No-Action Alternative. As a result, marginal benefits to transportation infrastructure resulting from reduced travel from the field to currently dispersed field office locations would not be realized.

4.4 CLIMATE

4.4.1 Proposed Action

As described in Section 4.1, the Proposed Action would generate marginal air emissions during construction and operations associated with construction equipment, vehicle trips, and small bench top equipment for cleaning and threshing small quantities of seed. The climate of the west side of Kauai would not be adversely affected by the Proposed Action. Additionally, the Proposed Action is not located within a 1% annual chance (100-year) flood plain or tsunami hazard zone and would not be subject to flooding hazards.

4.4.2 Alternative 1

The field office proposed under Alternative 1 would be substantially the same as the Proposed Action. Only minimal alterations to the layout would be made where necessary due to the alternate location on a nine-acre site located two miles northwest of the Proposed Action. As a result, marginal increases in air emissions under Alternative 1 would be substantially the same as under the Proposed Action. Alternative 1 would not result in any significant effects to the climate of the west side of Kauai. Additionally, Alternative 1 is not located within a 100-year flood plain or tsunami hazard zone and would not be subject to flooding hazards.

4.4.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. Therefore, no impacts associated with the climate of the west side of Kauai or flooding hazards would occur.

4.5 VISUAL RESOURCES

Short-term and localized visual impacts would occur from the presence of construction equipment and crews during construction of the field office. Long term visual impacts associated with construction of the field office include the addition of a manmade structure on what is currently undeveloped agricultural land. The addition of the field office will add a synthetic element to the existing natural environment. The visual impact will not be significant because the existing on-site and neighboring visual environment has

been modified by anthropogenic influences such as residential structures, transmission lines, drainage ditches, and roads such as Kaumualii Highway. This highway abuts the project site to the southwest, and is a designated Scenic Roadway Corridor according to the County of Kaua'i General Plan. While the field office will be visible from Kaumualii Highway, the addition of the field office will not significantly impact views from the highway. One of the primary goals of the Scenic Corridor Designation is to protect the agricultural and rural character of lands located along such roads. As such, the construction of a field office, which will be used to support the principal agricultural use of the property, aligns with the stated Policies of the Scenic Roadway Corridor designation (Policy 5.5.1 and 5.5.2, County of Kaua'i General Plan). In terms of design, the field office would conform with the scale of the nearby residential and agricultural structures, and be designed to correlate with local island architecture. Furthermore, the field office will be painted in mute tones to blend with the existing environment. Given the above considerations, the construction of the field office will not create a significant impact on existing visual resources.

4.5.1 Alternative 1

Due to the close proximity of the Proposed Action and Alternative 1, impacts to visual resources would be the same as those described under the Proposed Action. Therefore, no significant impacts to visual resources will occur as a result of Alternative 1.

4.5.2 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would remain the same. As a result, no impacts to visual resources would occur.

4.6 HAZARDOUS MATERIALS AND WASTE

4.6.1 Proposed Action

There is no evidence of hazardous materials or waste on or adjacent to the Proposed Action site. Hazardous materials or wastes are not expected to be encountered or released during construction or operation of the Proposed Action. If such materials or wastes are discovered or released during construction or operations they will be handled, removed, and disposed of in accordance with applicable state and federal laws, regulations, ordinances, and standards. No significant effects associated with hazardous materials or waste would occur.

4.6.2 Alternative 1

Similar to the Proposed Action, there is no evidence of hazardous materials or waste on or adjacent to Alternative 1, and hazardous materials and wastes are not expected be encountered or released during construction or operation. If such materials or wastes are discovered or released during construction or operations they will be handled, removed, and disposed of in accordance with applicable state and federal laws, regulations, ordinances, and standards. No significant effects associated with hazardous materials or waste would occur.

4.6.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. No significant effects associated with hazardous materials or waste would occur.

4.7 RECREATIONAL RESOURCES

4.7.1 Proposed Action

The Proposed Action would be located on a 10-acre site surrounded by agricultural fields. There are no recreational resources on or adjacent to the proposed site. The nearest recreational resource is MacArthur Park, located 0.75 miles to the southeast. Other resources are at least 1.25 miles to the east or southeast. The Proposed Action would not adversely affect access to MacArthur Park or any other recreational resources. No significant effects to recreational resources would occur.

4.7.2 Alternative 1

Alternative 1 would be located on a nine-acre site two miles northwest of the Proposed Action. There are no recreational resources on or adjacent to Alternative 1. As described in Section 3.7.2, the recreational resources in the areas that would be affected by the Proposed Action and alternatives under consideration are located east and southeast of the Proposed Action. Since Alternative 1 is northwest of the Proposed Action, it would be even further from these resources than the Proposed Action. Therefore, no significant effects to recreational resources would occur.

4.7.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. Therefore, no significant effects to recreational resources would occur.

4.8 GEOLOGY AND SOILS

4.8.1 Proposed Action

The Proposed Action site features generally level terrain. Moreover, the site was cleared of vegetation in 2010. The proposed field office would minimally alter the topography of the site. The Proposed Action will be consistent with drainage standards established by the County of Kauai, Department of Public Works. Implementation of Best Management Practices (BMPs) for erosion and sediment controls during construction will ensure that geologic or soil hazards and adverse effects to water quality do not occur. The Proposed Action would not result in significant effects associated with geology and soils. Although the site soils have an agricultural productivity rating of “B” according to the LSB evaluation, the small number of acres lost (10 acres) are not significant given the large size of the approximately 13,000-acre property.

4.8.2 Alternative 1

Like the Proposed Action, Alternative 1 features generally level terrain. The site also features soil and geology similar to the Proposed Action. Alternative 1 would minimally alter the topography of the site, comply with applicable drainage standards, and implement BMPs for erosion and sediment controls during construction. Alternative 1 would not result in significant effects associated with geology and soils.

4.8.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. No significant effects associated with geology and soils would occur.

4.9 WATER RESOURCES

4.9.1 Proposed Action

The Proposed Action would implement standard construction phase BMPs during construction of the Proposed Action (USEPA 2010). These BMPs would ensure that stormwater runoff from construction does not reach the drainage ditch located to the southwest of the project site. With implementation of construction BMPs, surface water would not be impacted by the Proposed Action. Construction disturbing greater than one acre requires a National Pollutant Discharge Elimination System (NPDES) Permit to monitor runoff and protect water resources during the construction process. If greater than one acre is disturbed, an NPDES permit would be obtained for the Proposed Action.

Construction activities are not expected to reach the underlying aquifer and the concrete lined foundation beneath the field office would prevent any potential chemical spills from reaching the ground; therefore, groundwater would not be impacted by the Proposed Action.

The nearest wetlands is a mitigation project overseen by the Department of Land and Natural Resources' Division of Forestry and Wildlife, Kawaiele Sand Mine Bird Sanctuary located approximately 2.5 miles (12,950 feet) northwest from the Proposed Action and within the Pacific Missile Range Facility, which is designated as conservation land. This area is within 0.5 mi of the Pacific Ocean. It would not be possible for activities at the project site to impact this wetland area due to the existing runoff drainage ditches, distance, and topography.

The Proposed Action lies within the Federal Emergency Management Agency (FEMA)'s Federal Insurance Rate Map (FIRM) Panel 1500020251F, effective date November 26, 2010 (FEMA 2011). The FIRM Panel illustrates that the Proposed Action is in "Other Areas" Zone X, which is designated as "areas determined to be outside the 0.2% annual chance floodplain" (500-year floodplain). Therefore, no significant impacts related to flooding hazards would occur.

The Project Site is not located within an SMA or SSA under the Hawaii CZM Program. No significant environmental consequences associated with water resources would result from the Proposed Action.

4.9.2 Alternative 1

The Alternative 1 site lies within FEMA's FIRM Panel 1500021020F, effective date November 26, 2010 (FEMA 2010). The FIRM Panel illustrates that Alternative 1 is in "Other Areas" Zone X, which is designated as "areas determined to be outside the 0.2% annual chance floodplain". The adjacent property to the north is in a Zone A which is a "special flood hazard area subject to inundation by the 1% annual chance flood with no Base Flood Elevation determined". Therefore, no significant impacts related to flooding hazards would occur. In addition to flooding hazards, other impacts to water resources would be the same as those previously described under the Proposed Action. There would be no significant impacts to surface water, ground water, or wetland resources under Alternative 1.

4.9.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. Therefore, no impacts to surface water, groundwater, wetlands, or nearshore waters would occur due to construction of the field office.

4.10 BIOLOGICAL RESOURCES

4.10.1 Proposed Action

The Proposed Action will not result in adverse impacts to any plant or animal species currently listed or proposed for listing under federal or state endangered species statutes, or otherwise of biological value or interest. The Proposed Action will not affect federally-designated critical habitat. Furthermore, with the prevalence of suitable habitat in the vicinity, the Proposed Action will not result in adverse impacts to Hawaiian Goose or Nene. Shielding of any exterior lighting associated with the Proposed Action is recommended to minimize the potential for impacts to nocturnally flying seabirds, including the Hawaiian Petrel and Newell's Shearwater. The Proposed Action does not extend to the potentially jurisdictional water feature located adjacent to the site and would not directly impact this feature. There would be no significant impact to biological resources under the Proposed Action.

4.10.2 Alternative 1

Like the Proposed Action, the Alternative 1 site was formerly cultivated agricultural land. Alternative 1 is located approximately two miles to the northwest of the Proposed Action on the same property. While heavily overgrown with grasses, shrubs, trees, and weeds, it is not expected to include any special status biological resources. Federally-designated critical habitat is not located or adjacent to the site. Alternative 1 will not extend to any potentially jurisdictional water feature. Impacts to biological resources under Alternative 1 will be similar to the impacts under the Proposed Action. There would be no significant impacts to biological resources under Alternative 1.

4.10.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. Therefore, no impacts to biological resources would occur due to construction and installation of the field house.

4.11 CULTURAL RESOURCES

4.11.1 Proposed Action

No prehistoric or plantation-era sites were observed or identified within the project site as a result of the historical research and limited field inspection. Also, no historic-period buildings or structures are present. Most of the project site had already been disturbed with recent activity for transportation or agricultural purposes. The combination of modern development and decades of previous cultivation has likely significantly impacted or destroyed any surface or subsurface materials that may have existed within the project site. Further consultation with the State Historical Preservation Division will be necessary to establish appropriate mitigation measures, should project-related excavation activities exceed the depth of fill or should unidentified cultural resources be inadvertently discovered. In the unlikely instance that cultural resources are unearthed, notification of the proper authorities would occur immediately according to applicable law. The Proposed Action would have no significant impact on cultural resources.

The LRFI was submitted to the State of Hawaii Historic Preservation Offices for their review and concurrence. The EA will be updated as soon as notification is provided.

4.11.2 Alternative 1

Cursory online research of the general location of Alternative 1 did not identify any sites eligible for the NRHP. In addition, no cultural resources were identified on the site using the SHPD Data Resource Internet Site. Therefore, similar to the Proposed Action, there would be no significant impacts to cultural resources under Alternative 1.

4.11.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. Therefore, no impacts to cultural resources would occur due to the Proposed Action.

4.12 LAND USE

4.12.1 Proposed Action

The Proposed Action would occur on land zoned for agriculture. The proposed field office would be consistent with this zoning designation. Moreover, the Proposed Action would be consistent with surrounding agricultural land uses and the rural character of the west side of Kauai as described in the Kauai General Plan. The site is located approximately 0.75 miles east of the PMRF. The Proposed Action is subject to the Hawaii CZM Program, but the site is not located within an SMA or SSA. No significant land use impacts would occur.

4.12.2 Alternative 1

Similar to the Proposed Action, Alternative 1 would be consistent with its agricultural zoning designation, surrounding agricultural land uses, and the rural character of the west side of Kauai. Alternative 1 is subject to the Hawaii CZM Program, but the site is not located within an SMA or SSA. However, Alternative 1 would be located immediately east of the PMRF across Kaumualii Highway. The PMRF has an easement on nearby State-owned property that protects it from encroachment. The easement limits activities that could potentially interfere with telescope operations at the PMRF, such as light-emitting activities, new electromagnetic sources (such as operations with motors), and fuel storage areas. Moreover, PMRF objects to the development of a field office on the Alternative 1 site. According to Steven Lupkes, Research Station Manager for BASF, the proximity of Alternative 1 to PMRF would potentially interfere with telescope operations at the PMRF (Lupkes 2011). Construction and operation of Alternative 1 would potentially conflict with easement requirements applicable to the site. As a result, the Alternative 1 site will have greater land use impacts relative to the Proposed Action, although these land use impacts would not be significant.

4.12.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. No significant land use impacts would occur.

4.13 SOCIOECONOMIC RESOURCES

4.13.1 Proposed Action

The Proposed Action would employ 16 full-time workers during operations. In addition, the Proposed Action would create temporary construction jobs and hire seasonal workers during operations on an as-needed basis. All full-time positions and 25 percent of seasonal positions require specialized skills or education beyond high school. Adverse effects to population, employment levels, and the local economy would not occur. The Proposed Action would not result in direct or indirect effects that could adversely affect cultural practices of nearby communities, the County of Kauai, or Hawaii.

Moreover, the Proposed Action is primarily surrounded by agricultural fields and open space. The site would not be located in close proximity to any human populations and, as described through this EA, the Proposed Action would not create substantial risks to public health or safety. Therefore, no populations would be disproportionately affected by the Proposed Action, including children, minority, and disadvantaged groups. No significant socioeconomic impacts would occur.

4.13.2 Alternative 1

Since Alternative 1 is located two miles northwest of the Proposed Action, socioeconomic resources impacts would be substantially the same under both scenarios. No significant socioeconomic impacts would occur under Alternative 1.

4.13.3 No-Action Alternative

Under the No-Action Alternative, existing environmental conditions would not change. Therefore, no socioeconomic resources impacts would occur.

4.14 CUMULATIVE IMPACTS

4.14.1 Proposed Action

No other present or planned projects have been identified within an approximately five-mile search radius from the site in which the environmental effects of other projects could combine with the environmental consequences of the Proposed Action or Alternative 1. Therefore, the incremental effects of the Proposed Action would not be compounded or increased by the incremental effects of other projects. In addition, the incremental effects of the Proposed Action would not contribute to cumulatively considerable effects when considered together with similar effects from past projects. The incremental effects of the Proposed Action would not contribute to cumulatively considerable effects for any environmental resource evaluated in this EA. No significant cumulative impacts would occur.

4.14.2 Alternative 1

Since Alternative 1 would be located two miles northwest of the Proposed Action, the potential for cumulative impacts under Alternative 1 would be substantially the same as the Proposed Action. No significant cumulative impacts would occur.

4.14.3 No-Action Alternative

Under the No-Action Alternative, the affected environment would not change. The No-Action Alternative would not have any incremental effects that could combine with similar effects from past, present, or future projects to result in cumulatively considerable effects. Therefore, no significant cumulative impacts would occur.

4.15 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Irreversible and irretrievable resources cannot be recovered once committed. Non-renewable resources that would be irretrievably lost if the Proposed Action or Alternative 1 were implemented include gasoline, diesel, potable and irrigation water, and electricity from non-renewable sources consumed during construction and operations. Human labor during construction and operation also would be irretrievable. No cultural, biological, or other natural resources would be lost or irretrievably committed by the Proposed Action or Alternative 1. Neither the Proposed Action nor Alternative 1 would irreversibly curtail the range of potential uses of the environment, including but not limited to cultivation of crops and agricultural uses.

4.16 RELATIONSHIP OF SHORT-TERM USES AND LONG-TERM PRODUCTIVITY

This section describes the relationship between local short-term uses of humanity's environment and the maintenance and enhancement of long-term productivity. Trade-offs between short-term and long-term gains and losses are discussed.

As described in Sections 4.1 to 4.14, neither the Proposed Action nor Alternative 1 would result in significant effects to the environment or long-term risks to health or safety. However, under both scenarios, a field office including structures and paved areas would be developed on existing undeveloped land. Marginal increases in air emissions and noise levels would occur during construction and to a lesser extent during operations. Marginal increases in vehicle trips on and near the sites would occur. The sites would be connected with water and electric utility infrastructure. Areas developed with structures and pavement under the Proposed Action or Alternative may not be available for cultivation in the future without remediation.

In contrast with the uses of the environment described above, the Proposed Action and Alternative 1 would each result in long-term productivity benefits. The Proposed Action and Alternative 1 would each consolidate and centralize BASF field office operations on the Mana Plain, which in turn will decrease time lost during travel from the field to current field office locations, improve worker safety, promote seed purity and quality control, and provide secure storage areas for machinery, tools, and equipment. Activities conducted at the proposed field office would contribute to development of improved yield and quality traits in important crops such as corn, soybean, and rice.

SECTION 5 COMPLIANCE WITH CHAPTER 343, HAWAII REVISED STATUTES

5.1 ANTICIPATED DETERMINATION

This EA was prepared in accordance with Chapter 343, HRS, and Chapter 11-200 HAR. This EA demonstrates that construction and operation of the Proposed Action would not result in any significant environmental effects. Therefore, pursuant to Chapter 343, HRS, should a Finding of No Significant Impact be determined, an EIS would not be required.

5.2 FINDINGS AND REASONS SUPPORTING THE ANTICIPATED DETERMINATION

The anticipated negative determination was based on review and analysis of the significance criteria specified in § 11-200-12, HAR, which states, "In determining whether an action may have a significant effect on the environment, the agency shall consider every phase of a proposed action, the expected consequences, both primary and secondary, and the cumulative as well as the short-term and long-term effects of the action. In most instances, an action shall be determined to have a significant effect on the environment if it…" meets any of the following criteria:

- **Involve an irrevocable commitment or loss of or destruction of natural or cultural resources.** The Proposed Action will not impact or cause the loss of sensitive or protected natural plant communities or animal species. Furthermore, the Proposed Action will not cause the destruction of any known historic, archeological, or cultural resources.
- **Curtail the range of beneficial uses of the environment.** The Proposed Action will not curtail the range of beneficial uses of the environment at the project site or surrounding area. Although it would cause the loss of agricultural land, the number of acres lost as a result of the Proposed Action is not cumulatively significant when considering the number of acres of agricultural land that will be retained in the vicinity. Additionally, the Proposed Action will enable surrounding agricultural lands to be managed more efficiently, thus increasing the potential for beneficial uses of the site and surrounding environment.
- **Conflict 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 order.** As outlined in specific resource evaluations of this document, the Proposed Action will be consistent with the State's long-term environmental goals and policies, as well as the specific policies and guidelines outlined in Chapter 344, HRS.
- **Substantially affect the economic welfare, social welfare, and cultural practices of the community or State.** The Proposed Action will not adversely affect population levels, employment levels, or the local economy. Furthermore, the Proposed Action will not adversely affect cultural practices of any nearby communities in the County of Kauai or the State of Hawaii as evidenced in the cultural resource analysis section of this document.

- **Substantially affect public health.** The Proposed Action will not create substantial impacts to public health. The Proposed Action will not create significant impacts to air quality or noise as it will not generate substantial pollutants or unreasonably increase ambient noise levels. Additionally, the Proposed Action will not introduce any hazardous materials, nor will it degrade the site and surrounding geological resources, or impact overall water quality. The Proposed Action is also located outside the 0.2% annual chance floodplain, and is therefore not subject to frequent flooding.
- **Involve substantial secondary impacts, such as population changes or effect public facilities**. The Proposed Action will not induce substantial secondary impacts to population counts or negatively affect existing public facilities / infrastructure. Though the Proposed Action will have short-term impacts to infrastructure during construction, such systems have demonstrated an adequate capacity to accommodate these needs. These systems also have demonstrated capacity to facilitate the long term operational needs of the Proposed Action.
- **Involve a substantial degradation of environmental quality.** The Proposed Action will not substantially degrade or impact existing air quality, biological resources, visual resources, soils, or water quality. The Proposed Action will not create additional emissions that would substantially degrade air quality levels. Furthermore, it will not degrade any sensitive habitat for plant and animal species. No sensitive viewsheds have been identified in the surrounding area, and views from Kaumualii Highway would not be significantly degraded as a result of the Proposed Action. Soil and water quality levels will also remain largely unaffected by the addition of the Proposed Action.
- **Is individually limited and cumulatively has considerable effect upon the environment, or involves a commitment for larger actions.** The Proposed Action will not create a cumulatively considerable impact on the environment, or require the commitment for larger action. While marginal increases in air emissions and noise levels would occur during construction and to a lesser extent during operations, these are not considered cumulatively considerable. Furthermore, marginal increases in vehicle trips on and near the sites would occur during construction and operation, but are also not identified as cumulatively considerable. While the Proposed Action will convert agricultural land to development, the overall impact of this transition will not be cumulatively considerable.
- **Substantially affect a rare, threatened, or endangered species or its habitat.** The Proposed Action will not impact any rare, threatened or endangered natural plant community or animal species.
- **Detrimentally affect air or water quality or ambient noise levels.** The Proposed Action will not detrimentally affect air, or water quality, or ambient noise levels. Though the Proposed Action will introduce noise from construction and operation related actions, such activities will not significantly increase ambient noise levels. Consequently, no detrimental impacts to noise levels would occur. Additionally, the Proposed Action is not located within an SMA or SSA under the Hawaii CZM Program, and no wetlands are located on the site. Likewise, the Proposed Action will comply with all State and Federal agency permitting requirements and will not degrade existing water quality levels. Air quality levels will not be degraded as the Proposed Action will not add significant air pollutants.

- **Affect, or is likely to suffer damage by being located in an environmentally sensitive area such as a floodplain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.** The Proposed Action is not in a tsunami warning area, and would not affect wetlands, coastal waters, or beaches. The Proposed Action is also not located in a geologically hazardous area, or flood zone, nor is it prone to high rates of erosion.
- **Substantially affect a scenic vista or viewplanes identified in county or State plans or studies.** The Proposed Action will not affect a scenic vista or viewplane as identified in the Kauai County General Plan. No scenic vistas or viewplanes were identified within the viewshed of the Proposed Action.
- **Require substantial energy consumption.** The Proposed Action will not require substantial energy to construct or operate. While it will cause the irreversible and irretrievable loss of resources such as electricity, gasoline, and diesel fuels, consumption of these resources will not be collectively substantial.

SECTION 6 LIST OF AGENCIES, ORGANIZATIONS AND INDIVIDUALS CONSULTED

6.1 CHAPTER 343, HRS PRE-ASSESSMENT CONSULTATION

A pre-assessment consultation was prepared in the form of a Project Kickoff Information for Stakeholders presentation, which was provided to the agencies and organizations listed in Table 6-1 via electronic mail. This pre-assessment consultation occurred during preparation of this PreDraft EA in accordance with Chapter 343, HRS requirements. This information was provided in lieu of an in-person meeting since BASF was already in communication with several agencies for planning and permitting purposes. This informational presentation was conducted to introduce the Proposed Action to stakeholders and allow them to comment or provide site specific information to BASF. A copy of the Project Kickoff Information for Stakeholders presentation can be found in Appendix C. An asterisk (*) identifies parties who responded to the request for pre-assessment consultation.

Table 6-1. List of Agencies and Organizations Receiving Pre-Assessment Consultation

FEDERAL AGENCIES
Region IX U.S. Environmental Protection Agency * P.O. Box 50003 Honolulu, Hawaii 96850
US Department of Agriculture Office of the Chairperson 1428 S. King Street Honolulu, Hawaii 96814
United States Army Corps of Engineers Pacific Ocean Division, Building 230 Fort Shafter, Hawaii 96858-5440
United States Department of the Interior Fish and Wildlife Service Pacific Islands Fish and Wildlife Office 300 Ala Moana Blvd., Room 3-122, Box 50088 Honolulu, Hawaii 96813
United States Department of the Interior US Geological Survey Pacific Islands Water Science Center 677 Ala Moana Blvd. #415 Honolulu, Hawaii 96813

STATE AGENCIES
State of Hawaii Agribusiness Development Corporation * 235 South Beretania Street, Room 205 Honolulu, Hawaii 96813
Office of Environmental Quality Control 235 South Beretania Street, Suite 702 Honolulu, Hawaii 96813

STATE AGENCIES
State of Hawaii Department of Health Environmental Planning Office PO Box 3378 Honolulu, Hawaii 96801
State Historic Preservation Division Department of Land & Natural Resources 601 Kamokila Boulevard, Room 555 Kapolei, Hawaii 96707
Department of Land and Natural Resources Land Division 1151 Punchbowl St, Room 220 Honolulu, Hawaii 96813
State of Hawaii Department of Transportation 869 Punchbowl Street Honolulu, Hawaii 96813

COUNTY AGENCIES
Kauai County Planning Department 4444 Rice Street, Suite 473 Lihue, Hawaii 96766
Kauai County Water Department 4398 Pua Loke Street P.O. Box 1706 Lihue, Hawaii 96766

ADJACENT AND NEARBY PROPERTIES
Kekaha Agricultural Association P.O. Box 940 Waimea, HI 96796
Pacific Missile Range Facility * P.O. Box 128 Kekaha, HI 96752

LOCAL AND HAWAIIAN NATIVE ORGANIZATIONS
E Ola Mau Na Leo O Kekaha, Inc. ** P.O. Box 640 Kekaha, Hawaii 96752
Office of Hawaiian Affairs 711 Kapiolani Boulevard, Suite 500 Honolulu, Hawaii 96813

* Agency responded to Pre-Assessment Consultation: Project Kickoff Information for Stakeholders.

** Agency forwarded information to additional agency, Kekaha Hawaiian Homestead Association (KHHA). KHHA sent a letter and BASF followed up with a response letter.

6.2 CHAPTER 343, HRS PRELIMINARY DRAFT EA DISTRIBUTION

A Preliminary Draft EA was prepared and provided to the agencies and organizations listed in Table 6-2 via electronic mail. This Preliminary Draft EA was submitted prior to the Draft EA in accordance with Chapter 343, HRS requirements to provide a preview of the Draft EA and provide these entities an opportunity for response and comment pertaining to the project site. An asterisk (*) identifies parties who responded to the request for Preliminary Draft EA. URS confirmed that all of these agencies received the Preliminary Draft EA and had an opportunity to review and provide comment.

Table 6-2. List of Agencies and Organizations Receiving the Preliminary Draft Environmental Assessment

FEDERAL AGENCIES
United States Army Corps of Engineers * Pacific Ocean Division, Building 230 Fort Shafter, Hawaii 96858-5440
United States Department of Agriculture Office of the Chairperson 1428 S. King Street Honolulu, Hawaii 96814
United States Department of the Interior Fish and Wildlife Service Pacific Islands Fish and Wildlife Office 300 Ala Moana Blvd., Room 3-122, Box 50088 Honolulu, Hawaii 96813
United States Department of the Interior * US Geological Survey Pacific Islands Water Science Center 677 Ala Moana Blvd. #415 Honolulu, Hawaii 96813

STATE AGENCIES
State of Hawaii Agribusiness Development Corporation * 235 South Beretania Street, Room 205 Honolulu, Hawaii 96813
Office of Environmental Quality Control 235 South Beretania Street, Suite 702 Honolulu, Hawaii 96813
State of Hawaii Department of Health Environmental Planning Office PO Box 3378 Honolulu, Hawaii 96801

STATE AGENCIES
State of Hawaii Department of Health * Wastewater Branch PO Box 3378 Honolulu, Hawaii 96801
State of Hawaii Historic Preservation Division * Department of Land & Natural Resources 601 Kamokila Boulevard, Room 555 Kapolei, Hawaii 96707
State of Hawaii Department of Land and Natural Resources * Land Division 1151 Punchbowl St, Room 220 Honolulu, Hawaii 96813
State of Hawaii Department of Transportation 869 Punchbowl Street Honolulu, Hawaii 96813

COUNTY AGENCIES
Department of Land and Natural Resources, Kauai 3060 Eiwa St. #208 Lihue, HI 96766
Kauai County Planning Department 4444 Rice Street, Suite 473 Lihue, Hawaii 96766
Kauai County Water Department 4398 Pua Loke Street P.O. Box 1706 Lihue, Hawaii 96766
Kauai Island Utility Service 4463 Pahee Street, Suite #1 Lihue, Hawaii 96766

ADJACENT AND NEARBY PROPERTIES
Kekaha Agricultural Association P.O. Box 940 Waimea, HI 96796
Pacific Missile Range Facility * P.O. Box 128 Kekaha, HI 96752
Shredco P. O. Box 662115 Lihue, Kauai, Hawaii 96766
Syngenta Seeds 7050 Kaumualii Highway Kekaha, HI 96752

Pioneer Hi Bred International Inc. * PO Box 609 Waimea, HI 96796

LOCAL AND HAWAIIAN NATIVE ORGANIZATIONS
E Ola Mau Na Leo O Kekaha, Inc. P.O. Box 640 Kekaha, Hawaii 96752
Historic Hawaii Foundation * Dole Cannery Dole Office Building Tower, Suite 690 680 Iwilei Rd Honolulu, Hawaii 96817
Hawaiian Homes Commission * Department of Hawaiian Home Lands 91-5420 Kapolei Parkway Kapolei, HI 96707
Kekaha Hawaiian Homesteads Association PO Box 291 Kekaha, Hi 96752
Office of Hawaiian Affairs 711 Kapiolani Blvd., Ste. 500 Honolulu, Hawaii 96813

* Agency responded to the Preliminary Draft EA.

6.3 CHAPTER 343, HRS DRAFT EA DISTRIBUTION

The agencies and organizations listed in Table 6-3 will receive electronic copies of the Draft EA as part of the Chapter 343, HRS review process.

Table 6-3. List of Agencies and Organizations Receiving the Draft Environmental Assessment

FEDERAL AGENCIES
United States Army Corps of Engineers Pacific Ocean Division, Building 230 Fort Shafter, Hawaii 96858-5440
United States Department of Agriculture Office of the Chairperson 1428 S. King Street Honolulu, Hawaii 96814

United States Department of the Interior Fish and Wildlife Service Pacific Islands Fish and Wildlife Office 300 Ala Moana Blvd., Room 3-122, Box 50088 Honolulu, Hawaii 96813
United States Department of the Interior US Geological Survey Pacific Islands Water Science Center 677 Ala Moana Blvd. #415 Honolulu, Hawaii 96813

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State of Hawaii Department of Transportation 869 Punchbowl Street Honolulu, Hawaii 96813

COUNTY AGENCIES
Kauai County Planning Department 4444 Rice Street, Suite 473 Lihue, Hawaii 96766

Kauai County Water Department 4398 Pua Loke Street P.O. Box 1706 Lihue, Hawaii 96766
Kauai Island Utility Service 4463 Pahee Street, Suite #1 Lihue, Hawaii 96766

ADJACENT AND NEARBY PROPERTIES
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Hawaiian Homes Commission Department of Hawaiian Home Lands 91-5420 Kapolei Parkway Kapolei, HI 96707
Kekaha Hawaiian Homesteads Association PO Box 291 Kekaha, Hi 96752
Office of Hawaiian Affairs 711 Kapiolani Blvd., Ste. 500 Honolulu, Hawaii 96813

6.4 NATIONAL HISTORIC PRESERVATION ACT, SECTION 106 CONSULTATION

The State Historic Preservation Division was consulted in compliance with Section 106 of the NHPA. Their concurrence is pending completion of the review of the Archaeological Literature Review and Field Inspection report prepared by Cultural Surveys Hawaii (2011).

SECTION 7 REFERENCES

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SECTION 8 LIST OF PREPARERS

This report was prepared for BASF by URS. Members of the URS professional staff are listed below.

Project Management

- Robyn Goong

Quality Assurance

- Kristen Walker Potente
- David Marx

Technical Analysts

- Andrew Martin
- Mark Storm
- Arleen Garcia-Herbst
- Anne Runnalls
- Derek Langsford
- Matt Moore
- Brian Madigan

Graphic Design

- Julio Benito, Jr.

APPENDIX A

BIOLOGICAL SURVEYS FOR A BASF PLANT SCIENCES FACILITY ON A 10+ ACRE SITE (POR TMK: (4) 1-2-002:001) NEAR KEKAHA, KAUAI

Biological surveys for a BASF plant sciences facility on a 10+ acre site (por TMK: (4) 1-2-002:001) near Kekaha, Kaua‘i

September 15, 2011 *AECOS* No. 1274

Eric Guinther and Reginald David[1]
AECOS, Inc.
45-939 Kamehameha Hwy, Suite 104
Kāne‘ohe, Hawai‘i 96744
Phone: (808) 234-7770 Fax: (808) 234-7775 Email: guinther@aecos.com

Introduction

This report[2] presents results from biological resources surveys undertaken for a proposed BASF plant sciences facility ("Project") along Kaumualii Highway north of Kekaha, Kaua‘i (Fig. 1). The primary purpose of the surveys was to determine if there are any botanical, avian, or mammalian resources on the Project site of special concern, particularly species currently listed under either federal or state endangered species statutes. We were also asked to evaluate the potential impacts that the Project might pose to any sensitive or protected species, or species proposed for protection, and to suggest appropriate minimization or mitigation measures to reduce any such impacts to below a significance level.

Site Description

The Project parcel (Fig. 2) is a recently plowed field bordered on the southeast by an private agriculture access road (Lighthouse Road), on the southwest by a sizeable drainage ditch, and on the northwest through northeast by more agricultural land; however, the land to the northwest is heavily overgrown with grasses, shrubs, and some trees that have come in after use of this plot to grow sugar cane (*Saccharum officinarum*) ceased and the land allowed to go fallow. A

[1] Rana Biological Consulting, Inc., Kailua-Kona, Hawai‘i.
[2] This report has been prepared for URS to accompany Project entitlement submittals and will become part of the public record.

row of grasses and shrubs separates the subject parcel from an adjacent plot in active agricultural use to the northeast and is present along the southwest border between the plowed area and a levee or berm road along the ditch on the southwest side of the site. A number of weedy plants are attempting to establish within the site, and these are the same species found on the less recent disturbed margins of the site.

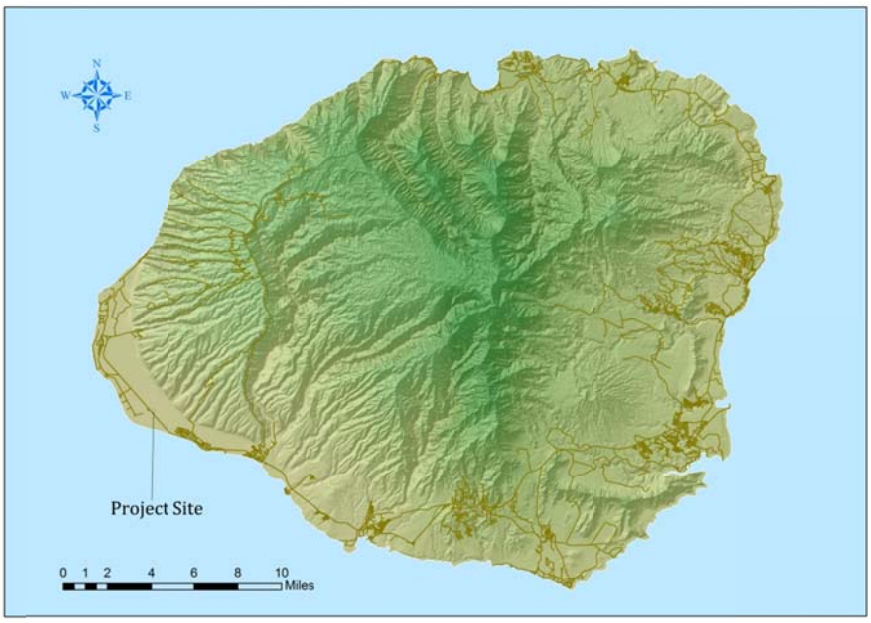

Figure 1. Project site location on the Island of Kaua‘i.

Survey Methods

Botanical Survey

A botanical survey utilizing a wandering “transect” to survey the subject parcel on August 11, 2011, following a preliminary survey on July 11. This transect involved traversing around the margins of the site and crossing the field at several points and in several directions. Although the survey was conducted in August, the dry season in Hawai‘i, rainfall on this leeward side of the island has provided adequate conditions for plants typical of the site, including annuals, to be easily observed. Nearly all of the parcel has been plowed (Fig. 3) and presently larger grasses and shrubs are confined to the field margins. Plant

names generally follow *Manual of the Flowering Plants of Hawai'i* (Wagner et al., 1990, 1999) for native and naturalized flowering plants.

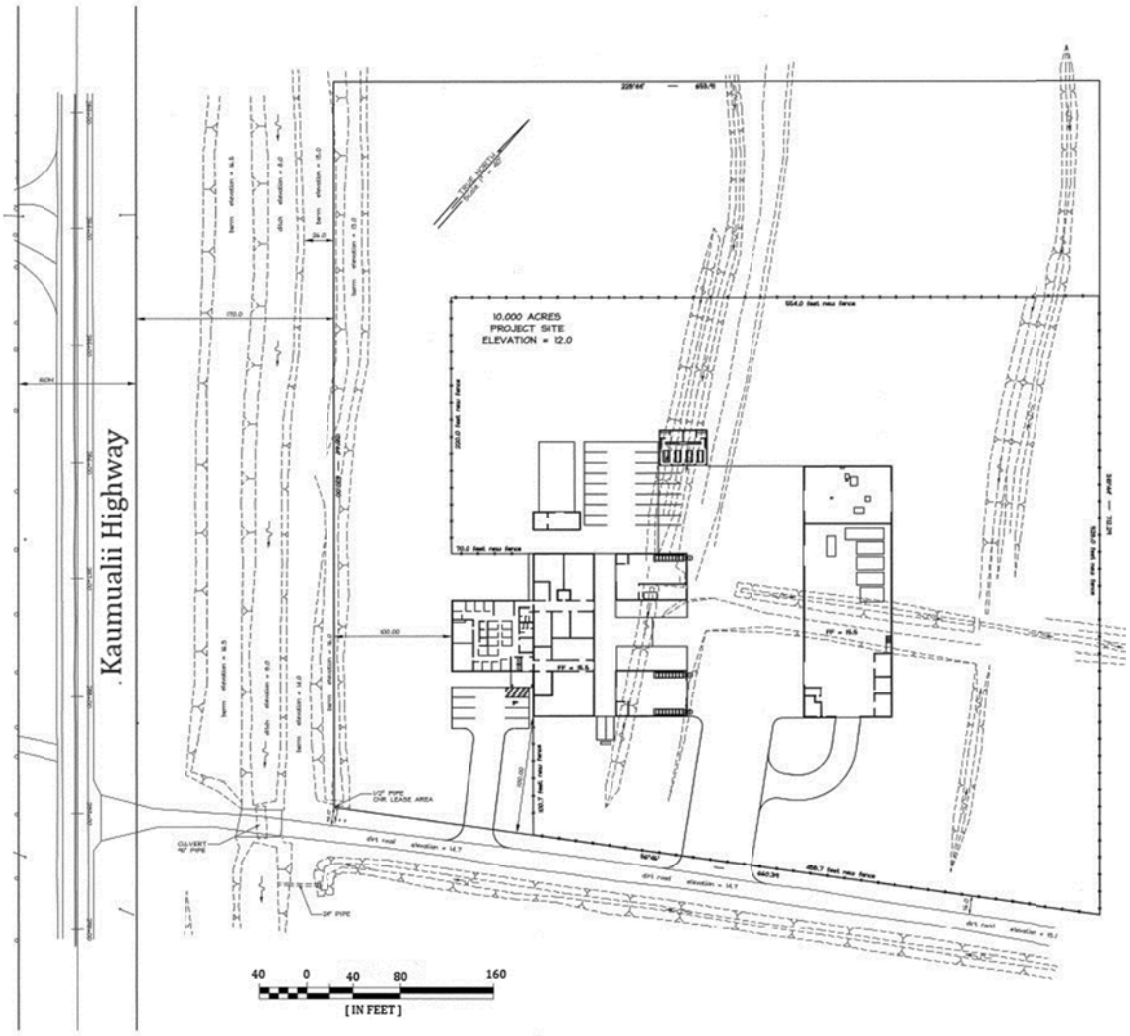

Figure 2. BASF Project site near Kekaha.

Avian Survey

On July 11, 2011, two avian count stations were sited within or near the Project area. Following receipt of additional maps, it was determined that the BASF site was a short distance further to the southeast, prompting a return visit for an additional survey of vertebrates. On July 26, 2011, a total of four avian count stations were sited within and immediately adjacent to the Project site. A single

eight-minute point count was conducted at each of the four stations. Field observations were made with the aid of Leica 10 X 42 binoculars and by listening for vocalizations. Counts were concentrated during the early morning hours, the peak of daily bird activity. Time not spent at counting stations was used to search the rest of the site for species not detected during count sessions.

Figure 3. The BASF site looking east across the Mānā Plain from the margin vegetation as it appeared on June 21 (photo provided by Robyn Goong, URS).

The avian phylogenetic order and nomenclature used in this report follows the *AOU Check-List of North American Birds* (American Ornithologists' Union 1998), and the 42nd through the 51st supplements to the Check-List (American Ornithologists' Union, 2000; Banks et al., 2002, 2003, 2004, 2005, 2006, 2007, 2008; Chesser et al., 2009, 2010, 2011).

Mammalian Survey

With the exception of the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), or *‘ōpe‘ape‘a* as it is known locally, all terrestrial mammals currently found on the Island of Kaua'i are alien species, and most are ubiquitous. The

survey of mammals was limited to visual and auditory detection, coupled with visual observation of scat, tracks, and other animal sign. A running tally was kept of all vertebrate species observed and heard within the project area during our surveys.

Aquatic Survey

A large water conveyance ditch is located adjacent to the Project site on the southwest. No special effort—beyond noting environmental conditions and organisms observable—was made to study this feature because it is outside the Project boundary (see Fig. 2). Casual observations were made on July 11, 2011 when the ditch contained about one foot (30-40 cm) of water with steady flow to the south. Water birds observed in or near the ditch are discussed under Avian Survey results.

Results

Vegetation

The site vegetation is minimal except around the edges of the 10-acre plot, since everything else represents recent weeds invading a plowed field (Figs. 3 and 4). Vegetation around the edges is mostly either tall Guinea grass (*Panicum maximum*) with para grass (*Urochloa mutica*) in some places, or mixed grass and shrubby *koa haole* (*Leucaena leucocephala*).

Flora

Table 1 lists all flowering plants observed during the survey (no ferns, fern allies, or conifers were seen). Species are listed within their respective plant families. In all, 26 plant species were recorded. Considering that the site is a very disturbed field of approximately 10 ac (4.0 ha), this number is low but not unexpected. Of note is the fact that all but one of the species are introduced (naturalized) or non-native species. The one agricultural crop plant (*Sacchrum officinarum*) is a cultivar of a plant originally introduced to the Hawaiian Islands by the early Polynesians (as *kō*). In this area, the cane is likely a remnant or escapee from previous culture of commercial sugar cane on the property.

The majority of the species observed are ruderal species establishing after disturbance (by plowing or tilling) of the soil. All are naturalized species commonly occurring on surrounding lands (see Note <1> in Table 1). Plant numbers are low and most of the site is bare soil.

Figure 4. The BASF site as it appeared on July 11. This view from the west corner looking to the northeast shows the dense vegetation on adjacent, fallow land (left). Valley in the background is Ho‘ea-Kahoana.

Table 1. Flora for Kekaha BASF Facility Site, Kaua‘i

Species	Common name	Status	Abundance	Notes
	FLOWERING PLANTS			
	DICOTYLEDONE			
AMARANTHACEAE				
Amaranthus cf. spinosa L.	amaranth	Nat	R	<3>
CUCURBITACEAE				
Cucummis dipsaceus Ehrenb. ex Spach	teasel gourd	Nat	U	
Momordica charantia L.	wild bittermelon	Nat	R	
CONVOLVULACEAE				
Ipomoea triloba L.	little bell	Nat	R	
Merremia aegyptia (L.) Urb.	hairy merremia	Nat	U	
EUPHORBIACEAE				
Euphorbia hirta L.	garden spurge	Nat	O	
Ricinus communis L.	castor bean	Nat	O	<1>

Table 1 (continued).

Species	Common name	Status	Abundance	Notes
FABACEAE				
Canavalia cathartica Thouars	*maunaloa*	Nat	R	
Crotalaria incana L.	fuzzy rattlepod	Nat	U	
Desmanthus pernambucanus (L.) Thellung	virgate mimosa	Nat	R	<1>
Indigofera hendycaphyla Jacq.	prostrate indigo	Nat	U	
Leucaena leucocephala (Lam.) deWit	*koa haole*	Nat	O	<2>
Macroptilium atropurpureum (DC.) Urb.	---	Nat	U	<1>
Pithecellobium dulce (Roxb.) Benth.	*‘opiuma*	Nat	R	<2>
LAMIACEAE				
Hyptis pectinata (L.) Poit.	comb hyptis	Nat	U	
Leonotis nepetifolia (L.) R. Br.	lion’s ear	Nat	U	<1>
MALVACEAE				
Abutilon grandifolium (Willd.) Sweet	hairy abutilon	Nat	R	
Malvastrrum coromandalianum (L.) Garcke	false mallow	Nat	U	
Sida rhombifolia L.	Cuba jute	Nat	U	
Sida spinosa L.	prickly sida	Nat	R	
MYRTACEAE				
Syzygium cumini (L.) Skeels.	Java plum	Nat	R	
MONOCOTYLEDONES				
POACEAE (GRAMINEAE)				
Chloris barbata (L.) Sw.	swollen fingergrass	Nat	U	
Cynodon dactylon (L.) Pers.	Bermuda grass	Nat	U	
Panicum maximum Jacq.	Guinea grass	Nat	O	<1>
Saccharum officinarum L.	sugar cane	Orn	R	
Urochloa mutica (Forssk.) Nguyen	California grass	Nat	O	<1>

Legend to Table 1

Status = distributional status

Nat. = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of the Cook Expedition in 1778, and well-established outside of cultivation.

Orn. = exotic, ornamental or cultivated crop; plant not naturalized (not well-established outside of cultivation, at least at this location).

Abundance = occurrence ratings for plants on property in March 2008

R – Rare - only one or two plants seen.

U - Uncommon - several to a dozen plants observed.

O - Occasional - found regularly, but not abundant anywhere.

Notes:

<1> A plant judged to be common, abundant, or very abundant in July11, 2011 survey of adjacent area.

<2> As a seedling or sapling in the survey area.

<3> Plant lacking flowers or fruit; identification uncertain.

Avian Survey

A total of 288 individual birds of 21 species, representing 13 separate families, were recorded during station counts (Table 2). One of the species detected, Hawaiian Goose or *Nēnē* (*Branta sandvicensis*), is listed as an endangered species under both federal and state endangered species statutes. A total of nine *Nēnē* were recorded from near the site. Initially seven were seen flying over the site from *mauka* (in the direction of the mountains or interior) to *makai* (towards the ocean or coast) and land on the *makai* berm of the water conveyance ditch. Two additional birds were recorded flying over the site and later entered the water in the ditch a hundred yards (meters) north of the original seven birds observed. These birds also eventually entered the ditch.

Table 2 - Avian Species Detected – Kekaha BASF Site

Common Name	Scientific Name	***ST***	***RA***
	ANSERIFORMES		
	ANATIDAE - Ducks, Geese & Swans		
	Anserinae - Geese & Swans		
Hawaiian Goose (Nēnē)	*Branta sandvicensis*	**EE**	1.75
	GALLIFORMES		
	PHASIANIDAE - Pheasants & Partridges		
	Phasianinae - Pheasants & Allies		
Gray Francolin	*Francolinus pondicerianus*	A	0.75
Black Francolin	*Francolinus francolinus*	A	3.75
Red Junglefowl	*Gallus gallus*	A	5.75
	CICONIIFORMES		
	ARDEIDAE - Herons, Bitterns & Allies		
Cattle Egret	*Bubulcus ibis*	A	1.25
Black-crowned Night-Heron	*Nycticorax nycticorax hoactli*	IB	0.25
	COLUMBIFORMES		
	COLUMBIDAE – Pigeons & Doves		
Rock Pigeon	*Columba livia*	A	4.50
Spotted Dove	*Streptopelia chinensis*	A	5.00
Zebra Dove	*Geopelia striata*	A	19.25
	PASSERIFORMES		
	CETTIIDAE - Cettia Warblers & Allies		
Japanese Bush-Warbler	*Cettia diphone*	A	0.50

Table 2 (continued).

Common Name	Scientific Name	***ST***	***RA***
	ZOSTEROPIDAE - White-eyes		
Japanese White-eye	*Zosterops japonicus*	A	2.75
	TIMALIIDAE - Babblers		
Chinese Hwamei	*Garrulax canorus*	A	0.50
	MIMIDAE - Mockingbirds & Thrashers		
Northern Mockingbird	*Mimus polyglottos*	A	0.25
	STURNIDAE – Starlings		
Common Myna	*Acridotheres tristis*	A	5.50
	EMBERIZIDAE - Emberizids		
Red-crested Cardinal	*Paroaria coronata*	A	1.75
	CARDINALIDAE – Cardinals Saltators & Allies		
Northern Cardinal	*Cardinalis cardinalis*	A	1.75
	FRINGILLIDAE – Fringilline And Cardueline Finches & Allies		
	Carduelinae – Carduline Finches		
House Finch	*Carpodacus mexicanus*	A	8.00
	ESTRILDIDAE – Estrildid Finches		
	Estrildinae – Estrildine Finches		
Red Avadavat	*Amandava amandava*	A	0.75
Nutmeg Mannikin	*Lonchura punctulata*	A	6.25
Chestnut Munia	*Lonchura atricapilla*	A	1.00
Java Sparrow	*Padda oryzivora*	A	0.50

Key to Table 2.

ST	Status
EE	Endangered Endemic species – Endangered native and unique to Hawai‘i
A	Alien species – Introduced to Hawai‘i by humans, and have become established in the wild
IB	Indigenous Breeding Species– Native breeding species also found elsewhere naturally
IS	Indigenous Seabird – Native seabird species also found elsewhere naturally
RA	Relative Abundance: Number of birds detected divided by the number of count stations (4)

One other species, Black-crowned Night-Heron (*Nycticorax nycticorax hoactli*), an indigenous resident breeding species, was flushed from the adjacent, overgrown area northwest of the Project parcel. The remaining 19 species detected during the course of this survey are alien to the Hawaiian Islands.

Avian diversity and densities were typical for the habitats present in the area of the Project and its location in the lowlands of Kaua‘i and on the *Mānā* Plain. Four species—Zebra Dove (*Geopilia striata*), House Finch (*Carpodacus mexicanus*), Nutmeg Mannikin (*Lonchura punctulata*), and Red Junglefowl

(*Gallus gallus*)—accounted for 54.5% of the total number of birds recorded during station counts. The most commonly recorded species was Zebra Dove, which accounted for slightly less than 27% of the total number of individual birds recorded. An average of 38 birds was detected per station count.

Mammalian Survey

Two mammalian species were detected during the course of this survey. Domestic dog (*Canis f. familiaris*) and domestic cat (*Felis catus*) tracks and scat were encountered at several locations along the graded berm on the inland side of the water ditch.

Aquatic Resources

The water conveyance ditch (Fig. 5) near the Project site supports minimal plant growth as a result of routine maintenance efforts to keep the ditch from becoming overgrown. The sides and bed are mostly bare red soil or sediment. Aquatic organisms noted in this feature are: tilapia or a related fish (Fam. Cichlidae), cane toad (*Rhinella marinus*), top minnow (Fam. Poeciliidae), and apple snail (*Pomacea* sp., Fam. Pilidae). Adults of the dragonfly, *Orthemus ferruginea*, associate with this water body. These aquatic invertebrates are all alien species in the Hawaiian Islands.

Figure 5. View looking northeast (upstream) of the water conveyance ditch that lies adjacent to the BASF site (out of frame to the right).

Discussion

Botanical Resources

This particular parcel of land has had a long history of agricultural use and has been plowed recently. Consequently, the plants now present reflect this history, being primarily weedy species attempting to establish after soil disturbance. The flora at the site has no native component.

No plant species currently listed as endangered, threatened, or proposed for listing under either federal or state endangered species programs (DLNR 1998, USFWS 2005, 2011) were observed or anticipated to occur on the BASF site. Therefore, it is not expected that development of the Project will result in any adverse impacts to any plant species currently listed or proposed for listing under federal or state statutes, or of resource value or botanical interest.

Avian Resources

The findings of the avian survey are consistent with the location of the property, and the habitats present on the site. Two of the 16 avian species detected during the course of this survey are resident native species. One of these, *Nēnē*, is an endangered species. All of the *Nēnē* recorded during the course of this survey were banded birds. The band color, identification and leg are presented in Table 3.

The other native species detected, Black-Crowned Night-Heron, is an indigenous water obligate species commonly encountered in close proximity to almost any water feature on the Island of Kaua'i. The remaining 19 avian species recorded are considered to be alien to the Hawaiian Islands (see Table 2).

Although not detected during this survey, Hawaiian Petrel (*Pterodroma sandwichensis*), and the endemic sub-species of Newell's Shearwater (*Puffinus auricularis newelli*), have both been recorded overflying the project vicinity between April and the end of November each year (David, 1995; Morgan et al., 2003, 2004; David and Planning Solutions, 2008). Additionally, the Save Our Shearwaters Program has recovered downed birds of both species from the general project vicinity on an annual basis over the past three decades (Morgan et al., 2003, 2004; David and Planning Solutions, 2008; Save our Shearwater Program, 2010).

Table 3 - *Nēnē* leg band combination and numbers.

Leg with Color Band	Color and Identifier
Right	Yellow 196
Right	Yellow 296
Right	Yellow 603
Right	Yellow 605
Right	Yellow 871
Right	Yellow 961
Right	Yellow 962
Right	Yellow 963
Left	Green UA
Right	Green JH

The petrel is listed as endangered, and the shearwater as threatened under both federal and State of Hawai‘i endangered species statutes. The primary cause of mortality in both Hawaiian Petrel and Newell's Shearwater is thought to be predation by alien mammalian species at the nesting colonies (USFWS, 1983; Simons and Hodges, 1998; Ainley et al., 2001). Collision with man-made structures is considered to be the second most significant cause of mortality of these seabird species in Hawai‘i. Nocturnally flying seabirds, especially fledglings on their way to sea in the Summer and Fall, can become disoriented by exterior lighting. When disoriented, seabirds often collide with man-made structures, and if not killed, are dazed or injured and easy targets for feral mammals (Hadley, 1961; Telfer, 1979; Sincock, 1981; Reed et al., 1985; Telfer et al., 1987; Cooper and Day, 1994; Podolsky et al., 1998; Ainley et al., 2001). There are no nesting colonies, nor is there appropriate nesting habitat for either of these seabird species, within or in the vicinity of the Project site.

We did not record any migratory shorebirds during the course of this survey. This is not surprising as the survey was conducted in July when indigenous migratory shorebirds are not usually recorded in Hawai‘i. Both Pacific Golden-Plover (*Pluvialis fulva*) and Ruddy Turnstone (*Arenaria interpres*) have been recorded in the general Project area (David, 2011). These two shorebird species nest in the high Arctic during the late spring and summer months, returning to Hawai‘i and the tropical Pacific to spend fall and winter months of each year. They usually leave Hawai‘i for their trip back to the Arctic in late April or early May each year.

Mammalian Resources

The findings of the mammalian survey are consistent with the location of the property and the habitats currently present. Both mammalian species detected are alien to the Hawaiian Islands. Although no Hawaiian hoary bats were observed, bats have been recorded foraging for insects within the general Project area on a regular basis (David, 2011). Hawaiian hoary bats are widely distributed in the lowland areas on the Island of Kaua‘i, and have been documented in and around almost all places that have some dense vegetation (Tomich, 1986; USFWS, 1998; David, 2011).

Although no rodents were detected during the course of our survey, it is likely that the four established alien Muridae found on Kaua‘i—roof rat (*Rattus r. rattus*), Norway rat (*Rattus norvegicus*), European house mouse (*Mus musculus domesticus*), and possibly Polynesian rat (*Rattus exulans hawaiiensis*)—use resources within the general Project area. All of these introduced rodents are deleterious to native ecosystems and native faunal species dependent on them.

No mammalian species protected or proposed for protection under either the federal or state endangered species programs (DLNR, 1998; USFWS, 2005a, 2005b, 2011) were detected during the course of this survey.

Potential Impacts to Protected Species or Special Habitats

Nēnē

Although Nēnē were detected flying over the site and birds were seen in the ditch *makai* of the site, the proposed modifications to the site and the planned use of the site, in all probability, will be less attractive to Nēnē than current conditions (open and plowed field). It therefore can be concluded that the Project will not result in adverse impacts to this species.

Hawaiian Petrel and Newell’s Shearwater

The principal potential impact that the further development of the site poses to Hawaiian Petrel and Newell’s Shearwater is the increased threat that birds will be downed after becoming disoriented by outdoor lighting associated with possible night-time construction activity and, following build-out, with exterior lighting associated with any structures built on the property.

Hawaiian Hoary Bat

Development of the BASF facility would pose no threat to the Hawaiian hoary bat because the site presently has no vegetation attractive for roosting.

Critical Habitat

No federal Critical Habitat is present on the site or adjacent to the property. Thus the development of the site will not result in impacts to federally designated Critical Habitat. There is no equivalent statute under state law.

Jurisdictional Waters

A large ditch runs along the side of the site parallel with Kaumualii Highway (see Fig 5). This feature is maintained by herbicide spraying in this area to be free of vegetation and has only the characteristic of hydrology to satisfy the Clean Water Act definition of a wetland (USACE, 1987). Although clearly an agriculture-related conveyance structure, one purpose would appear to be the transfer of runoff across the Mānā Plain from *mauka* streams in Ho'ea and Kahoana valleys. Infrequent flows from these small, intermittent[3] streams are directed through this man-made ditch to an ocean outlet at a *muliwai* or brackish pond isolated behind Kekaha Beach near the east end of the county dragstrip. Given this conveyance use (runoff from fields is also carried by the ditch), it is very likely that the State of Hawai'i, Department of Health and the federal government (U.S. Army Corps and U.S. Environmental Protection Agency) would consider this ditch to be jurisdictional. Project plans do not extend to this water feature and would not impact directly on this feature. The ditch is carried under Lighthouse Road in a 90-in diameter pipe culvert (Fig. 2).

Recommendations

- If night-time work will be required in conjunction with development of the Project site, it is recommended that lights be shielded to reduce the potential for interactions between man-made structures and nocturnally flying Hawaiian Petrel, Newell's Shearwater, and other seabirds protected under the federal Migratory Bird Treaty Act (Reed et al., 1985; Telfer et al., 1987).

- If there is exterior lighting associated with the completed Project, these must be shielded so as to reduce the potential for interactions between nocturnally flying seabirds and external lights and other man-made structures (Reed et al., 1985; Telfer et al., 1987).

[3] Neither is listed as perennial by Hawaii Cooperative Park Service Unit (1990).

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APPENDIX B

AN ARCHAEOLOGICAL LITERATURE REVIEW AND FIELD INSPECTION FOR A 10-ACRE AGRICULTURAL FIELD OFFICE, KEKAHA, WAIMEA AHAPUAA, DISTRICT OF WAIMEA, ISLAND OF KAUAI TMK: (4) 1-2-002-001 (POR)

An Archaeological Literature Review and Field Inspection for a 10-acre Agricultural Field Office

Kekaha, Waimea Ahupua´a, District of Waimea, Island of Kaua´i

TMK: [4] 1-2-002:001(por.)

Prepared for

URS Corporation

Prepared by

Erin Coward, B.A.

and

Hallett H. Hammatt, Ph.D.

Cultural Surveys Hawai‘i, Inc.

Kailua, Hawai‘i

(Job Code: KEKAHA 3)

August 2011

O‘ahu Office
P.O. Box 1114
Kailua, Hawai‘i 96734
Ph.: (808) 262-9972
Fax: (808) 262-4950

www.culturalsurveys.com

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 Literature Review and Field Inspection for a 10- acre Agricultural Field Office Kekaha, Waimea Ahupua‘a, District of Waimea, Island of Kaua´i TMK: [4] 1-2-002:001(por.) (Coward and Hammatt 2011)
Date	August 2011
Project Number	Cultural Surveys Hawai‘i (CSH) Job Code: KEKAHA 3
Project Location	The proposed project is located at the intersection of Kaumuali´i Highway (running northwest/southeast) and a private road that runs northeast from Kaumuali´i Highway. This area is depicted on the 1991 U.S. Geological Survey, Kekaha Quadrangle, 7.5-minute series map showing the project area.
Project Funding and Jurisdiction	Private
Permit Number	CSH completed the fieldwork under state archaeological fieldwork permit No. 11-17 issued by the State Historical Preservation Division/ Department of Land and Natural Resources (SHPD/DLNR), per Hawai´i Administrative Rules (HAR) Chapter 13-282.
Project Description	The project involves the proposed construction of a field office complex which are both currently zoned as agricultural. Minimally, land disturbing activities would include grubbing and grading, excavations for subsurface utilities, and associated infrastructure improvements.
Project Acreage	Approximately 10 acres
Project area and Area of Potential Effect (APE)	For the purposes of this archaeological literature review and field inspection study, the Area of Potential Effect (APE) is considered to be the entire 10-acre project area.
Historic Preservation Regulatory Context	The proposed project is subject to Hawai´i State environmental and historic preservation review legislation [Hawai‘i Revised Statutes (HRS) Chapter 343 and HRS 6E-8/Hawai´i Administrative Rules (HAR) Chapter 13-275, respectively]. While this investigation does not fulfill the requirements of an archaeological inventory survey investigation (per HAR Chapter 13-276), it serves as a document to facilitate the proposed project’s planning and supports historic preservation review compliance by assessing if there are any major archaeological concerns within the study area and to develop data on the general nature, density and distribution of archaeological resources.
Fieldwork Effort	Fieldwork was conducted on July 11, 2011 by CSH archaeologist Gerald Ida, B.A. under the general supervision of Hallett H. Hammatt, Ph.D (Principal Investigator).
Number of Historic Properties Identified	No prehistoric or plantation-era sites were observed.

Historic Properties Recommended Ineligible to the Hawai‘i Register	None
Mitigation Recommendation	No historic preservation mitigation measures are recommended for the current scope of the project. If subsurface excavation is planned to exceed the depth of the fill at the surface, the project proponent should consult with the SHPD to establish appropriate mitigation measures.

Table of Contents

Management Summary ..... **i**

Section 1 Introduction **1**

1.1 Project Background 1
1.3 Environmental Setting 5
1.3.1 Natural Environment 5
1.3.2 Built Environment 5

Section 2 Methods **7**

2.1 Literature Review 7
2.2 Field Check 7

Section 3 Background Research **8**

3.1 Traditional and Historical Background 8
3.1.1 Traditional Land Settlement Patterns 8
3.1.2 Kekaha Ahupua´a 8
3.2 Early Historic Period 11
3.3 Mid-1800s to Early-1900s 14
3.3.1 Rice Cultivation 16
3.3.2 Sugar 17
3.3.3 The Kekaha Ditch 17
3.3.4 Railroad 19
3.4 Modern Land Use 20
3.5 Previous Archaeological Research 21
3.6 Background Summary and Predictive Model 28
3.6.1 Background Summary 28
3.6.2 Predictive Model 31

Section 4 Results of Fieldwork **32**

Section 5 Significance and Recommendations **35**

Section 6 References Cited **36**

List of Figures

Figure 1. 1991 U.S. Geological Survey, Kekaha Quadrangle, 7.5-minute series map showing the project area 2
Figure 2. NOAA 2000 Kaua´i Coast aerial showing the project area**Error! Bookmark not defined.**
Figure 3. TMK: [4] 1-2-002:001(por.) showing the project area 4
Figure 4. Portion of the 2000 NOAA Kauai Coast aerialwith overlay showing soils in within the project area (Foote et al. 1972; U.S. Department of Agriculture 2001) 6
Figure 5. 1891 map by L.E. Imlay of Gay and Robinson lands, Kekaha area....10
Figure 6. 1921 map by T. J. Evans of Kekaha Cane and Pasture Lands, Naumu’s LCA outlined in blue, the depression is marked by the red arrow....13
Figure 7. 1912 U.S Geological Survey map of the Island of Kaua´i, showing the Mānā Plain and its swamplands. 15
Figure 8. Historic photo of the upper reaches of Kekaha Ditch showing the general nature of ditch (Wilcox 1996:94) 18
Figure 9 . Previous archaeological studies in the Kekaha area....24
Figure 10. General view of project area from E corner, showing private road, uplifted sandy sediment, and fill surface 33
Figure 11. General view of project area from E corner, uplifted sandy sediment in foreground, fill surface in background 33
Figure 12. General view of project area to the W from the E corner 34
Figure 13. General view of the project area from the SE side....34

List of Tables

Table 1. Previous Archaeological Studies in the Kekaha Area 21
Table 2. Traditional Hawaiian Settlement Patterns in Kekaha 29

Section 1 Introduction

1.1 Project Background

At the request of URS Corporation, Cultural Surveys Hawai‘i, Inc. (CSH) has prepared this Archaeological Literature Review and Field Inspection for a 10-acre agricultural field office, Waimea Ahupua´a, Waimea District, Kaua´i Island [TMK: [4] 1-2-002:001(por.)]. The proposed project is located at the intersection of Kaumuuali´i Highway (running northwest/southeast) and a private road that runs northeast from Kaumuuali´i Highway. This area is depicted on the 1991 U.S. Geological Survey, Kekaha Quadrangle, 7.5-minute series map showing the project area (Figure 1).

For the purposes of this Archaeological Literature Review and Field Inspection (LRFI), the area of potential effect (APE) is considered to be the entire approximately 10-acre study area. The project involves the proposed construction of a field office/complex TMK: [4] 1-2-002:001(por.) (Figure 3), which are both currently zoned as agricultural. Minimally, land disturbing activities would include grubbing and grading, excavations for subsurface utilities, and associated infrastructure improvements.

The proposed project is subject to Hawai´i State environmental and historic preservation review legislation [Hawai´i Revised Statutes (HRS) Chapter 343 and HRS 6E-8/Hawai´i Administrative Rules (HAR) Chapter 13-275, respectively]. While this investigation does not fulfill the requirements of an archaeological inventory survey investigation (per HAR Chapter 13-276), it serves as a document to facilitate the proposed project’s planning and supports historic preservation review compliance by assessing if there are any major archaeological concerns within the study area and to develop data on the general nature, density and distribution of archaeological resources.

1.2 Scope of Work

This study was not intended to meet the requirements of an archaeological inventory-level survey per the rules and regulations of the State Historic Preservation Division/Department of Land and Natural Resources (SHPD/DLNR). However, the level of work is sufficient to address archaeological site types and locations, and allow for future work recommendations. The literature review and field inspection includes a report detailing research methods and findings. The goal was to identify, if possible, any cultural resources documented in historical and archival records.

<u>Scope of Work</u>

1. Historical research to include study of archival sources, historic maps, Land Commission Awards and previous archaeological reports to construct a history of land use and to determine if archaeological sites have been recorded on or near this property.

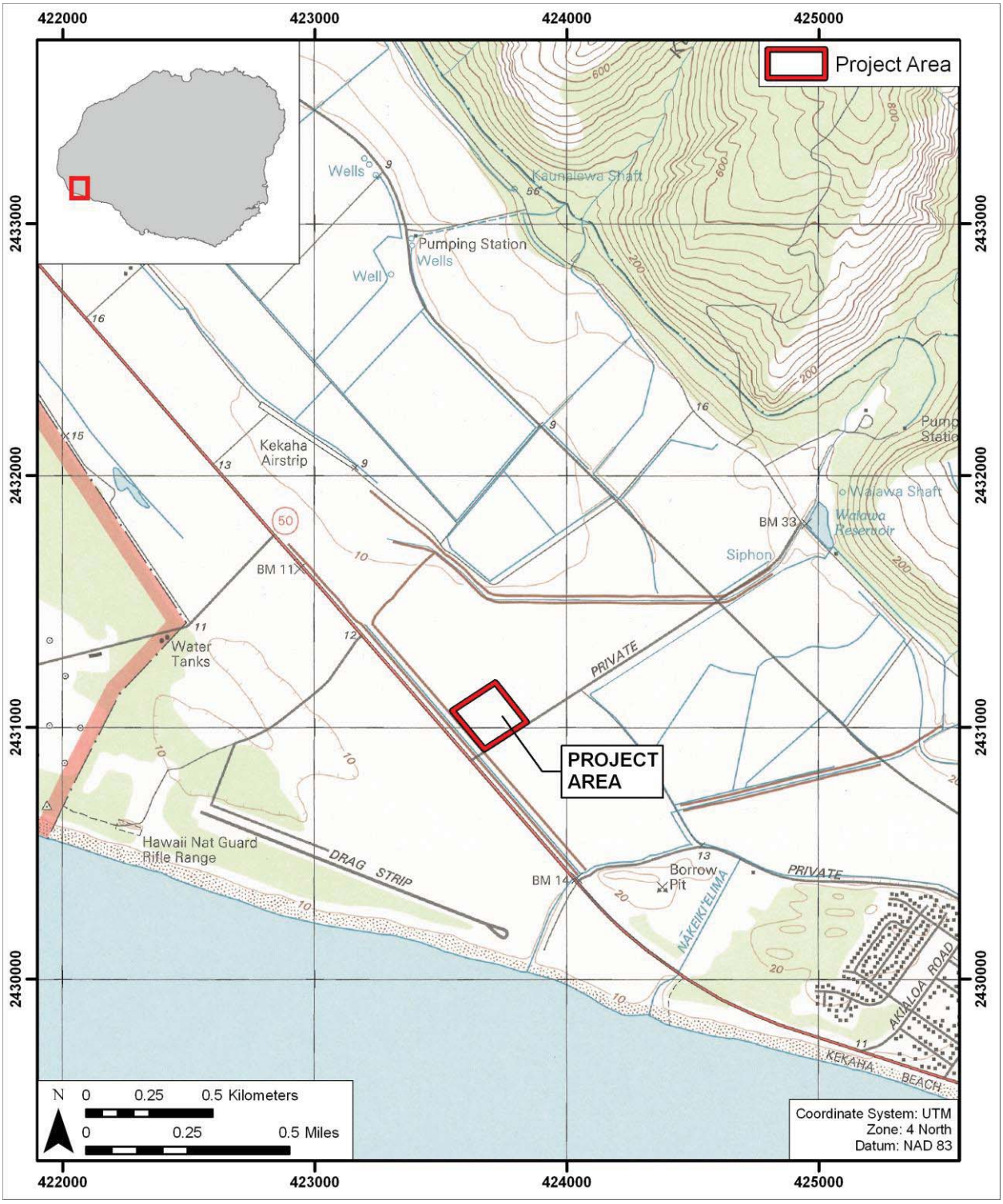

Figure 1. 1991 U.S. Geological Survey, Kekaha Quadrangle, 7.5-minute series map showing the project area

Figure 2. NOAA 2000 Kaua´i Coast aerial showing the project area

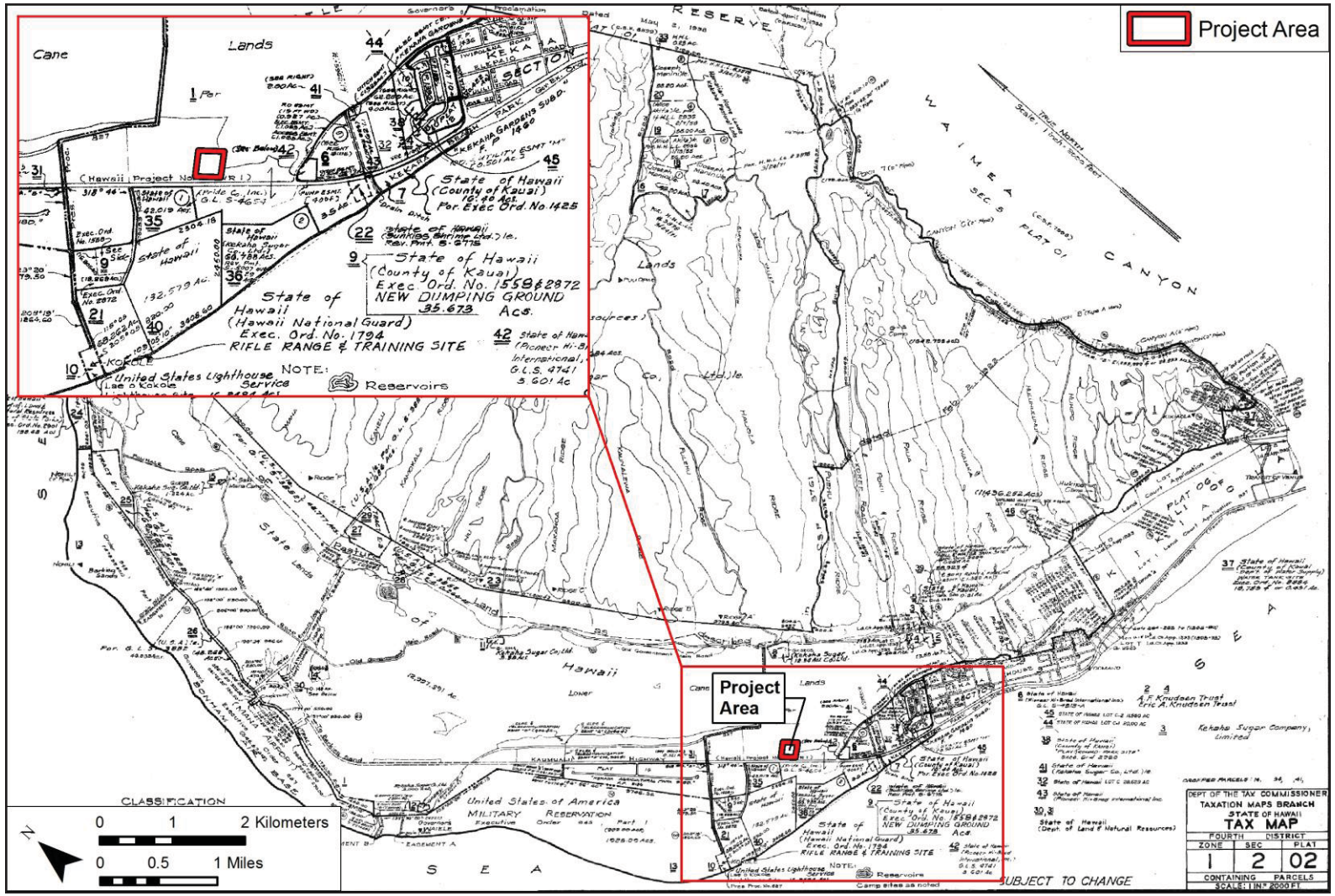

Figure 3. TMK: [4] 1-2-002:001(por.) showing the project area

2. Limited field inspection of the project area to identify any surface archaeological features and to investigate and assess the potential for impact to such sites. This assessment will identify any sensitive areas that may require further investigation or mitigation before the project proceeds.
3. Preparation of a report to include the results of the historical research and the limited fieldwork with an assessment of archaeological potential based on that research, with recommendations for further archaeological work, if appropriate. It will also provide mitigation recommendations if there are archaeologically sensitive areas that need to be taken into consideration.

1.3 Environmental Setting

1.3.1 Natural Environment

Kekaha is in the *ahupua‘a* of Waimea on the southwest side of the island of Kaua´i, part of the old district or *moku* of Kona and current district of Waimea. The *ahupua‘a* is a unit of land measurment, consisting most frequently of a slice of an island that follows from the top of the local mountain (volcano) to the shore, often following the boundary of a stream drainage. The Waimea *Ahupua‘a* is by far the largest on the island, comprising 92,646 acres and accounting for more than a quarter of the total land area of Kaua´i. It encompasses all of the Waimea River Canyon area, the uplands of Kōke´e, the high swampy plateau of Alaka´i, and the northwestern coastal valleys of Nu´alolo and Miloli´i (Gray 1875: 140-146).

Located on the drier leeward coast of Kaua´i, annual rainfall in the project area averages less than 20 inches (500 millimeters) and occurs primarily in the fall and winter months (September to March) (Giambelluca et al. 1986). This site is situated at an area of soil transition. To the west of the project area we find Jaucas loamy fine sand, 0 to 8 percent slopes (JfB). At the project site the soil type present is commonly comprised of Fill land (Fd) (Figure 4). The Fill land (Fd) of Kaua´i is described by Foote et al. (1972:31):

> this land type consists mostly of areas filled with bagasse and slurry from sugar mills. A few areas are filled with material from dredging and from soil excavations. Generally, these materials are dumped and spread over marshes, low-lying areas along the coastal flats, coral sand, coral limestone, or areas shallow to bedrock

1.3.2 Built Environment

The project area is located on the eastern extent of former Kekaha Sugar Plantation lands and is adjacent to pasture lands (see Figure 1). The area is still rural and the fields were mainly fallow at the time of fieldwork with the exception of corn and truck produce outside of the project area toward Mānā Road. No historic-period buildings or structures were present on the subject property.

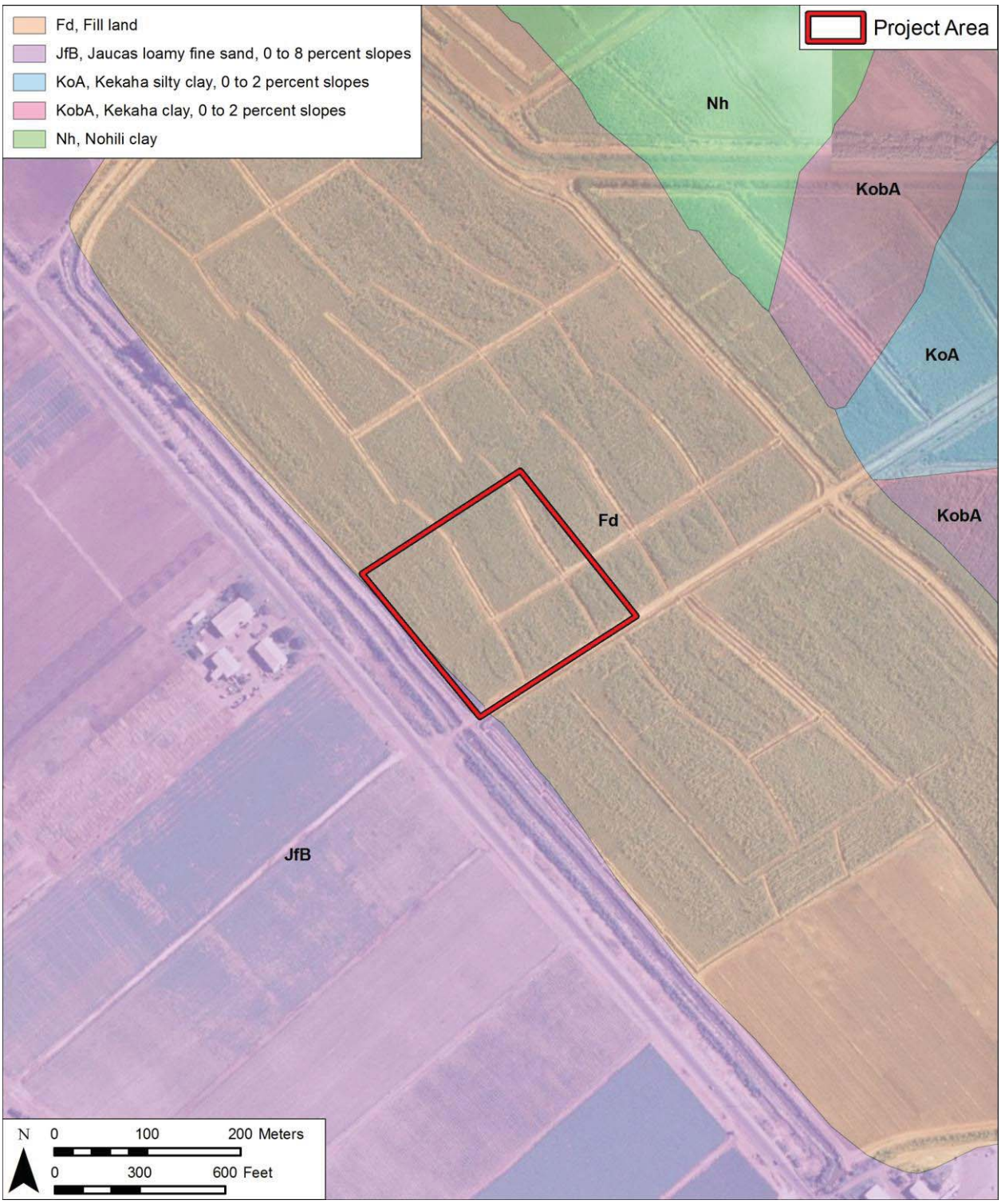

Figure 4. Portion of the 2000 NOAA Kaua´i Coast aerial with overlay showing soils in within the project area (Foote et al. 1972; U.S. Department of Agriculture 2001)

Section 2 Methods

2.1 Literature Review

Background research included a review of previous archaeological studies on file at the SHPD; review of documents at Hamilton Library of the University of Hawai´i, the Hawai´i State Archives, the Mission Houses Museum Library, the Hawai´i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai´i State Archives and the Archives of the Bishop Museum; and study of historic maps at the Survey Office of the Department of Land and Natural Resources. Information on Land Commission Awards was accessed through Waihona Aina Corporation's Māhele Data Base (www.waihona.com).

2.2 Field Check

The fieldwork component of the archaeological literature review and field inspection was conducted on July 11, 2011 by CSH archaeologist, Gerald Ida, B.A., under the general supervision of Hallatt H. Hammatt, Ph.D. (principal investigator). The inspection was a pedestrian survey conducted by Gerald Ida following transects from east to west, each approximately 20 meters wide. A total of 20 transects were inspected, covering the entire field. As no cultural materials were found, no further survey was needed.

Section 3 Background Research

Following is a brief discussion of historical background research pertaining to the current project area. For a broader analysis of traditional and pre-Contact uses of the Waimea District, the reader is referred to the companion Cultural Impact Assessment (CIA) document for this project (Fernandes-Farias et al. 2010).

3.1 Traditional and Historical Background

3.1.1 Traditional Land Settlement Patterns

Kekaha, Pōki´i, Wai´awa and Mānā are *ahupua´a* in the ancient district of Kona, Waimea *´okana* (a district or subdivision) on the southwest side of the island of Kaua´i. All of these *ahupua´a* are now *´ili ´āina* (a further division of land within the *ahupua‘a*) of the *ahupua‘a* of Waimea. Waimea *Ahupua´a* is by far the largest on the island, comprising 92,646 acres and accounting for more than a quarter of the total land area of Kaua´i. It encompasses all of the Waimea River Canyon area, the uplands of Kōke´e, the high swampy plateau of Alaka´i, and the northwestern coastal valleys of Nu´alolo and Miloli´i (Gray 1875: 140-146).

Waimea *ahupua´a* is composed of several regions which are very different in climate and terrain. These differences essentially dictated the kinds of resources that were available, and hence had much to do with the way the *ahupua´a* was settled by pre-Contact Hawaiians. The well-watered valley and delta of the Waimea River were ingeniously developed and engineered for wetland agriculture, and represents the epitome of the typical Hawaiian and Kaua´i-type valley settlement (Handy and Handy 1972:393-397).

On the southwestern leeward coast, about three miles from Waimea Bay, a broad, flat plain stretches between the Waimea River delta and Polihale to the west (Handy and Handy 1972). It is here that Kekaha, Pōki´i, Wai´awa and Mānā are located, backed on the *mauka* (towards the mountain) side by steep low cliffs and a series of small valleys and gulches.

Just below, *makai* (towards the ocean) of the ridges and valleys, lies the Kekaha Ditch, which winds its way down from the Waimea River in the mountains. From the edge of Kekaha Ditch to the ocean lie the former swamp lands of the Kekaha-Mānā plains, now planted in corn and truck produce, and previously in sugar cane. Between these former swamp lands and Kekaha Ditch is a strip of land that once housed many people in the villages of Pōki´i, Wai´awa, Kaunalewa, Mānā, and others. Between the villages were intermittent homes, with the Old and New Government Roads to Mānā (also called the Mānā Road) linking each community between Mānā and Kekaha.

3.1.2 Kekaha Ahupua´a

Pukui et al. (1974:106) gives the literal translation of Kekaha as “the place.” However, Handy and Handy’s (1972:54) definition gives more insight into the place name.

> Kaha was a special term applied to areas facing the shore but not favorable for planting. Kekaha in Kona, Hawaii, was one so named, and Kekaha on Kauai another.

Kelly (1971:2) describes Kekaha on the island of Hawai‘i as *‘āina malo´o* (dry land)" and indeed the same could be said of Kekaha, Kaua´i if one considers the area's low annual rainfall and lack of permanent streams. Kekaha, however, was neither void of water nor a pre-Contact population that made use of the local resources.

The Boundary Commission officially surveyed and set the bounds of the *ahupua‘a* of Waimea in 1875; there are a few sources that contradict this, maintaining that Kekaha was a separate *ahupua‘a.*

Testimony in the mid-1800s that supports the native land claim of R. Naumu refers to the "Kekaha ahupua‘a" in describing the properties (Board of Commissioners 1929: Native Testimony, n.d. Vol. 11:15).

Valdemar Knudsen, an early *haole* (non-native) settler in the area, also refers to the "ahupua‘a of Ketaha" in a letter to John Dominis, Commissioner of Crown Lands (Knudsen 1866:3). A late nineteenth century map (Imlay 1891) shows a pie-shaped land section that is labeled "Kekaha," indicated by a dotted line boundary that encompasses the area from the top of Waiaka ridge to the shoreline (Figure 5).

Handy and Handy (1972:427) imply that Kekaha, as well as Polihale and Mānā, were individual *ahupua‘a* of Waimea, though the reasoning for this is not given. However, the native land claim of Elia Lihau for the land of Wai´ awa, just west of Kekaha, records this area as part of the *ahupua‘a* of Waimea (Board of Commissioners 1929: Native Register 1848; Vol. 9:244).

It is unusual for a single *ahupua‘a* to occupy such a large percentage of the land area of a major Hawaiian island. It could easily be argued that the comparatively low agricultural productivity of the Mānā plain, due to the scarcity of water, is the basis for its inclusion into Waimea. However, the same cannot be said for the well-watered valleys of Nu´alolo and Miloli´i, both of which could easily support typical and self-contained valley settlements of small but stable populations.

It could also be speculated that Waimea, being one of the two areas of the island that traditionally was the domain of the high chiefs (the other being Wailua), commanded the resources of the large upland region of Kōke´e and Alaka´i, among them the large *koa* trees out of which the hulls of canoes were hewn, and forest birds which supplied the feathers for cloaks, capes, and other items associated with the *ali‘i* (chiefly class). It is quite possible that at one time, Waimea was divided into several smaller *ahupua‘a*, perhaps before the *Māhele* (land division of 1848) or even in pre-Contact times.

The *ahupua'a* of Kekaha is located outside of the project area, but is located between Waimea proper and Pōki´i *Ahupua´a*, it is included here due to its location, and its relationship to the project area over time, as demonstrated by historical research. Kekaha *Ahupua´ā*, according to the Ulukau database (www.ulukau.com), is "One of 9 Crown lands, formerly an *ahupua´a* in the *´okana* of Waimea. Not named in Mahele Book" (Pukui et. al. 1974, Kelly (1971:2).

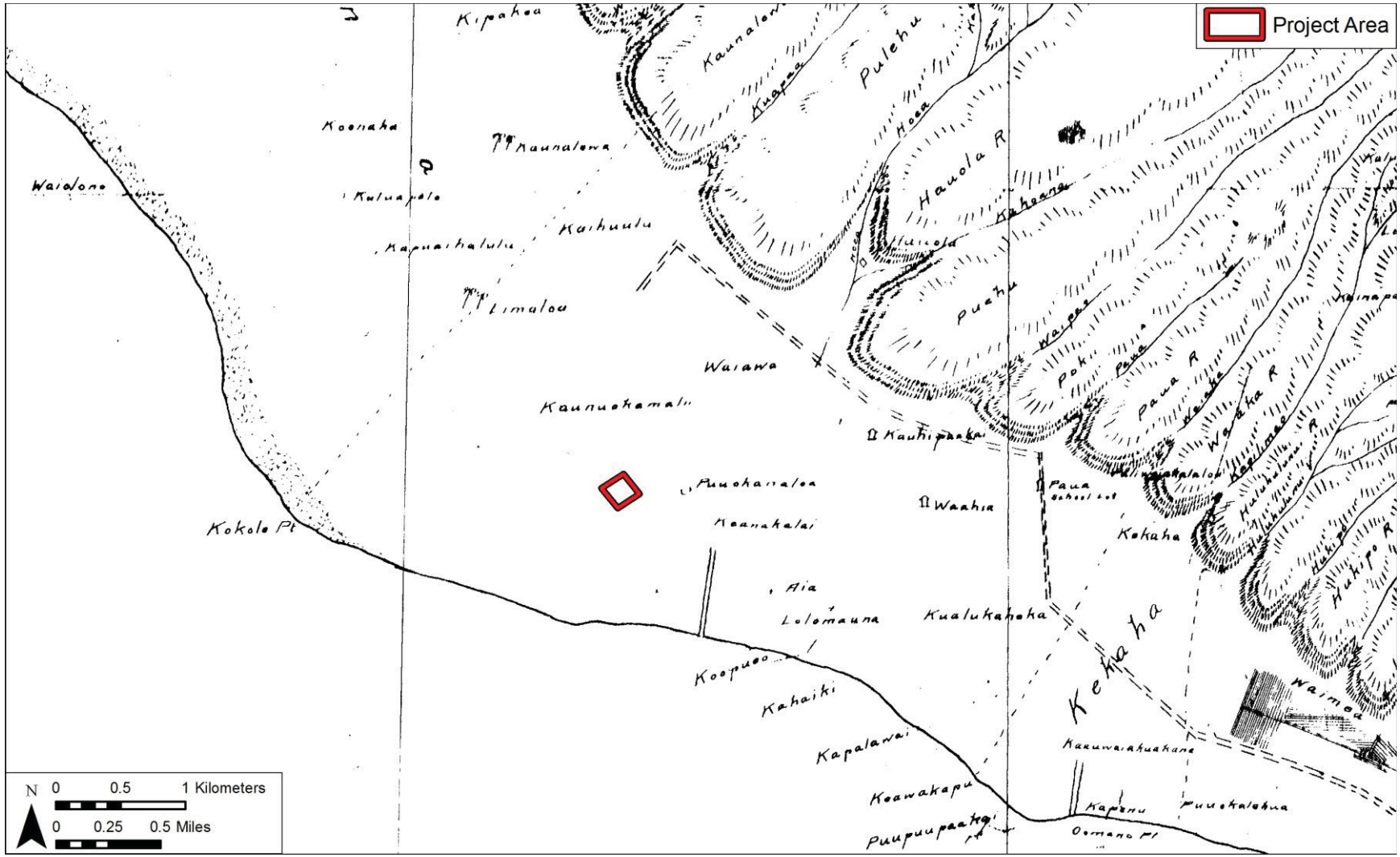

Figure 5. 1891 map by L.E. Imlay of Gay and Robinson lands, Kekaha area

According to Ms. Christina Faye of the Kaua’i Museum, Kekaha did not exist prior to the plantation which was established prior to the *mahele* (Pers. Comm. 6/9/2010, Lihue, Kaua´i). As stated above, Pukui et al. (1974:106) provides the literal translation of Kekaha (Ke-kaha) as “the place” and, according to Ms. Faye, “the place” refers to location of the sugar mill (Pers. Comm. 6/9/2010, Lihue, Kaua´i). According to Faye, the name Kekaha was used for the region because it was “the place” where the plantation was located. All mention of a village at Kekaha dates to after the establishment of the plantation, with the exception of the village of “A-Tappa” in the 1798 Beresford account.

3.2 Early Historic Period

A thorough search of major Hawaiian myths and legends found no mention of Kekaha, but the first western description of the place comes only nine years into the post-Contact era. William Beresford was the supercargo on board the British ship *Queen Charlotte* under Captain George Dixon, which along with the *King George*, captained by Nathanial Portlock, sailed on an exploratory voyage to the northwest coast of America. In 1798, both ships wintered in Hawai´i, spending much time off Waimea, Kaua´i. On one of the several shore outings, Beresford visited nearby Kekaha, which he called “A Tappa.”

> Having frequently heard our people who had been on shore speak of a village, called by the natives A Tappa, where a great number of people were commonly employed in manufacturing cloth, curiosity prompted me to walk to that place first, as I found it was not more than three miles distant, so that I could easily get back by Tyheira's dinner time.
>
> The country, from the place where we landed to A Tappa is tolerably level, and for the space of two miles, very dry. The soil here is a light red earth, and with proper cultivation, would produce excellent potatoes, or any thing that suits a dry soil; but at present, it is entirely covered with long coarse grass: the inhabitants, I suppose, finding plenty of ground near their habitations, more conveniently situated for their various purposes. So far, the space from the beach to the foot of the mountains is about two miles in breadth; but from hence to A Tappa, it grows gradually narrower, till it terminates in a long sandy point, which I have already observed, is the West extreme of Wymea Bay.
>
> A Tappa is a pretty large village, situated behind a long row of cocoanut trees, which afford the inhabitants a most excellent shelter from the scorching heat of the noonday sun. Amongst these cocoa-trees is a good deal of wet swampy ground, which is well laid out in plantations of taro and sugar cane.
>
> I had laid my account in seeing their method of manufacturing cloth; but here I was mistaken. A number of our people, prompted by the same curiosity as myself, were got to A Tappa before, where “Labour stood suspended as we passed.” The people flocked eagerly about us; some asking us to repose ourselves under the shady branches of trees planted about their doors; other running to the trees for cocoa-nuts and presenting them to us with every mark of kindness and good

> nature; in short, every inhabitant of the village was fully employed, either in relieving our wants, or gratifying their curiosity in looking at us.
>
> The day being very sultry, we walked leisurely back, and I returned by a different path from that I had taken, in going to A Tappa. On examining the grass, which in most places is higher than the knee, I found it no altogether of a rough coarse sort, but intermixed with various sorts of flowers, together with different grasses, of the meadow kind; so that I have no doubt, with proper management, it would make excellent hay (Dixon 1968:124-126).

Beresford's remark that the dry soil conditions in the area would be most suitable for potatoes is in line with Handy and Handy's (1972:410) assertion that the sweet potato was probably the prime staple of the village, rather than taro, because of the limited water resources.

While Beresford described taro, sugarcane, and coconut being cultivated in Kekaha, no mention is made of *wauke* (the inner bark of the mulberry tree) used as the raw material for making *kapa* (bark cloth). This seems curious in light of his statement that cloth making was a major activity of the village and the main purpose of his trek there was to observe this process.

Due to climatic conditions, the Mānā plain was probably not a prime *wauke* growing area (Handy and Handy 1972:209). However, Beresford did note on a later excursion through the lower Waimea Valley that "cloth mulberry" trees were numerous around the house sites there (Dixon 1968:131). It is possible that there was some sort of trade going on between the residents of Waimea and Kekaha, for raw material and the labor that turned it into cloth.

Native claims for land made to the Board of Commissioners to Quiet Land titles in 1848 also shed some light on to settlement and land use in the area during the early historic period. Only three claims were made in and nearby Kekaha.

Keaona (No. 8841) claimed a house lot, six *lo‘i* (irrigated plots) and some *kula* (land used for dryland agriculture or pasture) near the base of the *pali* (cliff) at Pōki´i, about a mile north of Kekaha (Board of Commissioners 1929: Native Register 1848; Vol. 9:397). Elia Lihau (No. 6698) claimed all the land of Wai´awa (just west of Pōki´i), most of which was unused *kula*, but included a restricted fishery. This claim was never awarded (Board of Commissioners 1929: Native Testimony, Vol 11:155).

The only one to claim land actually in Kekaha was B. Naumu (No. 5386). Mentioned in this claim are *lo‘i*, a house lot, a salt bed (*aliapa‘akai*) and a *muliwai* (a pool near the mouth of a stream or an estuary) called Kapenu. Naumu developed the *lo‘i* in 1844, stating that it was previously overgrown land (Board of Commissioners 1929: Native Testimony, Vol 11:146).

The 1891 map of West Kaua´i by L.E. Imlay (see Figure 5) shows Kapenu as a stream that entered the ocean just east of ´Ō´ōmanō Point. A later 1921 map by Evans does not show the stream, but places one of Naumu's awarded lots in the same area near the shore (Figure 6). Naumu was also awarded a parcel in Kekaha at the base of the *makai*-facing *pali* of Hululunui Ridge.

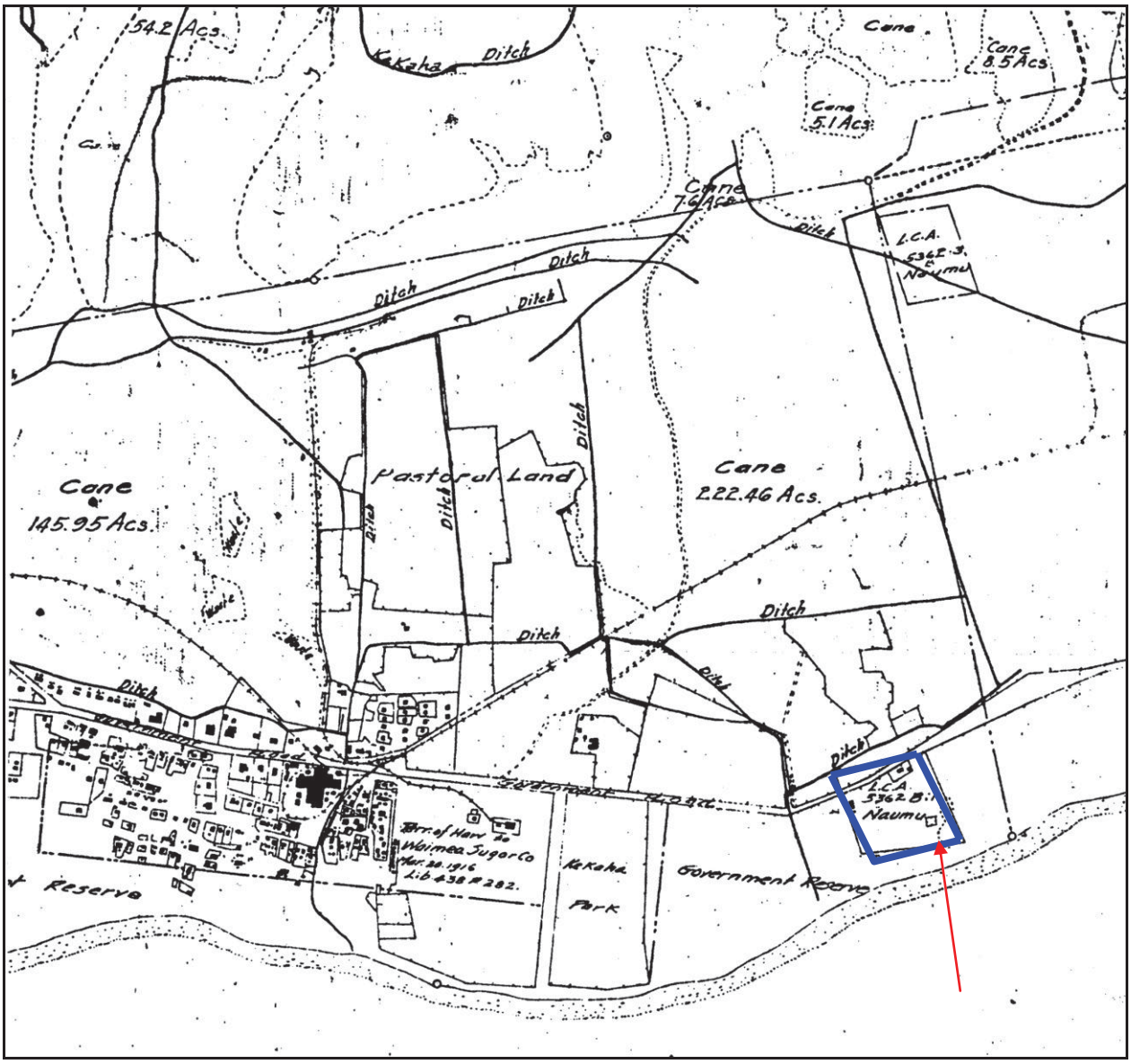

Figure 6. 1921 map by T. J. Evans of Kekaha Cane and Pasture Lands, Naumu’s LCA outlined in blue, the depression is marked by the red arrow

3.3 Mid-1800s to Early-1900s

Most of the historical accounts of Kekaha during this period are found in letters, papers, and books authored by Valdemar Knudsen and his immediate offspring, Eric A. Knudsen and Ida Elizabeth Knudsen Von Holt. Knudsen came to Hawai´i from Norway via the continental United States where he had business dealings. He settled at Wai´awa in 1854 as a rancher, agriculturalist and later, sugar planter.

Knudsen took over the lease of government land from Archibald Archer and a Mr. Gruben. The two men were involved in a failing tobacco farming enterprise. Associated with them was a Mr. Clifford, who made cigars (Lydgate 1991:92).

Eventually Knudsen controlled the entire district, excluding *kuleana* (tenant) lands, from Nu´alolo to Waimea, including all the *mauka* area (Knudsen and Noble 1945:35). In this post-Māhele era, he held the title of *konohiki* (overseer), and Hawaiians with no *kuleana* of their own who lived in the district, reportedly numbering three to four hundred people, worked for Knudsen three days out of the month as “rental” payment” (Von Holt 1985:61).

Knudsen described Kekaha as “a low marsh land, full of fish ponds and cocoanut-trees, but the ponds are overgrown with bullrushes and would cost more than they are worth to bring in order. I tried once and it cost me circa $200.00. - There is not much grazing lands belonging to Ketaha and it is chiefly pili grass” (Knudsen 1866:304).

Valdemar's son Eric, later made this observation:

> From Waimea towards Mana there were no trees, no fences, no cane, all was open country; along the taro patches of Kekaha and Pokii grew quite a number of cocoanuts. The mango trees were planted by my father. Numbers of Hawaiians lived about Kekaha and Pokii, where there were springs and taro land. Then the land was bare again until you reached Waiawa. Above the road in Pokii, where the cane loaders now stand, was a row of thatched houses and the natives planted a lot of tobacco (Knudsen 1991:98).

The perpetual swamplands of the plain apparently were greatly enlarged during periods of heavy winter rains. It was possible on these occasions to paddle a canoe from Mānā to Waimea on this inland waterway (Figure 7; Knudsen 1991:99, Von Holt 1985:77-78). Waterfowl present in the wetlands provided a food resource for the area residents. Among them the *koloa* (Hawaiian duck) and especially the *‘alae* (Hawaiian gallinule) and *āe‘o* (*kukuluāe‘o*; Hawaiian stilts) were numerous (Von Holt 1985:78). All three were traditionally caught and consumed by Hawaiians (Malo 1951:39).

Kekaha was watered by a spring called Kauhika located at the base of the *pali*. The spring had a fishpond, then taro *lo‘i* and rice fields before flowing into the swamp (Knudsen and Noble 1945:62).

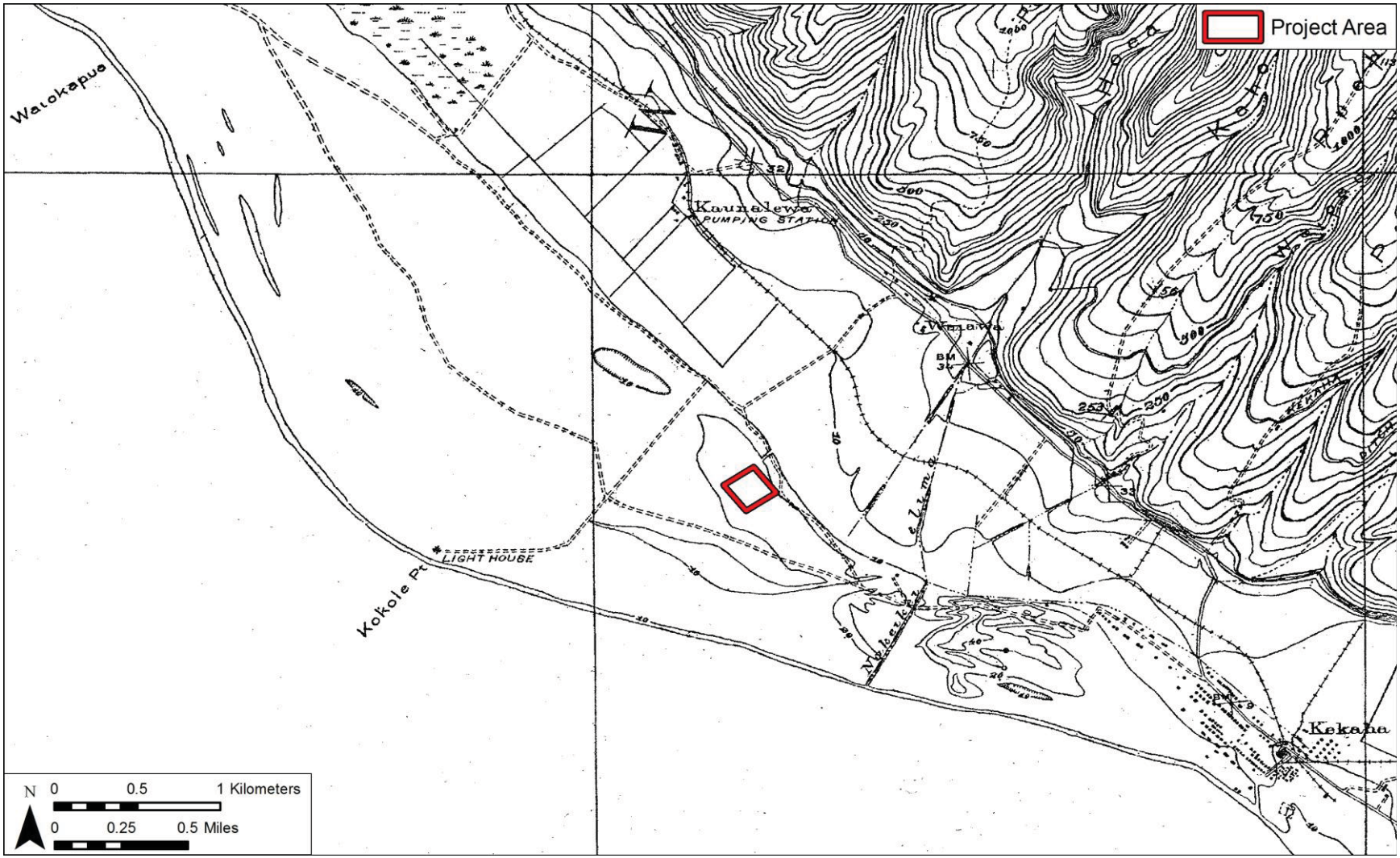

Figure 7. 1912 U.S Geological Survey map of the Island of Kaua´i, showing the Mānā Plain and its swamplands.

Most of the residents also lived in this area, near the water source and cultivatable lands. Eric Knudsen gives an anecdotal description:

> A row of grass houses extended all the way along the foothills from Waimea to Mānā. Every house site had a name. To find a man you had to find his house name. The natives seemed to know every name and would keep sending you along until you finally came to the spot you were looking for.
>
> At certain hours all the women sat in their houses and beat tapa cloth and as they beat they talked to one another in a tapa beater's code. They could send a message with great speed from Waimea to Mānā. When the men returned from the mountains with fire wood or canoes, the woman that saw them at once tapped out the news and it flew from house to house with the result that every man, when he came home, found his house in order and no surprised visitors hanging around. The men tried to learn this secret code but never did, though an old man at Mānā told my father than the men had tried for years to learn the secrets of the tapa code but were never able to do so.
>
> The grass houses were all built in one general design - one big living room and two doors - one on each side and opposite to one another. One day my father noticed that all were built with their gable-ends east and west and the doors facing the ocean and the hills. He asked one of the men why that was so and he replied, "Why, you know that Po, the abode of the dead, lies under the ocean just outside Polihale, where the cliffs and the ocean meet, and the spirits of the dead must go there. As the spirits wander along their way to Po, they will go around the gable-end of a house but if the house stood facing the other way, the spirits would walk straight through and it would be very disagreeable to have a spirit walk past you as you were eating your meal. "In fact," he continued, "we can always tell when a battle has been fought by the number of spirits passing at the same time" (Knudsen 1991:101-102).

3.3.1 Rice Cultivation

Commercial rice growing came to the Kekaha-Mānā plain in the 1860s. The area's most prolific planter was Leong Pah On, a Chinese immigrant (Joesting 1984:206).

Pah On started farming in Waimea Valley and eventually met Valdemar Knudsen who allowed him to cultivate the swamplands. He imported Chinese laborers, drained the swamps with ditches, brought in water buffaloes, and eventually acquired more land. At its peak, Pah On's rice lands totaled approximately 600 acres throughout Mānā, Kekaha, and Waimea (Char and Char 1979:21).

Pah On's enterprise ended suddenly in 1922. The leases on government lands were expiring and H. P. Faye, manager of the Kekaha Sugar Co., convinced Pah On not to bid on new leases and let the sugar company take over control of the land. In return Kekaha Sugar would sub-lease the rice fields back to Pah On. The successful rice grower could have easily out-bid the sugar

company, but agreed to the plan. When Kekaha Sugar secured the leases its board of directors overruled Faye and denied any subleases to Pah On (Char and Char 1979:22).

3.3.2 Sugar

The Reciprocity Treaty of 1876 between the United States and Hawai‘i gave impetus for the expansion of the sugar industry throughout the islands. Valdemar Knudsen and a partner, Christian L’Orange, planted the first commercial cane in the Kekaha area in 1878 near Pōki´i. Hans P. Faye, Knudsen’s nephew, was brought in as another grower, and it was he who dug the first artesian wells in the Hawaiian Islands at Kekaha. A steady but still small water source impelled investor interest, and the Kekaha Sugar Co. was incorporated in 1898 (Wenkam 1977:63; Joesting 1984:216-217). The Kekaha Sugar Co. was developed on the lands of the Meier and Kruse sugar plantation (1886-1898), H. P. Faye & Company sugar plantation (1886-1898), and Kekaha Mill Company sugar plantation (1880-1898) and was organized under the auspices of the major sugar factor H. Hackfield & Company (Dorrance and Morgan 2000:35). The mill was set up on the sand lands of Kekaha at the *makai* edge of the swamp, its foundations set deep into the underlying coral (Knudsen and Noble 1945:161-162). The Kekaha Sugar Co. saw expansion after 1907 under the management of Hans Peter Faye when the construction of the plantation's major irrigation ditch was completed. Most of the cane was initially transported by flume. By 1910 the plantation had 15 miles of permanent railroad track transporting cane from collection points to the mill and then transporting bags of sugar to the steamship landing at Waimea. In this timeframe the plantation employed approximately 1,000 people. In 1938 a *Honolulu Advertiser* article stated that Kekaha Sugar Co. was the most valuable single piece of property in the Territory. In the 1940s trucks took over the transport of cane from the flume system and railroad. In 1983 Kekaha Sugar employed about 400 people and produced 54,819 tons of sugar. In 1994 Amfac/JMB consolidated many functions of Kekaha Sugar and Lihue Plantation as a cost-cutting measure (Wilcox 1996:97). The Kekaha Sugar mill closed in 2000.

3.3.3 The Kekaha Ditch

Valdemar Knudsen looked to the Waimea River as a source of sugar cane irrigation water. Initial engineering studies in 1881, 1892 and 1893 were not favorable to the project citing exorbitant costs (Wilcox 1996:92). The high cost estimates for the proposed ditch lead to intensified efforts at groundwater extraction in 1898 but drought and over use lead to skyrocketing salt content and a major drop in well levels. The fate of the plantation hinged on water supply development. H. P. Faye was impressed with the success of the Waimea (Kikiaola) Ditch in supplying irrigation water to the Waimea Sugar Mill Plantation and pushed forward with the Kekaha Ditch. Construction started in May 1906 and was completed in September 1907 (Wilcox 1996:93). The Kekaha Ditch has also been known as the Waimea Ditch and as the Waimea-Kekaha Ditch. J. S. Malony was contracted and James L. Robertson was the project supervisor. The ditch intercepted water in the Waimea River at 550-foot elevation and originally extended through 16 miles of *mauka* lands and 4 miles through the lowlands (Wilcox 1996:93).

It was later extended another eight miles. Most of the ditch was driven through hard rock by teams of Japanese workers. In some areas the sides were reinforced with cemented cut stone to minimize erosion but the ditch bottom was typically unlined.

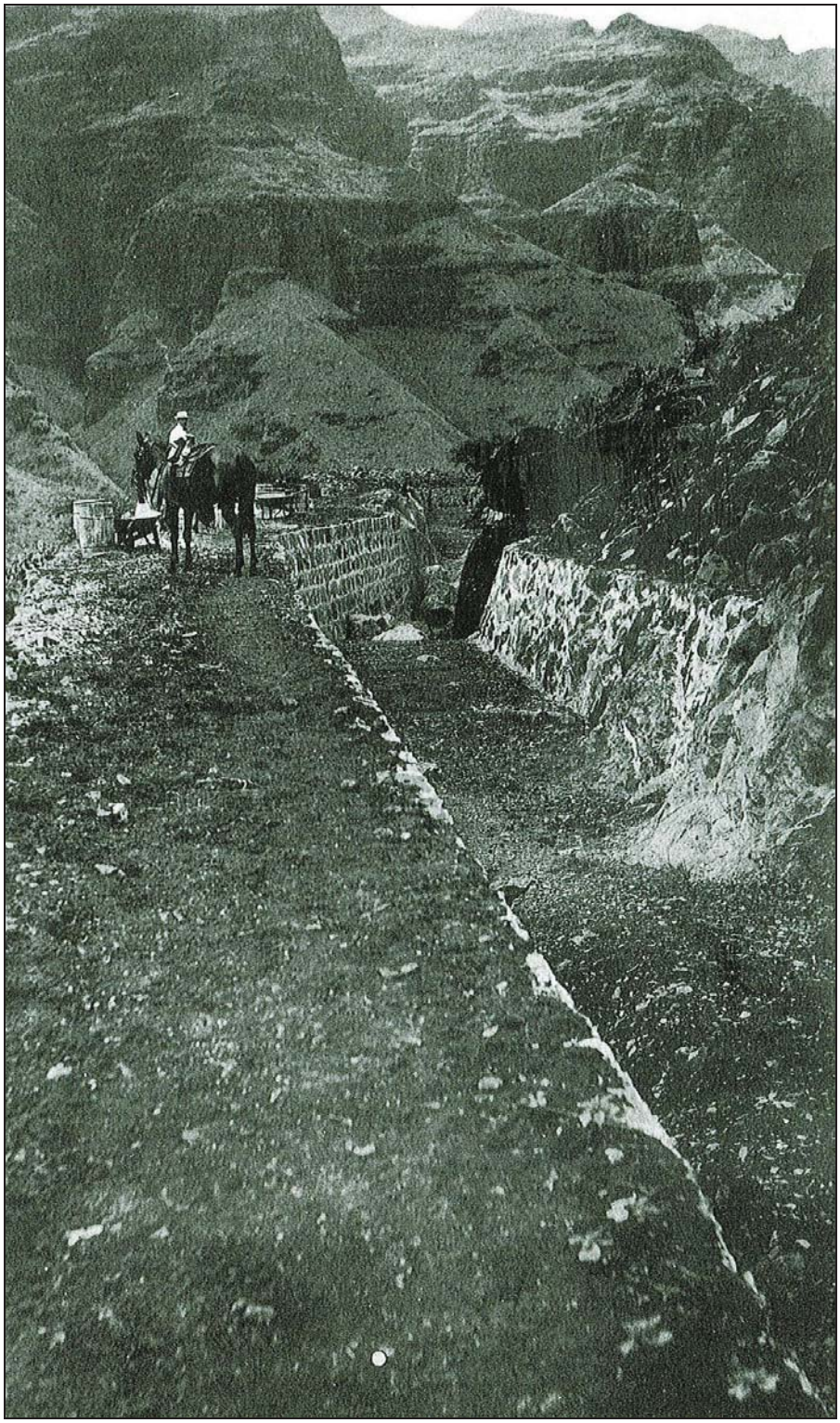

Figure 8. Historic photo of the upper reaches of Kekaha Ditch showing the general nature of ditch (Wilcox 1996:94)

“A 2190-foot steel inverted siphon, since replaced, crossed the Waimea River” (Wilcox 1996:93). Hydro-electric power was used to pump water to higher elevations watering an additional 400 to 500 acres. The initial average flow was about 30 million gallons a day. By 1912 the Kekaha Ditch water production had dropped due to seepage and it was decided to extend the upper portion of the ditch another 280 feet above the prior intake and to build a second hydo-electric powerhouse. In 1923 the Kekaha Sugar Co. carried out extensive improvements expanding the average capacity to 35 million gallons a day and also began work on the Kokee Ditch.

3.3.4 Railroad

A railroad was constructed for the Kekaha Sugar Company in 1884, which was present from Waimea to the sugar mill at Kekaha. A visitor in 1965 described the main track:

> . . . They have engineers only – no firemen – no brakemen. No brakes on cars. Roads are dead level. We passed cane fields and grazing pastures all in sight of ocean – as our course was parallel to beach and one mile from it (cited in Conde and Best 1973:141).

This railroad generated a deal of excitement in 1920, when it became site of the first and only train robbery to take place in the Hawaiian Islands. At the western most section of the Kekaha Sugar Co. were the fields in the Mānā area, which extended to the current location of the airfield at Barking Sands. The families working on these fields lived at Mānā Camp. Due to the distance of this camp from the main office at Kekaha, a paymaster, Mr. Asser, was sent to the camp each month.

On February 11, 1920, the pay for all of the workers, $11,000, was carried in individual envelopes by the paymaster, who rode on the plantation train. The tale of “The Great Train Robbery” was told by Philip Rice in the February 28, 1968 issue of the Garden Island.

> The locomotive proceeded towards the camp, passing through the high cane. At a place where a sharp curve or poor condition of the track necessitated a reduction in speed to about that at which a man could walk, a person completely clothed in the garb of a cane loader stepped forth from the tall cane. Over his face was a part of an old towel with eye holes cut in it. . . .
>
> He pointed a revolver at Mr. Asser and the locomotive engineer, ordered the locomotive stopped and that they dismount. The two complied, and the holdup man boarded the locomotive, started it, and proceeded toward Mānā Camp, quite a distance beyond and out of sight of the holdup point…
>
> When the robbery was discovered, a search was made where the locomotive had been abandoned. A trail of tabi (footwear of heavy blue denim) prints extended makai toward the swamp near the coast at Kekaha. A helpful local fisherman named Kaimiola Hali, who sold his fish to the workers at Mānā camp on their paydays, helped in the search. When the tabi prints led into the peninsula swamp near Hali’s house, he cautioned the men not to go into the swamp since it was too

> deep. The sheriff became suspicious of the man when he saw him try to obliterate one of the prints. The sheriff returned to the area and entered the swamp. A few feet from the end of the peninsula, he found a large lard can with several pay envelopes, containing all but $250 of the stolen money. The sheriff then went to Hali's house and collected evidence and testimony pointing to Hali as the robber, including wet tabis hanging up to dry that exactly matched the tabi prints in the swamp. An exhausting trial was then conducted, and Hali was found guilty…
>
> In the trial, it came out that Hali often went to the theater at Mānā, which showed westerns, especially those that depicted outlaws and train robberies. It has been suggested that these films inspired Mr. Hali to commit the crime (Rice 1968 – cited in Conde and Best 1973: 143-144).

By 1910, a railroad system was laid from Kekaha sugar mill to Polihale for transporting sugarcane, labor, and freight. The steam locomotives acquired for this purpose were named "Poli Hale", "Mana", "Kolo", "Nohili", and "Pokii" after places of the area. They were eventually replaced with diesel locomotives in 1928. The railroad system was eliminated in 1947 when trucks were utilized for hauling sugarcane to the mill (Conde and Best 1973:141-146).

3.4 Modern Land Use

Up until 2001, Kekaha Sugar Plantation lands on the Mānā Plain were managed by the State of Hawaii Department of Land and Natural Resources (DLNR). Between 2001 and 2003 Agribusiness Development Corporation (ADC) held a right of entry to manage the lands from the Board of Land and Natural Resources. In 2003, an Executive Order was awarded to ADC for the land. The land is classified as "Agricultural" by the State of Hawai´i.

According to the ADC, approximately 5,090 acres of sugarcane plantation land were located in coastal Kekaha-Mānā Plain. Immediately adjacent to the project area, and in the uplands, about 14,500 ac (5,868 ha) of land is listed as Hawaiian Homestead Lands (Bow 2000). A portion of this area (26 ac, 11 ha) is leased to the United States Department of the Navy, with about 500 acres (202 ha) being leased to others for grazing purposes. Up until 2001, DLNR managed 2,668 acres of former sugarcane plantation fields in the uplands after the closure of Kekaha Plantation.

Since 2001 these lands have been managed by ADC. Gay and Robinson, the owners of the Kekaha Plantation, initially held on to approximately 3,500 acres after the closure of the plantation; however their holdings have decreased over time, dropping to 1,750 acres in 2005. Since the plantation closure in 2001, lands on the Kekaha-to-Mānā plain have "supported besides sugarcane, the production of seed corn, sweet corn, melons, tropical fruits, and various vegetable crops" (Southichack 2005:2).

Currently, located to the south and southeast of the project area, a short distance away is the town of Kekaha, it has become the "4th largest community on the island of Kaua´i" with about 2000 residents currently living there. It is also the hometown of the largest group of "transplanted" Hawaiians from Ni´ihau Island in the state. Within its bounds are old neighborhoods that were once part of the original camp, Hawaiian Homelands Housing, vacation

rental properties along Kaumuali´i Highway facing the beach, and a variety of buildings related to plantation times, which includes the old Kekaha Sugar Mill.

3.5 Previous Archaeological Research

A general archaeological background for Kekaha is presented, followed by a discussion of archaeological studies that have been conducted within and immediately adjacent to the current project area. Table 1 presents a list of previous archaeological research and Figure 9 shows previous study area locations.

Table 1. Previous Archaeological Studies in the Kekaha Area

Study	Location	Type	Findings
Bennett 1931	Island wide survey including Kekaha	Documentation of major pre-contact sites	Described 7 sites in the Kekaha area including *heiau*, burial caves, habitation, and agricultural features
Ching 1974	Kekaha	Hawaii Register of Historic Places nomination form	Ho´one´enu´u Heiau (SIHP # 50-30-05-12)
Bordner 1977	Kekaha Beach Park	Reconnaissance survey	No cultural material observed
Sinoto 1978	Valleys *mauka* of Kekaha Town	Reconnaissance survey	Sites located in valleys of Waiakea, Pawa, Waipoao, Waiawa, Kahoana, and Hō´ea
Ching 1982	Proposed landfill near Barking Sands	Reconnaissance survey	No cultural material observed
McMahon 1988	Mānā near the land fill	Field inspection	No historic properties observed
Ida and Hammatt 1992	Kekaha Town TMK 1-3-02:2	Inventory survey w/ subsurface testing	No historic properties or cultural deposits observed
Spear 1992	west of Kekaha Town; TMK 1-2-02: 22	Archaeological monitoring	No historic properties observed
Yent 1992	Polihale State Park	Subsurface testing	Cultural deposits associated with SIHP # 50-30-05-1818
McEldowney 1993	Mānā Quarry	Archaeological survey	Partial recording of *heiau* on the *mauka* bank of Kekaha Ditch near Mānā Quarry
Folk and Hammatt 1993	Proposed landfill expansion near Barking Sands; TMK	Inventory survey w/ subsurface testing	No historic properties observed

Study	Location	Type	Findings
	1-2-02: 9		
Folk and Hammatt 1994a	National Guard Rifle Range, Barking Sands	Inventory survey w/ subsurface testing	No historic properties observed
Folk and Hammatt 1994b	Kekaha Town	Inventory survey w/ subsurface testing	No historic properties observed
Masterson et al. 1994a	Kekaha Town; TMK 1-2-12: 38 and 1-2-02: 32, 34, and 38	Inventory survey w/ subsurface testing	2 Cultural layers (SIHP # 50-30-05-700, and -703), 2 human burials (SIHP # 50-30-05-701 and -702)
Masterson et al. 1994b	Proposed agricultural park near Barking Sands	Inventory survey w/ subsurface testing	2 human burials at Limaloa (SIHP # 50-30-05-3650)
Hammatt 1996	Kekaha Town	Subsurface Testing	No historic properties observed
Yent 1997	Kekaha Game Management Area; TMK 1-2-02	Reconnaissance Survey	No historic properties observed
Heidel et al. 1997	Kekaha Town; TMK 1-3-03-15, 19, and 23	Inventory survey w/ subsurface testing	4 human burials (SIHP # 50-30-05-619)
McGerty and Spear 1997a	Mānā Plain	Inventory Survey	No historic properties observed
McGerty and Spear 1997b	Parcel of land north of Mānā Reservoir; TMK 1-2-02: 001	Inventory Survey	SIHP #s 50-30-05-652 thru 658 including rock mounds ,terraces, and historic refuse dumps
Hammatt and Shideler 1999	Kekaha Town; TMK 1-3-05: 15, 19, and 23	Archaeological monitoring	No cultural material observed
Tulchin and Hammatt 2003	´Akialoa Road and Kaumuali‘i Highway; TMK 1-3-001: 999	Inventory survey w/ subsurface testing	No cultural material observed
Hammatt 2004	Aloha Kaua´i Villas, Kikiaola; TMK 1-2-13: 31	Inadvertent burial discovery and treatment report	3-5 individuals discovered during the excavation of a pool and designated as SIHP # 50-30-05-3911
Stein and Hammatt 2006	0.23-Acre Parcel within the Kekaha House Lots; TMK: (4) 1-3-05:45	Archaeological monitoring and inadvertent burial recovery report	2 burials designated SIHP # 50-30-05-3941
Hazlett and Hammatt 2008	Kekaha Town, Lot B Kekaha Housing;	Archaeological monitoring	1 burial designated SIHP # 50-30-05-3937

Study	Location	Type	Findings
	TMK 1-2-002: 032		
Wilkinson and Hammatt 2010	Kekaha Elementary School; TMK 1-3-002: 001 and 057	Archaeological monitoring	No cultural material observed

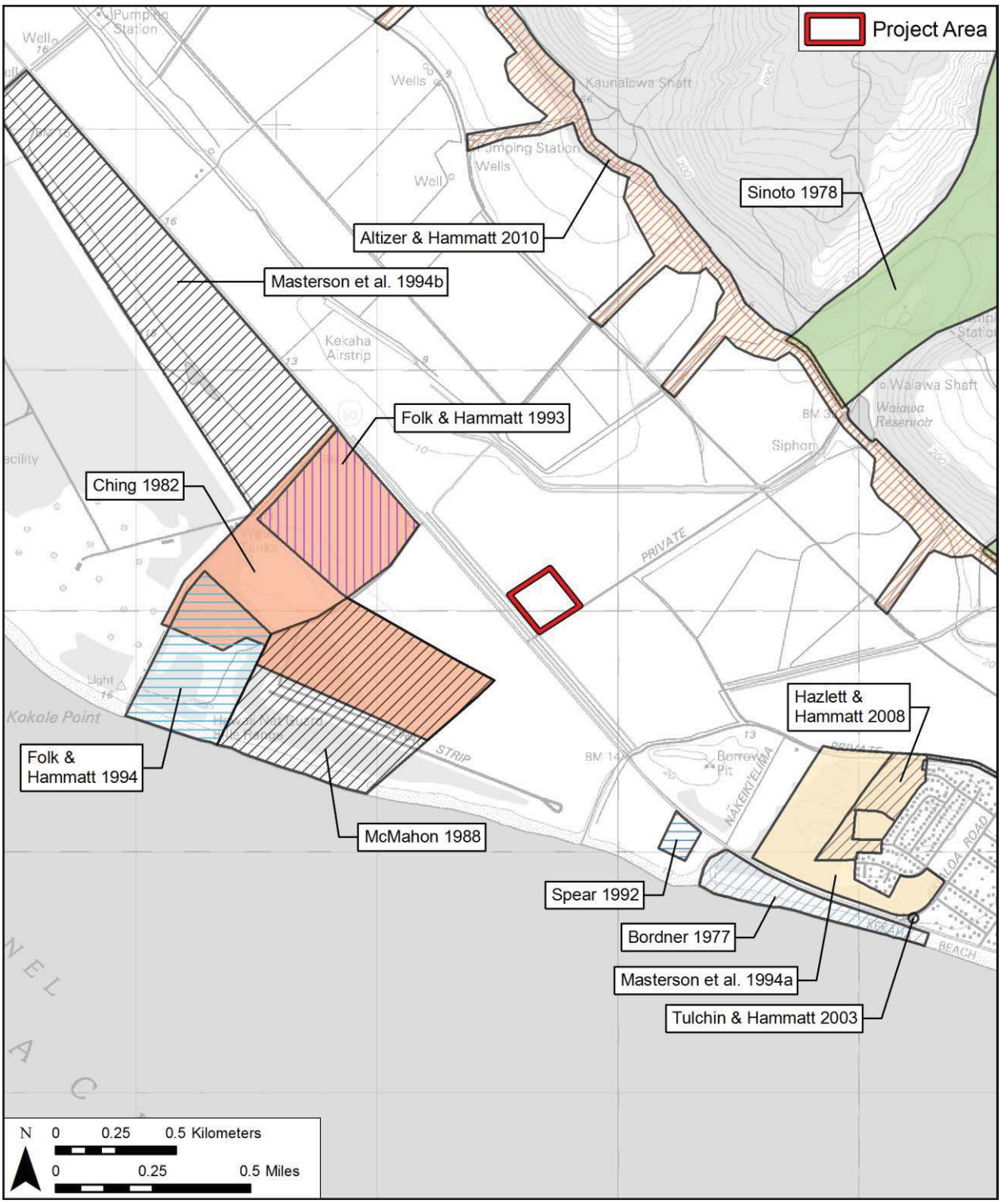

Figure 9 . Previous archaeological studies in the Kekaha area

The first comprehensive study of the archaeology of Kaua´i was undertaken by Wendell C. Bennett (1931) based on field work conducted in 1928-29. Bennett recorded seven major pre-Contact sites in the vicinity of Kekaha (Sites 10-16). These are listed by Bennett as:

> Site 10-Kahelu *heiau*, at Kahelu near Mana and described by Thrum as, "A *heiau* of platform character at the base of the hill, about six feet in front, not of large size."
>
> Site 11-Makahoe *heiau* and village site, on Niu ridge, Kaunalewa. A small, platform village shrine. Thrum describes the village as "Four and one-half miles from the coast and at an altitude of 1200 feet. This village had about 0.5 acres of taro land besides the dry crops to depend on." On the inland side of Niu ridge, small valleys are found with small streams and a few taro terraces. Petroglyphs were reported for this area.
>
> Site 12-Hooneenuu *heiau*, along the ditch line inland from the government road near the center of Kaunalewa ridge.
>
> Site 13-Burial caves, on Kaunalewa ridge.
>
> Site 14-Two small *heiau*, near Waiawa, described by Thrum as a 12 by 20-foot shrine, and an 18 by 28-foot shrine
>
> Site 15-House sites and taro terraces, in Waiawa valley. Some taro lines may still be seen in lower Waiawa valley. Many house sites are in evidence. They consist for the most part of leveled ground, faced in front with stone, or merely outlined with stone.
>
> Site 16-Hauola *heiau*, in Hoea valley at the base of Hauola ridge.
>
> Site 17-Burial caves, on Pokii ridge.

Bennett's Site 12, Ho´one´enu´u Heiau (SIHP # 50-30-05-12), is located approximately 2.5 – 3 km north, northwest of the current site.

Ching (1974) conducted fieldwork in support of a Hawai´i Register of Historic Places Nomination form for SIHP # 50-30-05-12. A partial scale drawing of the site was produced along with documentation for form submittal. The site was recommended as "Reserve local…because of the scarcity of enclosed *heiau* on Kaua´i" (Coversheet Hawai´i Register of Historic Places 1974).

The Bishop Museum returned to the bases of the narrow valleys overlooking present day Kekaha Town (Figure 10) during a study for potential rock borrow areas for the Corps of Engineers (Sinoto 1978). Archaeological sites were noted in Waiākea, Pawa, Waipao, Waiawa, Kahoana and Hō´ea. Sinoto's (1978) Waipao study area was bracketed on the east side by the Kōke´e Road and on the north and east sides by the Kekaha Ditch at the east end of the present study corridor. Sinoto (1978:4) notes: "A few sites, including crude terracing, stone piles, and an apparent cattle wall…" Sinoto (1978:4) recommended: "The area immediately south of the

pumping station, comprising about a third of the [Sinoto 1978 Waipao] survey area, is restricted from borrowing activities." This area of study lies farther inland of the present project area.

ARCH (Bordner 1977) conducted an archaeological reconnaissance survey of Kekaha Beach Park for the Army Corp of Engineers. Charcoal flecking was observed in a sand dune; however because no cultural material was observed, the flecking was attributed to the nearby sugar mill.

In 1982, ARCH conducted an archaeological reconnaissance survey for a proposed landfill site on a parcel adjacent to the south side of Barking Sands military installation. The land was previously under sugar cane cultivation and no cultural material or historic properties were observed.

McMahon (1988) conducted a field inspection of land in Mānā adjacent to the landfill, in response to a request for a land use permit. Impacts from the landfill were observed; however no historic properties or cultural material was observed.

CSH (Ida and Hammatt 1992) conducted an inventory survey with subsurface testing in support of the consolidation and re-subdivision of house lots in Kekaha Town. No historic properties or cultural deposits were observed.

SCS (Spear 1992) conducted archaeological monitoring on a parcel west of Kekaha Town in support of vegetation clearing and excavation for a well. No historic properties or cultural deposits were observed.

Yent (1992) conducted subsurface testing in support of a proposed road swale at Polihale State Park. The purpose of testing was to further define the extent of SIHP # 50-30-05-1818, a cultural deposit containing charcoal, basalt flakes, and shell midden, located in the sand dunes. Other goals included determining impacts to the site as a result of the project, and recommending treatment during construction. Remnants of the deposit were observed and documented as a result of subsurface testing.

McEldowney (1993) (SIHP #50-30-05-2113) conducted a field inspection in support of the proposed expansion of Mānā Quarry, which is located approximately six km to the north-northwest of the current site. Remnants of a *heiau* were partially documented near the southwestern extent of the quarry. These remnants were conclusively identified as a previously undocumented *heiau* and not Bennett's Site 12; however the site was mislabeled during subsequent administrative tasks. The current document rectifies this administrative error (see Section 4.1.8).

In 1993, CSH (Folk et al.) conducted an inventory survey with subsurface testing in support of proposed landfill expansion near Barking Sands military installation. No historic properties or cultural deposits were observed.

CSH (Folk and Hammatt 1994a) conducted an inventory survey with subsurface testing at the National Guard Rifle Range at Barking Sands military installation. No historic properties or cultural deposits were observed.

In 1994, CSH (Folk and Hammatt 1994b) conducted an inventory survey with subsurface testing in support of a proposed parcel subdivision in Kekaha Town. No historic properties or cultural deposits were observed.

CSH (Masterson et al 1994) conducted an inventory survey and subsurface testing in support of an 89-acre parcel being considered for development in Kekaha. A total of 100 trenches were excavated by backhoe to probe for possible subsurface cultural material. As a result, two Cultural layers (SIHP # 50-30-05-700, and -703) and two human burials (SIHP # 50-30-05-701 and -702) were documented. The cultural layers consisted predominantly of layers of charcoal flecking and radio carbon dating yielded a date range of AD 1645 to 1950. A small quantity of artifacts were recovered from SIHP # 50-30-05-703 including basalt flakes and a basalt plummett sinker (Masterson et al. 1994: 37-39).

Also in 1994, CSH (Masterson et al. 1994b) conducted an inventory survey with subsurface testing on a parcel of land located on the east side of Barking Sands military installation. This parcel was proposed for an agricultural park. As a result of subsurface testing, two burials were discovered and designated SIHP # 50-30-05-3650.

CSH (Hammatt 1996) conducted subsurface testing in Kekaha Town per the SHPD/DLNR request “that a minimum of 100 linear feet” of area be tested for archaeological deposits. No historic properties or cultural deposits were observed during testing.

Yent (1997) conducted of a reconnaissance survey of Kekaha Game Management Area in advance of limited vegetation clearing. No historic properties or cultural deposits were observed.

CSH (Heidel et al. 1997) conducted an inventory survey with subsurface testing of a six-acre parcel of land in Kekaha being considered for re-subdivision. Most of the stratigraphy observed had been previously disturbed by past land use. Informal interviews with nearby residents indicated the possibility of burials along Elepaio Road and subsequent testing recovered the remains of four individuals and a horse. These burials were designated SIHP # 50-30-05-619.

In 1997, SCS (McGerty and Spear 1997a) conducted field reconnaissance and interviews with local residents in support of a proposed change of land use for a parcel on Mānā Plain adjacent to the north side of Barking Sands military installation. Reconnaissance confirmed the parcel was previously under sugar cane cultivation. Historical background research indicated the area was a wetland marsh until it was filled for use by the sugar plantation. SCS concluded that the nearby sand dunes were likely used as fill material and any cultural material present in the parcel would likely be in secondary deposition (McGerty and Spear 1997: 20).

Also in 1997, SCS conducted an archaeological inventory survey of a parcel of land located approximately five to six km north-east of the current site. (McGerty and Spear 1997b). Seven sites were documented as a result of the survey and included terraces, rock mounds, two dirt roads, and historic artifacts. The terraces, mounds, and dirt roads were interpreted as associated with late pre-Contact to early plantation era activities, while the historic artifacts were associated with later plantation era activities. These sites were designated SIHP #s 50-30-05-652 through -658.

CSH conducted archaeological monitoring in support of the Kekaha Sunset Subdivision (Hammatt and Shideler 1999). A previous inventory survey documented four coffin burials (Heidel et al. 1997); however no additional historic properties or cultural deposits were observed as a result of monitoring activities.

In 2003, CSH conducted archaeological monitoring in support of the Sandwich Isles Fiber Optic Cable Landing at ´Akiaola Road in Kekaha (Tulchin and Hammatt 2003). Subsurface directional drilling was conducted to a point approximately 3,700 ft. off shore. No historic properties or cultural deposits were observed.

CSH responded to an inadvertent discovery of human remains at the Aloha Kaua´i Villas (Hammatt 2004). The remains of at least three individuals were discovered during pool excavations. The flexed position of one of the skeletons, as well as the absence of coffin fragments or grave goods, indicated the burials were likely pre-Contact traditional Hawaiian. In consultation with the SHPD and the Kaua´i Island Burial Council, the remains were disinterred and reinterred at a suitable location on-site away from the pool area. The remains were designated SIHP # 50-30-05-3911.

In 2006, CSH responded to an inadvertent discovery of human remains at Kekaha House Lots during excavation of a septic tank (Stein and Hammatt 2006). CSH archaeologists monitored the remainder of excavations to ensure the proper treatment of any additional burials. A total of two individuals were recovered and relocated as a result of the discovery. They were thought to be likely pre-Contact traditional Hawaiian because of their flexed position and the absence of coffin fragments or grave goods.

CSH conducted monitoring for Lot B of Kekaha House Lots in support of construction activities and to assist the land owner in complying with the SHPD determination that an archaeological monitor be on site for all ground disturbing activities within this lot because of the presence of a previously identified cultural layer (SIHP # 50-30-05-702) in close proximity to its southern boundary. One inadvertently discovered burial was documented during trenching associated with a fiber optic cable line present in the northern portion of the project area. The burial was designated SIHP # 50-30-05-3937 and was reinterred in close proximity to its original interment area (Hazlett and Hammatt 2008).

In 2010, CSH monitored wastewater system improvements at Kekaha Elementary School (Wilkinson and Hammatt 2010). No historic properties or cultural deposits were observed.

3.6 Background Summary and Predictive Model

3.6.1 Background Summary

The name, “Kekaha,” itself can be interpreted to mean “dry land” or an area near the shore that is not favorable for planting. The Kekaha region of Kaua´i has low annual rainfall and no permanent streams.

Despite the low rainfall, early visitors to Oahu in the late 1700s indicate that the Kekaha area was well-populated. Inhabitants manufactured cloth from *wauke* (Mulberry) and grew taro and sugarcane in the swampy ground. In the mid-1800’s, LCA requests show that there was both dry land and irrigated agriculture occurring in the region along with salt beds and at least one fishery.

Valdemar Knudsen settled in Wai´awa in 1854. His agricultural and pastoral lands covered much of the region and eventually he had control over the entire district. Knudsen made use of local labor by requiring residents to work for him three days each month as rental payment.

A Chinese immigrant, Leong Pah On, began growing rice commercially in the 1860s in the drained swamplands of the area, eventually utilizing 600 acres throughout Mānā, Kekaha, and Waimea for rice production. Pah On imported laborers from China to work the rice fields presumably creating a significant Chinese population in the area. Rice cultivation continued until 1922 when the Kekaha Sugar Co. assumed ownership of the lands.

The Kekaha Sugar mill closed in 2000 and the DLNR managed these lands until ADC was awarded them by the state in 2003. The land including the current project and survey areas is now classified as "Agricultural" by the State of Hawaii.

3.6.1.1 Kekaha Settlement Pattern

The traditional Hawaiian settlement of the Kekaha region can be divided into five zones (Table 2):

Table 2. Traditional Hawaiian Settlement Patterns in Kekaha

Zone	Environment	Resources	Type of Sites
Zone 1	Ridges and slopes	Kula land, forest products, dry land cultigens	*Heiau*, burials on slopes
Zone 2	Narrow valleys and slope base	Intermittent streams, springs, taro, sugar cane	*Lo‘i*, permanent habitations, *heiau*, and terraces
Zone 3	Marsh lands	Taro, sugarcane, fowl, fish	Fishponds, taro *lo‘i* on marsh edges
Zone 4	Sand plain, *mauka* portion	Coconuts	Clustered burials
Zone 5	Sand plain, *makai* portion	Coconuts, marine resources, salt	Fishing camps, saltpans, canoe landings, isolated burials

A settlement pattern emerges through the study of historical material concerning the Kekaha area. Permanent habitation areas were mainly among the *mauka* foothills, at the bases of the shore-facing cliffs. Extending up the gulches were agricultural areas watered by rainfall and intermittent streams. This has been confirmed by the archaeological investigations of Bennett (1931:103) and Sinoto (1978:2-6).

Makai of the foothills were fishponds and cultivated wetlands fed by springs. Beyond this was the great swamp, then the broad stretch of the sand lands which continued to the shoreline. Fishing camps and other temporary habitation areas existed on the beach, and in the inland stretches of the sand there were burials. This scenario was likely in place at the time of first western contact and remained relatively undisturbed throughout most of the 1800s.

Since then, much physical evidence of this settlement pattern has been significantly altered by commercial agriculture and other operations. The foothills and wetland areas have been extensively planted in sugar cane, livestock have grazed in the gulches, and even the beach areas have been disturbed by massive shoreline stabilization projects.

3.6.1.2 Ridges, Slopes, and Valleys

Bennett's (1931) study of archaeological sites in Kaua´i shows habitation evidence in small valleys dissecting Niu Ridge, as well as on the ridge itself. Waiawa Valley contains "many" house sites and associated taro *lo´i*, and *heiau* (temples) appear both in valleys and on ridges.

Bennett's survey apparently predated at least some of the land impact associated with sugar growing and was early enough to record sites at the base of the Waimea slope, allowing us to take note of the former importance of this area during pre-contact times.

Sinoto's study (1978) noted archaeological sites in Waiākea, Pawa, Waipao, Waiawa, Kahoana and Hō´ea. These sites survived in spite of the heavy impact of sugar activities and grazing, and provide reinforcement for this particular zone edging on the Kekaha flats as being a focus of permanent Hawaiian habitation, with a steady supply of water from springs.

McGerty and Spear (1997b) also documented the presence of terraces, mounds, and dirt roads associated with late pre-Contact to early plantation era activities. These were observed at the base of Kamōkala Ridge, near the northern portion of the current survey area.

3.6.1.3 Marsh Lands

The swamp lands between the cliffs and the sand flats are now the level agricultural fields of Kekaha. Draining of the once giant swamp for agriculture began in the late 1800s and, due to decades of sugar cane cultivation, archaeological site potential here is minimal. However, this does not mean that the Hawaiians did not use this land. Its fringes would be useful for taro, and waterfowl must have been abundant at times. There are accounts of widespread seasonal flooding of these lands. It is a reminder of the adaptability of Hawaiian planters who employed a unique method of taro growing at Mānā, as related by Pukui:

> As the plants grew, the rootlets were allowed to spread undisturbed, because they helped to hold the soil together. When the rainy season came, the whole area was flooded as far as Kalamaihiki, and it took weeks for the water to subside.
>
> The farmers built rafts of sticks and rushes, then dived into the water. They worked the bases of the taro mounds free and lifted them carefully, so as not to disturb the soil, to the rafts where they were secured. The weight of the mounds submerged the rafts but permitted the taro stalks to grow above the water just as they did before the flood came. The rafts were tied together to form a large, floating field of taro (Pukui 1983:232-233).

3.6.1.4 Sandy Plain and Shoreline

The bulk of archaeological studies in Kekaha have been conducted on the flat lands near the coast (Bordner 1977; Ching 1982; McMahon 1988; Folk and Hammatt 1993; Folk and Hammatt 1994a; Masterson et al. 1994 a and b; Spear 1992; McGerty and Spear 1997). Sand deposits between the swamplands (now drained sugar fields) and the ocean have high potential for shoreline occupation and scattered human burials, particularly along the *mauka* fringes of the sand deposits.

Human burials have been discovered in sand deposits in Waimea Town to the east of Kekaha (Cox 1975; Kikuchi 1985), and archaeological studies of sand areas have noted the potential for burials, even though none were immediately found (Bordner 1977; Ching 1982; McMahon 1988a, 1988b;). More recent studies have tested larger areas for burials: at the north end of Kekaha Town for the proposed Kekaha Housing Project (Masterson et al. 1994a); in the proposed Kekaha Agricultural Park (Masterson et al. 1994b); the proposed landfill expansion (Folk and Hammatt 1993); the Army National Guard rifle range (Folk and Hammatt 1994a); and in Kekaha Town (Heidel et al. 1997). A total of eight human burials were discovered as a result of archaeological testing: two burials (SIHP # 50-30-05-3650) were discovered at Limaloa in the proposed Kekaha Agricultural Park study area (Masterson et al. 1994b); two burials (SIHP # 50-30-05-701 and -702) were discovered near the shore at the north end of Kekaha Town, where new housing was proposed (Masterson et al. 1994a); and four burials (SIHP # 50-30-05-619) were discovered in Kekaha Town near Elepaio Road (Heidel et al. 1997).

Inadvertent discoveries of human remains have also occurred periodically, as a result of development activities. These include at least 3 individuals (SIHP # 50-30-05-3911) discovered during the excavation of a swimming pool at Alaoha Kaua´i Villas (Hammatt 2004), and three individuals (SIHP #s 50-30-05-3941 and -3937) discovered during monitoring activities associated with the development of Kekaha House Lots (Stein and Hammatt 2006 and Hazlett and Hammatt 2008).

Closer to the shoreline would have been the fishing oriented settlements now represented by cultural layers buried in backshore sand deposits (Yent 1992, Masterson et al. 1994a). Occasional fishponds and saltpans were also likely present. The occurrence of Hawaiian activity along the shoreline would be strongly influenced by the location of suitable canoe landings. For example, *Pu‘u pu‘u pa‘a kai* was a canoe landing *makai* of the sugar mill with a large settlement (Knudsen and Noble 1945:50).

3.6.2 Predictive Model

Based on previous historic documentation and archaeological research, two types of archaeological resources are expected in the survey area. These include remnants of pre-Contact habitation and agricultural activities such as terraces, mounds, and stacked walls. Plantation era infrastructure including water control features, structures, roads, and field dividers are also likely. Other resources that may be encountered include pre-Contact shell midden and artifacts as well as historic era trash deposits.

Section 4 Results of Fieldwork

Fieldwork consisted of a complete pedestrian inspection of the 10-acre project area. The proposed project is located at the intersection of Kaumuuali´i Highway (running northwest/southeast) and a private road that runs northeast from Kaumuuali´i Highway (see Figure 1 and **Error! Reference source not found.**). The project area was observed to have been heavily disturbed by mechanical grading and agricultural modification. Sparse vegetation of buffel grass, koa haole and caster bean was observed, but the area has been cleared of all agricultural material.

At the time of the field inspection of the project area there was evidence of recent plowing that had taken place. Plowing intrudes down to an average depth of 30 centimeters below the surface, and a silty sand material was observed at the edges of the project area, showing uplifted sediments that may exist beneath the fill surface (Figure 10 and Figure 11). The natural soil to the southwest (makai) of the project area is Jaucas loamy fine sand, 0 to 8 percent slopes (JfB), and is probably extant under the current fill surface layer (see Figure 4, Figure 10, Figure 11, Figure 12, Figure 13). No surface structures were observed within the project area.

Figure 10. General view of project area from E corner, showing private road, uplifted sandy sediment, and fill surface

Figure 11. General view of project area from E corner, uplifted sandy sediment in foreground, fill surface in background

Figure 12. General view of project area to the W from the E corner

Figure 13. General view of the project area from the SE side

Section 5 Significance and Recommendations

This archaeological literature review and field inspection study was completed for use as a due-diligence and/or long-range planning document. The purpose of the archaeological study was to determine if there are any major archaeological concerns within the project area and to develop data on the general nature, density and distribution of archaeological resources. The report and recommendations are designed for use as a due diligence document and to explain the State Historic Preservation Division requirements that would need to be fulfilled prior to land alteration within the study area.

Pedestrian inspection identified no archaeological sites within the project area. Most of the project area had already been disturbed with recent activity for transportation or agricultural purposes. The combination of modern development and decades of previous cultivation has likely significantly impacted or destroyed any surface or subsurface materials that may have existed within the project area.

No historic preservation mitigation measures are recommended for the current scope of the project. If subsurface excavation is planned to exceed the depth of the fill at the surface, the project proponent should consult with the SHPD to establish appropriate mitigation measures.

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APPENDIX C

PRE-ASSESSMENT CONSULTATION:
PROJECT KICKOFF INFORMATION FOR STAKEHOLDERS

Goong, Robyn

From: Robyn Goong
Sent: Tuesday, June 28, 2011 1:35 PM
To: matthew.rose@hawaii.gov
Subject: BASF - Project Kickoff Information for Stakeholders
Attachments: BASF Project Kickoff Information for Stakeholders.pdf

On behalf of BASF Corporation (BASF), URS Corporation (URS) was retained to prepare an Environmental Assessment (EA) for their proposed 10-acre site to build a field office in Kekaha on the island of Kauai. In discussions with BASF, they have already been working significantly with many of you so they felt this presentation was the best way to introduce this project. The project is already in progress in activities beyond the EA with meetings and planning activities. To that end, URS is pleased to provide this Project Kickoff Information for Stakeholders to orient you with their site and plans for their field office. Please review and comment on the enclosed presentation and respond to me by Monday, July 11th.

Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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PROJECT KICKOFF INFORMATION FOR STAKEHOLDERS

BASF Corporation

10-acre property located along Kaumualii Highway

Kekaha, Kauai, Hawaii

Tax Map Key: (4) 1-2-002-001 (portion)

Prepared by

URS Corporation

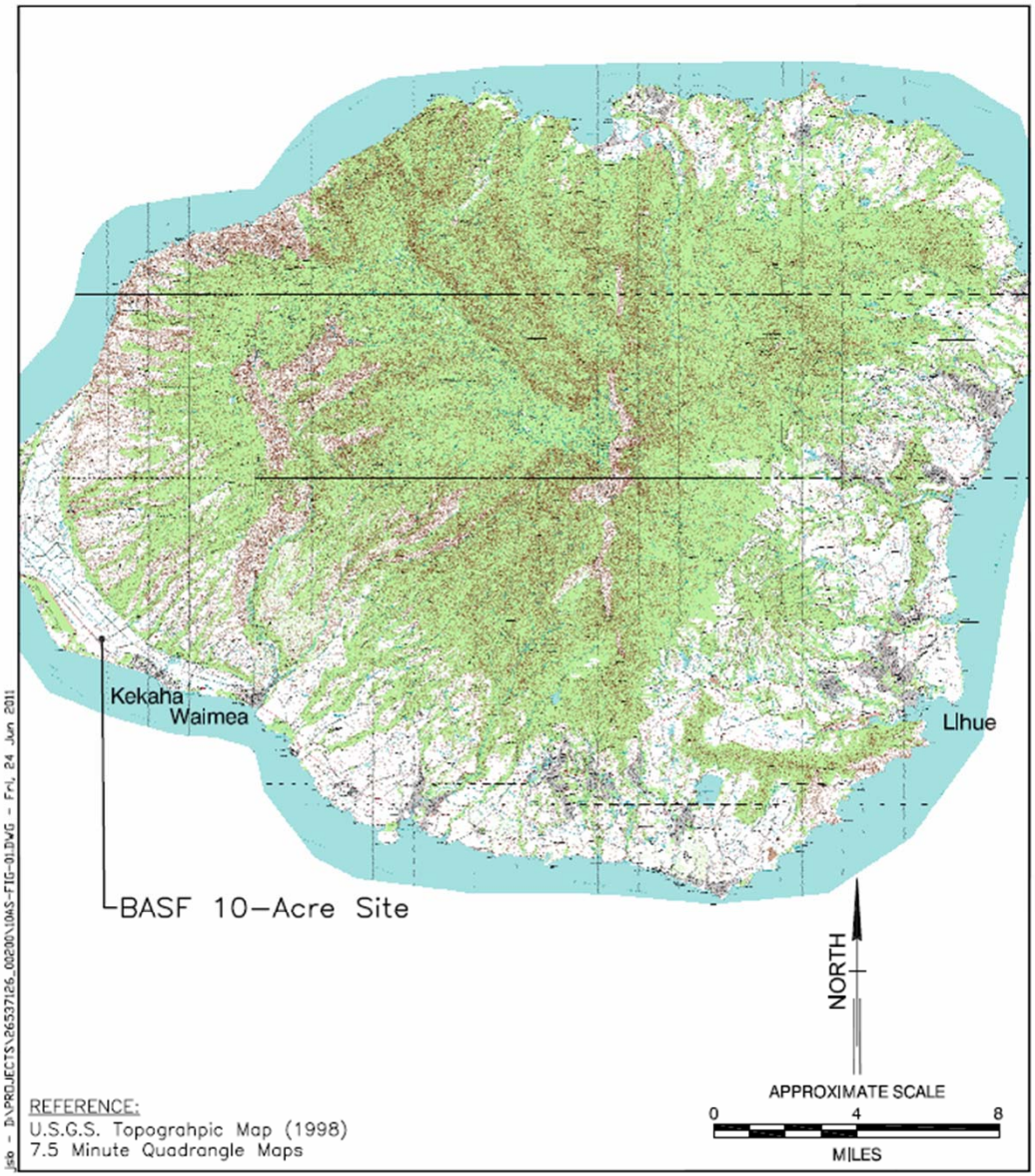
June 28, 2011

Introduction

BASF Corporation (BASF) has been working significantly with many of the various stakeholders. The project is already in progress in activities beyond the EA with meetings and planning activities. Based on the amount of interaction BASF has had with many of you, this presentation seemed to be more practical. Please review and comment on the enclosed information.

Site Background

- BASF is a diversified agricultural company who has been present on the island of Kauai for the past four years growing primarily corn, but also rice, soybeans, sunflowers and canola, which are always used for agricultural purposes.
- The site is a 10-acre property located along Kaumualii Highway in Kekaha, Kauai, Hawaii and denoted by Tax Map Key: (4) 1-2-002-001 (portion). This site is part of a much larger 13,000-acre parcel.
- The site is located on State of Hawaii-owned lands.

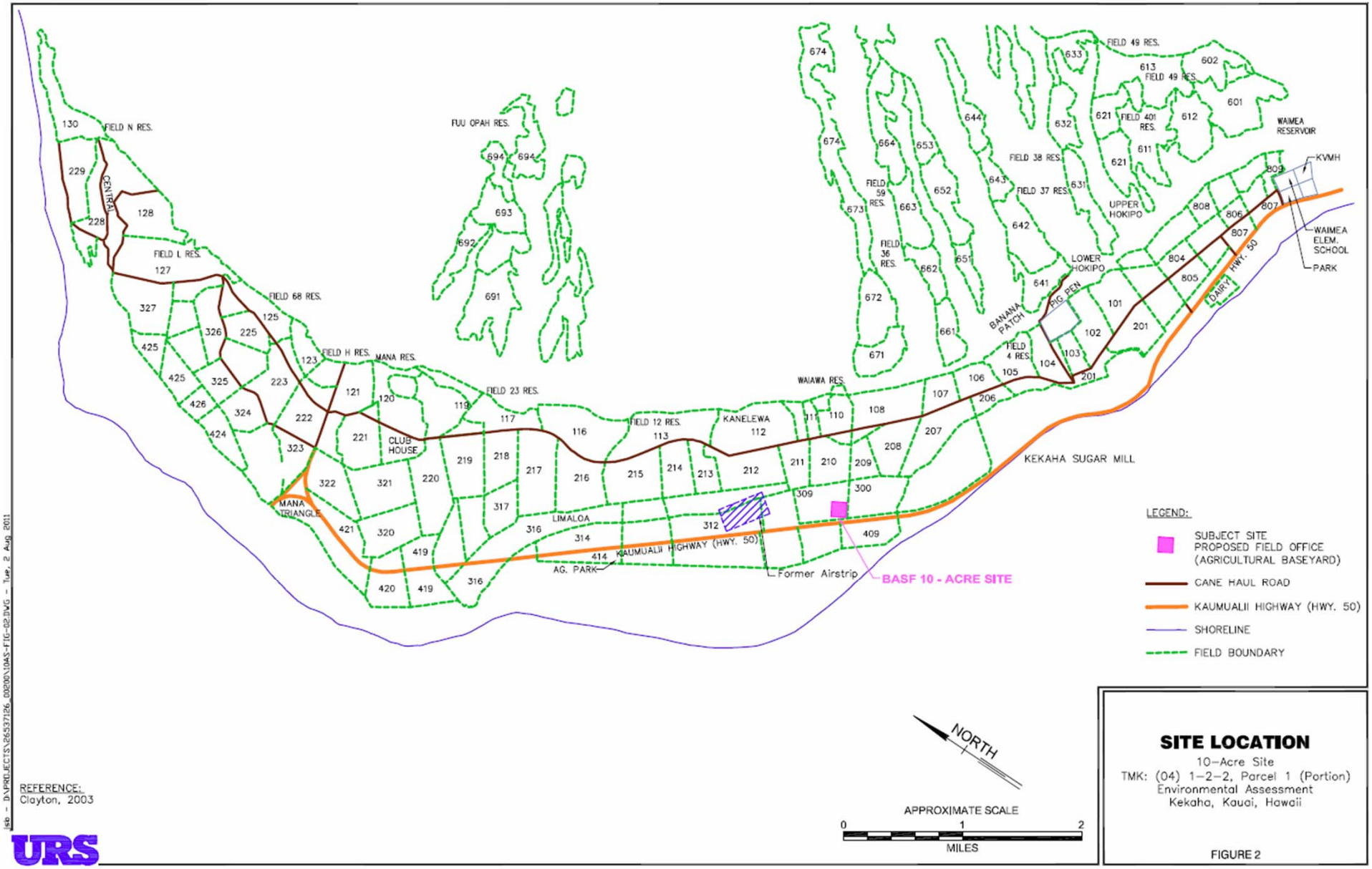


SITE AREA

10-Acre Site
TMK: (04) 1-2-2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

URS

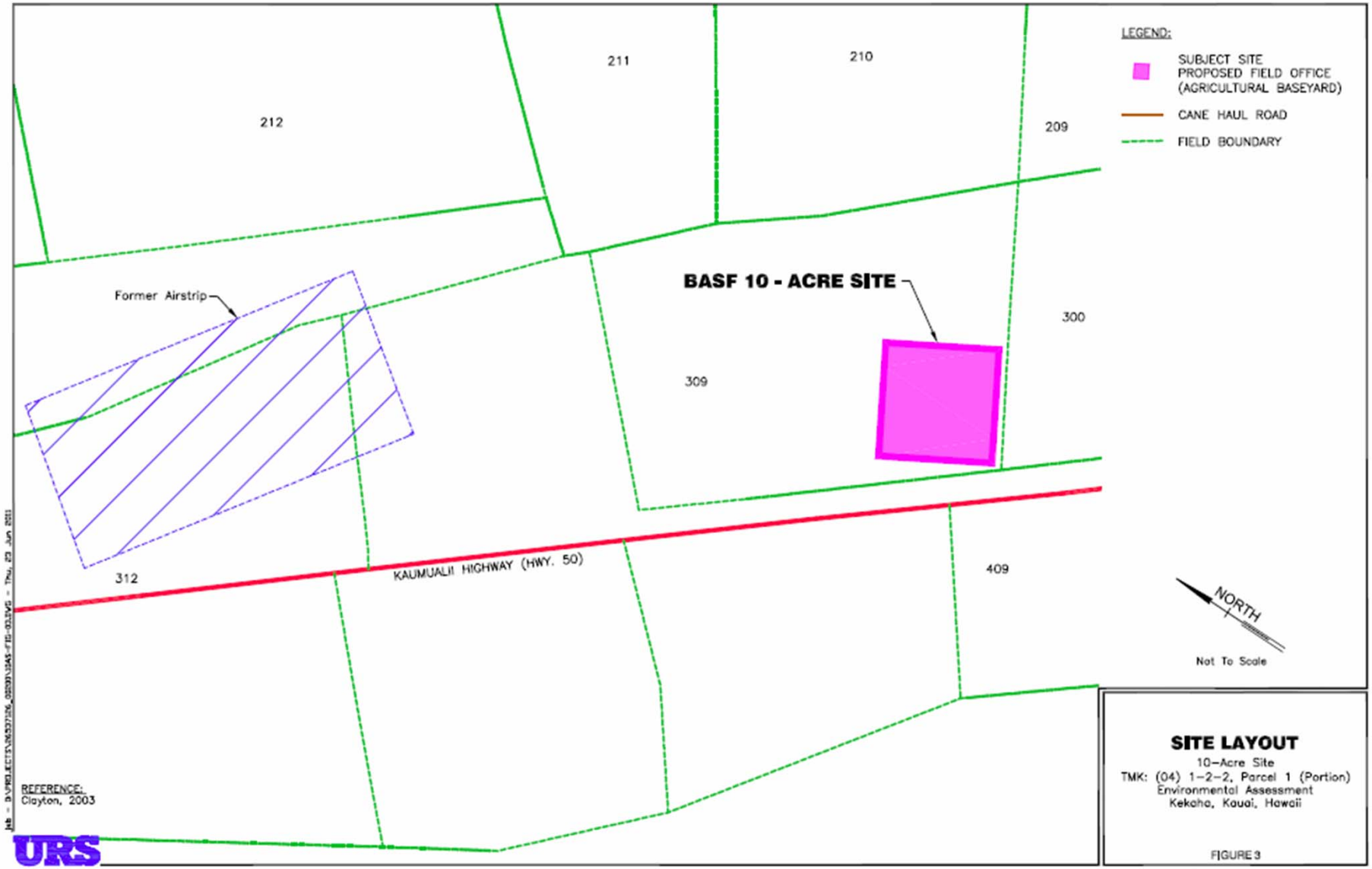
FIGURE 1



SITE LOCATION

10-Acre Site
TMK: (04) 1-2-2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

FIGURE 2



SITE LAYOUT

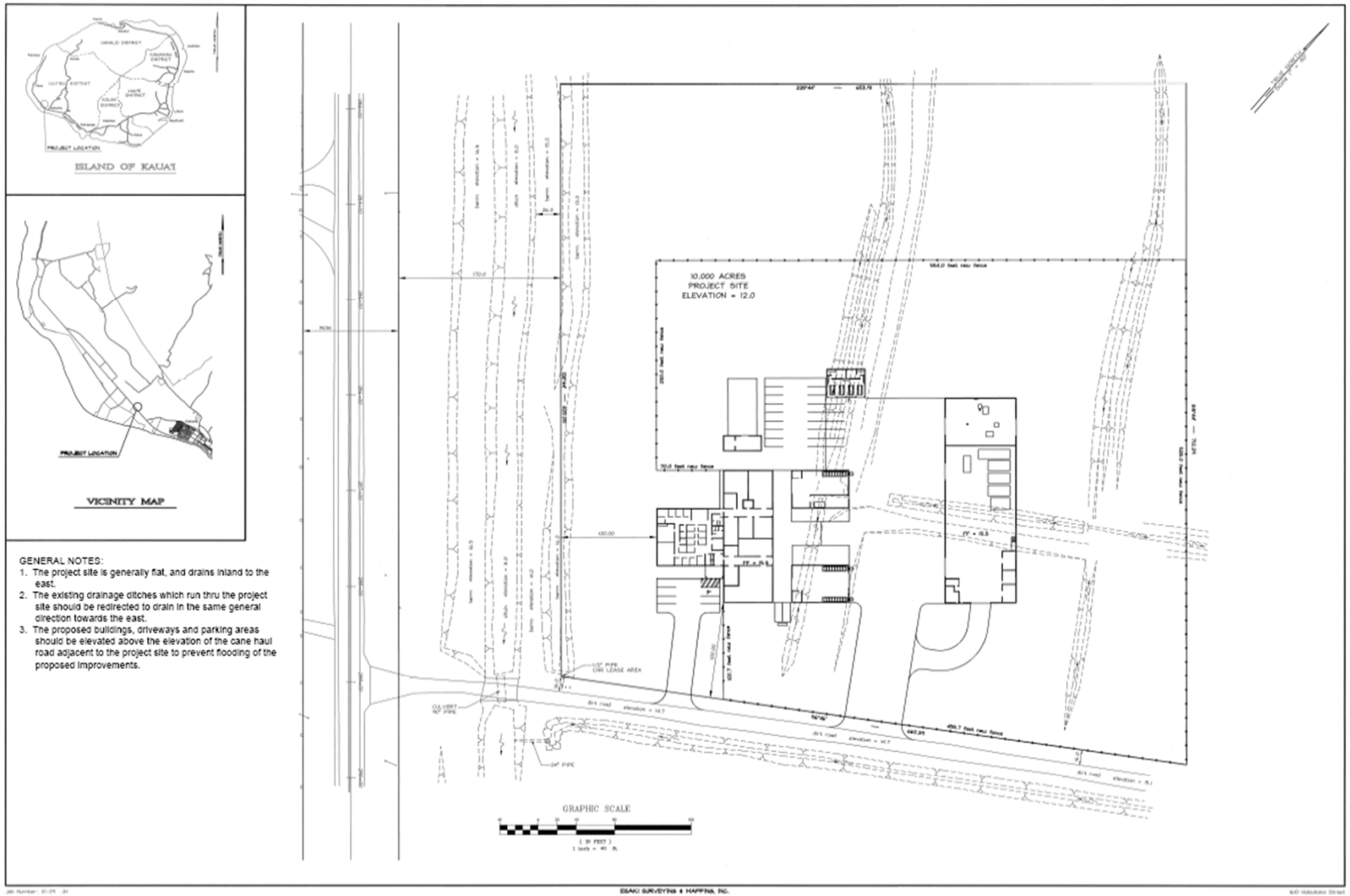
10–Acre Site
TMK: (04) 1–2–2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

FIGURE 3

Proposed Site Use

- The proposed action is to develop a field office including a research station, seed handling area, and machine storage area.
- Small bench top equipment would be used to thresh and clean very small quantities of seed.
- The field office would consolidate and centralize agricultural productions to decrease time lost during travel between the field and current location of the building/office site.

Site Plan


ISLAND OF KAUAI
PROJECT LOCATION
VICINITY MAP
PROJECT LOCATION
GENERAL NOTES:
1. The project site is generally flat, and drains inland to the east.
2. The existing drainage ditches which run thru the project site should be redirected to drain in the same general direction towards the east.
3. The proposed buildings, driveways and parking areas should be elevated above the elevation of the cane haul road adjacent to the project site to prevent flooding of the proposed improvements.
10,000 ACRES
PROJECT SITE
ELEVATION = 12.0
GRAPHIC SCALE
ESAKI SURVEYING & MAPPING, INC.
Civil Engineers - Land Surveyors - Planners

Site Progress Information

- BASF retained URS to assist them in the preparation of an EA
- The land is licensed to BASF from the State of Hawaii's Agribusiness Development Corporation (ADC) and BASF/URS are working with project manager, Mr. Matthew Rose.
- We are using an ADC-approved template based on the *Diesel Generator Installation FINAL EA* prepared by TEC in April 2010.
- The EA is being performed in accordance with the Hawaii Revised Statutes Chapter 343 and Hawaii Administrative Rules Title 11, Chapter 200.

Site Progress Information Continued

- URS and BASF are working with cultural and biological specialists to identify any site concerns.
  - Cultural Surveys Hawaii, Inc.
  - AECOS, Inc.
- A *Pre Draft EA* will be provided for an initial review and comment period prior to the *DRAFT EA* submittal.

Stakeholders

FEDERAL AGENCIES

- Pacific Islands Fish and Wildlife Office
- Region IX U.S. EPA
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture
- U.S. Fish and Wild life Service
- U.S. Geological Survey

STATE AGENCIES

- Agribusiness Development Corporation (lead agency)
- Department of Land and Natural Resources Land Division
- Office of Environmental Quality Control
- State of Hawaii Department of Health Environmental Planning Office
- State Historic Preservation Division
- State of Hawaii Department of Transportation

Stakeholders Continued

COUNTY AGENCIES

- Kauai County Planning Department
- Kauai County Water Department

ADJACENT AND NEARBY PROPERTIES

- Kekaha Agricultural Association
- Pacific Missile Range Facility

LOCAL AND HAWAIIAN NATIVE ORGANIZATIONS

- E Ola Mau Na Leo O Kekaha, Inc. (Kekaha Neighborhood Association)
- Office of Hawaiian Affairs

Proposed Schedule

- Project Kickoff Information for Stakeholders
  - Submitted by URS July 1st
  - Responses due from stakeholders July 11th
- Pre Draft EA
  - Submitted by URS September 26th
  - Preliminary responses due from stakeholders October 3
- Draft EA
  - Submitted to ADC October 17th for 30-day review and comment period
  - Responses due from stakeholders November 17th
- Final EA
  - Submitted to ADC December 15th
- Notice of Determination from Agency

Please provide questions, comments, or knowledge of any site specific information **by July 11th** to Ms. Robyn Goong, robyn_goong@urscorp.com

Thank You Very Much

Goong, Robyn

From: Matthew.Rose@hawaii.gov
Sent: Monday, June 27, 2011 3:17 PM
To: Robyn_Goong@URSCorp.com
Subject: Re: BASF - Project Kickoff Information for Stakeholders

Hi Robyn,

This looks OK with me, thanks for sending. As long as stakeholders are informed & concerns addressed, we should be OK with determining a FONSI.
Looking forward to seeing your prelim draft when it's done.

Mahalo,

Matthew Rose
Project Coordinator
STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION
235 South Beretania Street, Room 205
Honolulu, Hawaii 96813
P(808)586-0181
F(808)586-0189
E-mail: matthew.rose@hawaii.gov

Robyn_Goong@URSCorp.com

06/27/2011 11:32 AM

To matthew.rose@hawaii.gov
cc
Subject BASF - Project Kickoff Information for Stakeholders

Hi Matt -

In discussions with BASF, they have already been working significantly with various stakeholder agencies so they did not feel a meeting was the best way to introduce this project since it is already in progress on different levels beyond our EA (via meetings and planning). To that end, I suggested sending a powerpoint presentation to the stakeholder agencies instead. They liked that idea. Could you please review and comment on the enclosed presentation by Wednesday, June 27th? I would like to send out the informational to the stakeholders this week.

Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814

Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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[attachment "BASF Project Kickoff Information for Stakeholders.ppt" deleted by Matthew Rose/DOA/StateHiUS]

Goong, Robyn

From: Robyn Goong
Sent: Monday, July 18, 2011 11:07 AM
To: Benzie, John CIV PMRF
Subject: RE: BASF - Project Kickoff Information for Stakeholders
Attachments: Google map - site relative to PMRF.pdf

Hi John -

The site is approximately 0.5 mile southeast of the south end of the PMRF. I attached an unofficial figure showing the site relative to PMRF.

Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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"Benzie, John CIV PMRF" <john.benzie@navy.mil>
07/05/2011 05:19 PM

To
<Robyn_Goong@URSCorp.com>

cc

Subject
RE: BASF - Project Kickoff Information for Stakeholders

Mahalo for the info. It is not clear from the maps included exactly where that piece of land is with respect to the Navy Base and the Landfill. Could you please clarify?

Mahalo
Jack

-----Original Message-----
From: Robyn_Goong@URSCorp.com [mailto:Robyn_Goong@URSCorp.com]
Sent: Tuesday, June 28, 2011 13:36
To: matthew.rose@hawaii.gov
Subject: BASF - Project Kickoff Information for Stakeholders

On behalf of BASF Corporation (BASF), URS Corporation (URS) was retained to prepare an Environmental Assessment (EA) for their proposed 10-acre site to build a field office in Kekaha on the island of Kauai. In discussions with BASF, they have already been working significantly with many of you so they felt this presentation was the best way to introduce this project. The project is already in progress in activities beyond the EA with meetings and planning activities. To that end, URS is pleased to provide this Project Kickoff Information for Stakeholders to orient you with their site and plans for their field office. Please review and comment on the enclosed presentation and respond to me by Monday, July 11th.

Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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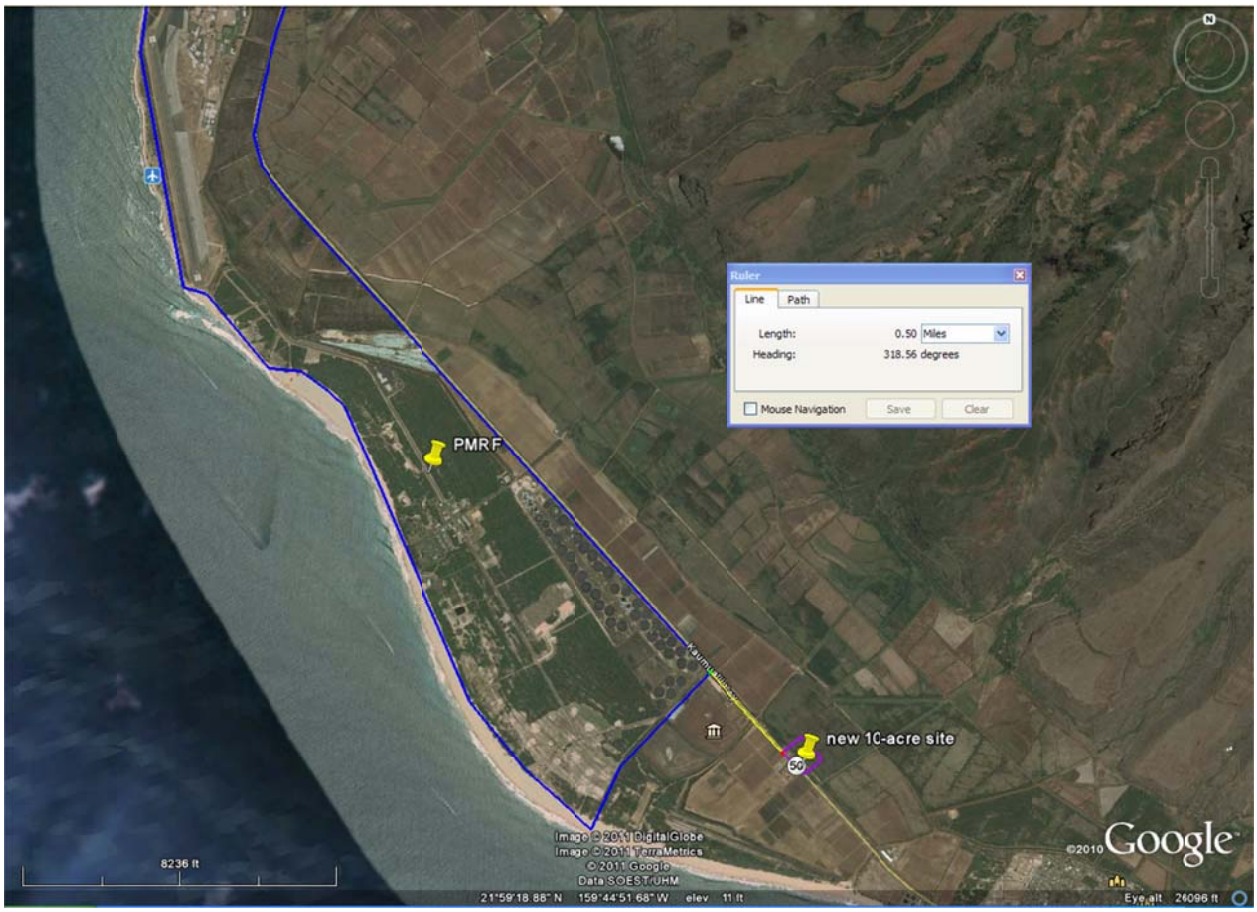
Ruler
Line
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Length:
0.50
Miles
Heading:
318.56 degrees
Mouse Navigation
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Clear
PMRF
new 10-acre site
50
Image © 2011 DigitalGlobe
Image © 2011 TerraMetrics
© 2011 Google
Data SOEST/UHM
8236 ft
21°59'18.88" N 159°44'51.68" W elev 11 ft
©2010 Google
Eye alt 24096 ft

Goong, Robyn

From: Jose Bulatao, Jr. <mrb@hawaiilink.net>
Sent: Wednesday, June 29, 2011 8:47 AM
To: Robyn Goong
Cc: mary buzasims; Landis Ignacio; MManuel2950@yahoo.com; Ann Wooton; Lola Cruz; Jason_Yoshida/KEKAHA/HIDOE@notes.k12.hi.us; Patrick Pereira; taryn.dizon@pioneer.com; Margaret Simola; Kawai Warren; Kalani Kapuniai; Thomas Nizo; Bucasas, Myrna H CONT \(PMRF MANU KAI\); Brenda Jose; Julie De Costa Kajiwara; Tanya Nitta
Subject: response to BASF expansion efforts in our midst...

Aloha,

Mahalo for this opportunity to respond to BASF's proposed expansion efforts in our midst.

I present my perspectives as a lifelong resident of Kekaha, Kauai, Hawaii where I have lived at the same residence for nearly 75 years. I am a retired educator, and as such, have had the honor and privilege of being an instructor, primarily in the fields of English and speech communication, as well as in the fields of music, journalism, and creative drama in classes that have ranged from kindergarten to senior citizens. Since my retirement, I have maintained close ties with my hometown, Kekaha, as a community advocate, serving in the capacity of advisor to our community organization, *E Ola Mau Na Leo O Kekaha.*

The steadfast presence of agricultural endeavors in this part of Kauai has included the noteworthy efforts of our host culture, the *kanaka maoli,* with their kalo endeavors and the cultivation of other subsistence food products they were able to provide for themselves from mauka to makai; the rice farms that followed; the sugar cane era; community gardening endeavors; and the current presence of an array of international GMO conglomorates which has been here for several decades. No, I have not been here THAT long, but three-quarters of a century of being officially at the same locale is a fairly good record!

I believe that it would be mutually beneficial to community residents and to the business and professional entities such as BASF to forge a bond in the following ways:
a. becoming pro-actively involved and engaged in projects, programs, and activities which promote mutual respect for each other and the space we share;
b. encouraging ways in which mutual endeavors to protect and preserve the finite resources may be maintained;
c. seeking and establishing avenues by which community needs may be identified and prioritized and to be interactively engaged in the processes by which collaborative efforts allow us to move forward to set goals and attain objectives;
d. maintaining due diligence in stewardship principles, especially on our Beloved Kauai!

We need to get out of our compartmentalized existence. We need to reach out to one another. We need more than occasional events to support one another or to enjoy one another. Where there may be issues to be resolved, we need to seek solutions, together. Where there are challenges to be met, we need to work together. This will enable us to establish clarity, transparency, and accountability among ourselves. This will enable us to build TRUST in one another. In the process, we need to be

guided by what is mutually respectful and mutually beneficial---by remembering that: "The land is chief; we are but stewards of the land."

To this end, I invite you and your colleagues to meet with the Executive Officers and Board members of the community organization, singularly and collectively, informally and formally, incidentally/occasionally/persistently--- to explore the realms of possibilities that are before us.

This one note from one person won't do it. We need to "get down to business" and reach out to one another because we NEED each other! In effect, I humbly offer this beginning to "join forces."

My phone number is: 337-9135. My email is: mrb@hawaiilink.net

Sincerely,
Jose Bulatao, Jr.
(MrB)

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17820)
http://free.pctools.com
=======

Goong, Robyn

From: Jose Bulatao, Jr. <mrb@hawaiilink.net>
Sent: Monday, July 11, 2011 7:14 PM
To: kawaiwarren@hawaii.rr.com; robyn_goong@urscorp.com
Cc: Elaine Searle; Alapaki; mary buzasims; MManuel2950@yahoo.com; Lola Cruz
Subject: Re: KHHA-Request to be on your Stakeholder list

Mahalo, Kawai, for keeping me in the loop on this matter. As you well know, I have long advocated for the inclusion of our Kekaha residents to be proactively engaged and involved in matters which impact our hometown. With the Kekaha Hawaiian Homesteaders Association (KHHA) and E Ola Mau Na Leo O Kekaha, our community organization we are continuing in our efforts to "stand united" on issues which affect all of us here in Kekaha.

We have learned our lessons well: We need to be aware of the projects and proposals that come before us. We can no longer merely sit on the sidelines as observers with respect to what may happen to our precious finite resources. All who are here need to be cognizant of the "malama aina"
principles forged by the host culture: "The land is chief; we are but stewards of the land." This is our shared kuleana.

I find it extremely gratifying to have our Kekaha residents participate in the processes and procedures which determine what will happen with our aina.
We need to continue in our efforts to encourage others to weigh and consider the options that are placed before us; to ask the pertinent questions in pursuit of clarity, transparency, and accountability; and to research diligently to seek appropriate documentation to substantiate the presentation of facts and figures which must be clearly analyzed so that we can express our perspectives with integrity.

Your letter serves as a clarion call for Kekaha residents to join us in our on-going collaborative efforts to shape the destiny of our community.

Sincerely,
Jose/MrB
Advisor, E Ola Mau Na Leo O Kekaha

----- Original Message -----
From: <kawaiwarren@hawaii.rr.com>
To: <robyn_goong@urscorp.com>
Cc: "Elaine Searle" <Elaine.G.Searle@hawaii.gov>; "Alapaki"
<Alapahi.Nahale-a@hawaii.gov>; <mrb@hawaiilink.net>
Sent: Monday, July 11, 2011 4:50 PM
Subject: KHHA-Request to be on your Stakeholder list

>
>
>
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> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17900)
> http://free.pctools.com/

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Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17900)
http://free.pctools.com/
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Goong, Robyn

From: kawaiwarren@hawaii.rr.com
Sent: Monday, July 11, 2011 8:15 PM
To: robyn_goong@urscorp.com
Cc: Alapaki
Subject: Kekaha Hawaiian Homestead request to be added to the list of stakeholder
Attachments: BASF_Stakeholder,_KHHA._doc.doc

Robyn,
I have include my mailing address on this attachment.

Mahalo Kawai Warren

KEKAHA HAWAIIAN HOMESTEADS ASSOCIATION

BASF Corporation
The Chemical Company
and
URS Corporation
Ms. Robyn Goong
Both via email, as requested, to: robyn_goong@urscorp.com

July 11, 2011

Dear Ms. Goong,

The Kekaha Hawaiian Homesteads Association ("KHHA") has been made aware of the BASF-initiated document prepared by URS Corporation, "Project Kickoff Information for Stakeholders" distributed July 1, 2011, regarding the proposed development of the 10-acre property located along Kaumualii Highway in Kekaha, Kauai, Hawaii (Tax Map Key: (4) 1-2-002-001 (portion)).

We request that KHHA be added to the list of stakeholders for this project's development and planning, and therefore included in all stakeholder communications or consultation processes afforded to other entities on your stakeholder list.

As the organization representing the interests and perspectives of Hawaiian beneficiaries most affected by any decisions made on the proposed 10 acre property, KHHA's stakeholder perspectives must be officially included, especially in light of the fact that this development is proposed on state-owned and managed lands.

We make the following comments to the Project Kickoff document and request a written response to the following points:

1. **Necessary Inclusion of Key Hawaiian Agencies.** Based on the Project Kickoff document, "the project is already in progress in activities beyond the EA with meetings and planning activities. Based on the amount of interaction BASF has had with many of you, this presentation seemed to be more practical." Yet, we note that neither Department of Hawaiian Homelands nor the Hawaiian Homes Commissioners have been included on your stakeholder list. We request that, if URS/BASF has not yet done so, these agencies be formally consulted and notified as stakeholders in your ongoing planning. Lack of consultation with Hawaiian agencies is already well documented in public records regarding the overall use and management of these lands, and we would like to change that pattern.

2. **Explanation of Depiction of Hawaiian Home Lands Agricultural Areas in Planning Document.** Figure 2 in the Project Kickoff document illustrates planting fields mauka of the proposed site that are on key Hawaiian home lands. Whether or not these fields are part of expansion plans, the expanded base presence of a seed handling, machine storage, and

research station raises the likelihood of expanded agricultural presence on adjacent lands, especially, as the publication notes, that " The field office would consolidate and centralize agricultural productions to decrease time lost during travel between the field and current location of the building/office site."

3. **Unexplained Inclusion of Neighboring Lots.** Figure 2 also indicates two color coded areas that are not explained in the map key - two lots in Kekaha and Waimea, near the banana patch and KVMH respectively, where we would like clarification regarding BASF's intentions. We request additional information regarding BASF's intentions on those parcels, and believe that our colleagues at the Kekaha-based E Ola Mau Na Leo o Kekaha would be interested as well.

4. **Cultural Impact.** We also note that Project Kickoff publication statement, "URS and BASF are working with cultural and biological specialists to identify any site concerns." Yet KHHA has not been notified by either URS or BASF about this project.

Thank you for your attention to these comments. We look forward to receiving your written response as well as the *Pre Draft EA* for initial review and comment period prior to the *DRAFT EA* submittal, as described in the Project Kickoff publication. All hard copy correspondence can be sent to our organization, at the address listed above. Email distributions can be sent to me at kawaiwarren@hawaii.rr.com.

Sincerely,

/s/

V. Kawai Warren
President
Kekaha Hawaiian Homesteads Association
PO Box 291
Kekaha, Hi 96752

Cc: Department of Hawaiian Homelands
Hawaiian Homes Commission
Alapaki Nahale'a, Chairman
E Ola Mau Na Leo o Kekaha

BASF
The Chemical Company

Helping Make
Products Better™

August 9, 2011

Mr. V. Kawai Warren
Kekaha Hawaiian Homesteads Association
PO Box 291
Kekaha Hawaii 96752

Subject: Response Letter: Project Kickoff Information for Stakeholders
BASF 10-Acre Site located along Kaumualii Highway
Kekaha, Kauai, Hawaii 96752
Tax Map Key: (4) 1-2-002-001 (portion)

Dear Mr. Warren:

Thank you for taking the time to respond to our slide presentation, Project Kickoff Information for Stakeholders. We appreciate the time you spent to write the letter. We have addressed your questions and concerns below.

1. Necessary Inclusion of Key Hawaiian Agencies

We will gladly add Kekaha Hawaiian Homesteads Association, Department of Hawaiian Homelands, and Hawaiian Homes Commissioners to the stakeholders list. As requested, you will be provided with the opportunity to comment on the preDraft and Draft Environmental Assessment.

2. Explanation of Depiction of Hawaiian Homelands Agricultural Areas in Planning Document

BASF Corporation intends to construct a field office on a 10-acre site in support of its field operations. This is the only structure to be constructed and is confined to the 10-acre site. Other than cultivated fields of various crops including corn, rice, soybeans, sunflowers, and canola, there are no plans to develop beyond the 10-acre site. Figure 2 of the slide presentation has been revised to clearly identify the site/project area.

BASF Plant Science, L.P.
8315 Kekaha Road, Suite F
P.O. Box 127
Kekaha, Hawaii 96752
Tel: (808) 337-2065
Fax: (808) 337-2067

3. Unexplained Inclusion of Neighboring Lots

Again, BASF has no intention of constructing or developing structures beyond the 10-acre site. Most of the land presented on figure 2 is used for agricultural purposes. The other items on Figure 2 are for reference purposes to provide site bearings and are not related to the site in any way.

4. Cultural Impact

The slide presentation was used to introduce the project to stakeholders. Surveys performed by the cultural and biological consultants will be documented and included in the Environmental Assessment. Should you have any questions or comments, you will have the opportunity to do during the public review and comment stage.

A revised version of the Project Kickoff Information for Stakeholders is enclosed. Thank you again for your questions and comments.

Sincerely,

BASF Corporation

Steven Lupkes
Research Station Manager

Attachment:
Revised Project Kickoff Information for Stakeholders

cc: Ms. Robyn Goong, URS Corporation

APPENDIX D

PRE-ASSESSMENT CONSULTATION: PROJECT KICKOFF INFORMATION FOR STAKEHOLDERS
COMMENTS AND RESPONSES

Goong, Robyn

From: Matthew.Rose@hawaii.gov
Sent: Monday, June 27, 2011 3:17 PM
To: Robyn_Goong@URSCorp.com
Subject: Re: BASF - Project Kickoff Information for Stakeholders

Hi Robyn,

This looks OK with me, thanks for sending. As long as stakeholders are informed & concerns addressed, we should be OK with determining a FONSI.
Looking forward to seeing your prelim draft when it's done.

Mahalo,

Matthew Rose
Project Coordinator
STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION
235 South Beretania Street, Room 205
Honolulu, Hawaii 96813
P(808)586-0181
F(808)586-0189
E-mail: matthew.rose@hawaii.gov

Robyn_Goong@URSCorp.com

06/27/2011 11:32 AM

To matthew.rose@hawaii.gov
cc
Subject BASF - Project Kickoff Information for Stakeholders

Hi Matt -

In discussions with BASF, they have already been working significantly with various stakeholder agencies so they did not feel a meeting was the best way to introduce this project since it is already in progress on different levels beyond our EA (via meetings and planning). To that end, I suggested sending a powerpoint presentation to the stakeholder agencies instead. They liked that idea. Could you please review and comment on the enclosed presentation by Wednesday, June 27th? I would like to send out the informational to the stakeholders this week.

Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814

Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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[attachment "BASF Project Kickoff Information for Stakeholders.ppt" deleted by Matthew Rose/DOA/StateHiUS]

Goong, Robyn

From: Jose Bulatao, Jr. <mrb@hawaiilink.net>
Sent: Wednesday, June 29, 2011 8:47 AM
To: Robyn Goong
Cc: mary buzasims; Landis Ignacio; MManuel2950@yahoo.com; Ann Wooton; Lola Cruz; Jason_Yoshida/KEKAHA/HIDOE@notes.k12.hi.us; Patrick Pereira; taryn.dizon@pioneer.com; Margaret Simola; Kawai Warren; Kalani Kapuniai; Thomas Nizo; Bucasas, Myrna H CONT \(PMRF MANU KAI\); Brenda Jose; Julie De Costa Kajiwara; Tanya Nitta
Subject: response to BASF expansion efforts in our midst...

Aloha,

Mahalo for this opportunity to respond to BASF's proposed expansion efforts in our midst.

I present my perspectives as a lifelong resident of Kekaha, Kauai, Hawaii where I have lived at the same residence for nearly 75 years. I am a retired educator, and as such, have had the honor and privilege of being an instructor, primarily in the fields of English and speech communication, as well as in the fields of music, journalism, and creative drama in classes that have ranged from kindergarten to senior citizens. Since my retirement, I have maintained close ties with my hometown, Kekaha, as a community advocate, serving in the capacity of advisor to our community organization, *E Ola Mau Na Leo O Kekaha.*

The steadfast presence of agricultural endeavors in this part of Kauai has included the noteworthy efforts of our host culture, the *kanaka maoli,* with their kalo endeavors and the cultivation of other subsistence food products they were able to provide for themselves from mauka to makai; the rice farms that followed; the sugar cane era; community gardening endeavors; and the current presence of an array of international GMO conglomorates which has been here for several decades. No, I have not been here THAT long, but three-quarters of a century of being officially at the same locale is a fairly good record!

I believe that it would be mutually beneficial to community residents and to the business and professional entities such as BASF to forge a bond in the following ways:
a. becoming pro-actively involved and engaged in projects, programs, and activities which promote mutual respect for each other and the space we share;
b. encouraging ways in which mutual endeavors to protect and preserve the finite resources may be maintained;
c. seeking and establishing avenues by which community needs may be identified and prioritized and to be interactively engaged in the processes by which collaborative efforts allow us to move forward to set goals and attain objectives;
d. maintaining due diligence in stewardship principles, especially on our Beloved Kauai!

We need to get out of our compartmentalized existence. We need to reach out to one another. We need more than occasional events to support one another or to enjoy one another. Where there may be issues to be resolved, we need to seek solutions, together. Where there are challenges to be met, we need to work together. This will enable us to establish clarity, transparency, and accountability among ourselves. This will enable us to build TRUST in one another. In the process, we need to be

guided by what is mutually respectful and mutually beneficial---by remembering that: "The land is chief; we are but stewards of the land."

To this end, I invite you and your colleagues to meet with the Executive Officers and Board members of the community organization, singularly and collectively, informally and formally, incidentally/occasionally/persistently--- to explore the realms of possibilities that are before us.

This one note from one person won't do it. We need to "get down to business" and reach out to one another because we NEED each other! In effect, I humbly offer this beginning to "join forces."

My phone number is: 337-9135. My email is: mrb@hawaiilink.net

Sincerely,
Jose Bulatao, Jr.
(MrB)

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17820)
http://free.pctools.com
=======

Goong, Robyn

From: Jose Bulatao, Jr. <mrb@hawaiilink.net>
Sent: Monday, July 11, 2011 7:14 PM
To: kawaiwarren@hawaii.rr.com; robyn_goong@urscorp.com
Cc: Elaine Searle; Alapaki; mary buzasims; MManuel2950@yahoo.com; Lola Cruz
Subject: Re: KHHA-Request to be on your Stakeholder list

Mahalo, Kawai, for keeping me in the loop on this matter. As you well know, I have long advocated for the inclusion of our Kekaha residents to be proactively engaged and involved in matters which impact our hometown. With the Kekaha Hawaiian Homesteaders Association (KHHA) and E Ola Mau Na Leo O Kekaha, our community organization we are continuing in our efforts to "stand united" on issues which affect all of us here in Kekaha.

We have learned our lessons well: We need to be aware of the projects and proposals that come before us. We can no longer merely sit on the sidelines as observers with respect to what may happen to our precious finite resources. All who are here need to be cognizant of the "malama aina"
principles forged by the host culture: "The land is chief; we are but stewards of the land." This is our shared kuleana.

I find it extremely gratifying to have our Kekaha residents participate in the processes and procedures which determine what will happen with our aina.
We need to continue in our efforts to encourage others to weigh and consider the options that are placed before us; to ask the pertinent questions in pursuit of clarity, transparency, and accountability; and to research diligently to seek appropriate documentation to substantiate the presentation of facts and figures which must be clearly analyzed so that we can express our perspectives with integrity.

Your letter serves as a clarion call for Kekaha residents to join us in our on-going collaborative efforts to shape the destiny of our community.

Sincerely,
Jose/MrB
Advisor, E Ola Mau Na Leo O Kekaha

----- Original Message -----
From: <kawaiwarren@hawaii.rr.com>
To: <robyn_goong@urscorp.com>
Cc: "Elaine Searle" <Elaine.G.Searle@hawaii.gov>; "Alapaki"
<Alapahi.Nahale-a@hawaii.gov>; <mrb@hawaiilink.net>
Sent: Monday, July 11, 2011 4:50 PM
Subject: KHHA-Request to be on your Stakeholder list

>
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> =======
> Email scanned by PC Tools - No viruses or spyware found.
> (Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17900)
> http://free.pctools.com/

> =======
>

=======
Email scanned by PC Tools - No viruses or spyware found.
(Email Guard: 7.0.0.21, Virus/Spyware Database: 6.17900)
http://free.pctools.com/
=======

Goong, Robyn

From: kawaiwarren@hawaii.rr.com
Sent: Monday, July 11, 2011 8:15 PM
To: robyn_goong@urscorp.com
Cc: Alapaki
Subject: Kekaha Hawaiian Homestead request to be added to the list of stakeholder
Attachments: BASF_Stakeholder,_KHHA._doc.doc

Robyn,
I have include my mailing address on this attachment.

Mahalo Kawai Warren

KEKAHA HAWAIIAN HOMESTEADS ASSOCIATION

BASF Corporation
The Chemical Company
and
URS Corporation
Ms. Robyn Goong
Both via email, as requested, to: robyn_goong@urscorp.com

July 11, 2011

Dear Ms. Goong,

The Kekaha Hawaiian Homesteads Association ("KHHA") has been made aware of the BASF-initiated document prepared by URS Corporation, "Project Kickoff Information for Stakeholders" distributed July 1, 2011, regarding the proposed development of the 10-acre property located along Kaumualii Highway in Kekaha, Kauai, Hawaii (Tax Map Key: (4) 1-2-002-001 (portion)).

We request that KHHA be added to the list of stakeholders for this project's development and planning, and therefore included in all stakeholder communications or consultation processes afforded to other entities on your stakeholder list.

As the organization representing the interests and perspectives of Hawaiian beneficiaries most affected by any decisions made on the proposed 10 acre property, KHHA's stakeholder perspectives must be officially included, especially in light of the fact that this development is proposed on state-owned and managed lands.

We make the following comments to the Project Kickoff document and request a written response to the following points:

1. **Necessary Inclusion of Key Hawaiian Agencies.** Based on the Project Kickoff document, "the project is already in progress in activities beyond the EA with meetings and planning activities. Based on the amount of interaction BASF has had with many of you, this presentation seemed to be more practical." Yet, we note that neither Department of Hawaiian Homelands nor the Hawaiian Homes Commissioners have been included on your stakeholder list. We request that, if URS/BASF has not yet done so, these agencies be formally consulted and notified as stakeholders in your ongoing planning. Lack of consultation with Hawaiian agencies is already well documented in public records regarding the overall use and management of these lands, and we would like to change that pattern.

2. **Explanation of Depiction of Hawaiian Home Lands Agricultural Areas in Planning Document.** Figure 2 in the Project Kickoff document illustrates planting fields mauka of the proposed site that are on key Hawaiian home lands. Whether or not these fields are part of expansion plans, the expanded base presence of a seed handling, machine storage, and

research station raises the likelihood of expanded agricultural presence on adjacent lands, especially, as the publication notes, that " The field office would consolidate and centralize agricultural productions to decrease time lost during travel between the field and current location of the building/office site."

3. **Unexplained Inclusion of Neighboring Lots.** Figure 2 also indicates two color coded areas that are not explained in the map key - two lots in Kekaha and Waimea, near the banana patch and KVMH respectively, where we would like clarification regarding BASF's intentions. We request additional information regarding BASF's intentions on those parcels, and believe that our colleagues at the Kekaha-based E Ola Mau Na Leo o Kekaha would be interested as well.

4. **Cultural Impact.** We also note that Project Kickoff publication statement, "URS and BASF are working with cultural and biological specialists to identify any site concerns." Yet KHHA has not been notified by either URS or BASF about this project.

Thank you for your attention to these comments. We look forward to receiving your written response as well as the *Pre Draft EA* for initial review and comment period prior to the *DRAFT EA* submittal, as described in the Project Kickoff publication. All hard copy correspondence can be sent to our organization, at the address listed above. Email distributions can be sent to me at kawaiwarren@hawaii.rr.com.

Sincerely,

/s/

V. Kawai Warren
President
Kekaha Hawaiian Homesteads Association
PO Box 291
Kekaha, Hi 96752

Cc: Department of Hawaiian Homelands
Hawaiian Homes Commission
Alapaki Nahale'a, Chairman
E Ola Mau Na Leo o Kekaha

BASF
The Chemical Company

Helping Make
Products Better™

August 9, 2011

Mr. V. Kawai Warren
Kekaha Hawaiian Homesteads Association
PO Box 291
Kekaha Hawaii 96752

Subject: Response Letter: Project Kickoff Information for Stakeholders
BASF 10-Acre Site located along Kaumualii Highway
Kekaha, Kauai, Hawaii 96752
Tax Map Key: (4) 1-2-002-001 (portion)

Dear Mr. Warren:

Thank you for taking the time to respond to our slide presentation, Project Kickoff Information for Stakeholders. We appreciate the time you spent to write the letter. We have addressed your questions and concerns below.

1. Necessary Inclusion of Key Hawaiian Agencies

We will gladly add Kekaha Hawaiian Homesteads Association, Department of Hawaiian Homelands, and Hawaiian Homes Commissioners to the stakeholders list. As requested, you will be provided with the opportunity to comment on the preDraft and Draft Environmental Assessment.

2. Explanation of Depiction of Hawaiian Homelands Agricultural Areas in Planning Document

BASF Corporation intends to construct a field office on a 10-acre site in support of its field operations. This is the only structure to be constructed and is confined to the 10-acre site. Other than cultivated fields of various crops including corn, rice, soybeans, sunflowers, and canola, there are no plans to develop beyond the 10-acre site. Figure 2 of the slide presentation has been revised to clearly identify the site/project area.

BASF Plant Science, L.P.
8315 Kekaha Road, Suite F
P.O. Box 127
Kekaha, Hawaii 96752
Tel: (808) 337-2065
Fax: (808) 337-2067

3. Unexplained Inclusion of Neighboring Lots

Again, BASF has no intention of constructing or developing structures beyond the 10-acre site. Most of the land presented on figure 2 is used for agricultural purposes. The other items on Figure 2 are for reference purposes to provide site bearings and are not related to the site in any way.

4. Cultural Impact

The slide presentation was used to introduce the project to stakeholders. Surveys performed by the cultural and biological consultants will be documented and included in the Environmental Assessment. Should you have any questions or comments, you will have the opportunity to do during the public review and comment stage.

A revised version of the Project Kickoff Information for Stakeholders is enclosed. Thank you again for your questions and comments.

Sincerely,

BASF Corporation

Steven Lupkes
Research Station Manager

Attachment:
Revised Project Kickoff Information for Stakeholders

cc: Ms. Robyn Goong, URS Corporation

PROJECT KICKOFF INFORMATION FOR STAKEHOLDERS

BASF Corporation

10-acre property located along Kaumualii Highway

Kekaha, Kauai, Hawaii

Tax Map Key: (4) 1-2-002-001 (portion)

Prepared by

URS Corporation

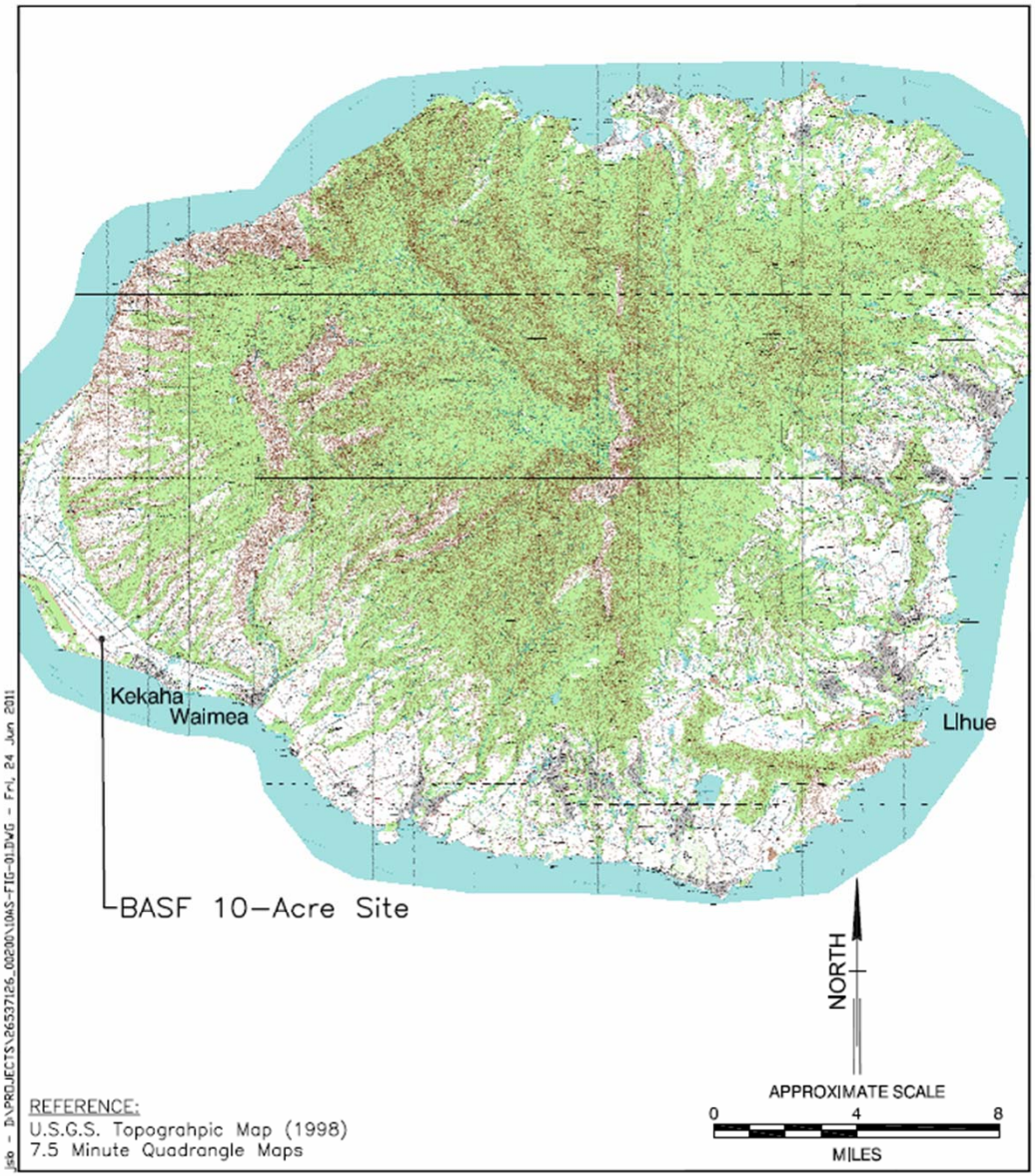
June 28, 2011

Introduction

BASF Corporation (BASF) has been working significantly with many of the various stakeholders. The project is already in progress in activities beyond the EA with meetings and planning activities. Based on the amount of interaction BASF has had with many of you, this presentation seemed to be more practical. Please review and comment on the enclosed information.

Site Background

- BASF is a diversified agricultural company who has been present on the island of Kauai for the past four years growing primarily corn, but also rice, soybeans, sunflowers and canola, which are always used for agricultural purposes.
- The site is a 10-acre property located along Kaumualii Highway in Kekaha, Kauai, Hawaii and denoted by Tax Map Key: (4) 1-2-002-001 (portion). This site is part of a much larger 13,000-acre parcel.
- The site is located on State of Hawaii-owned lands.

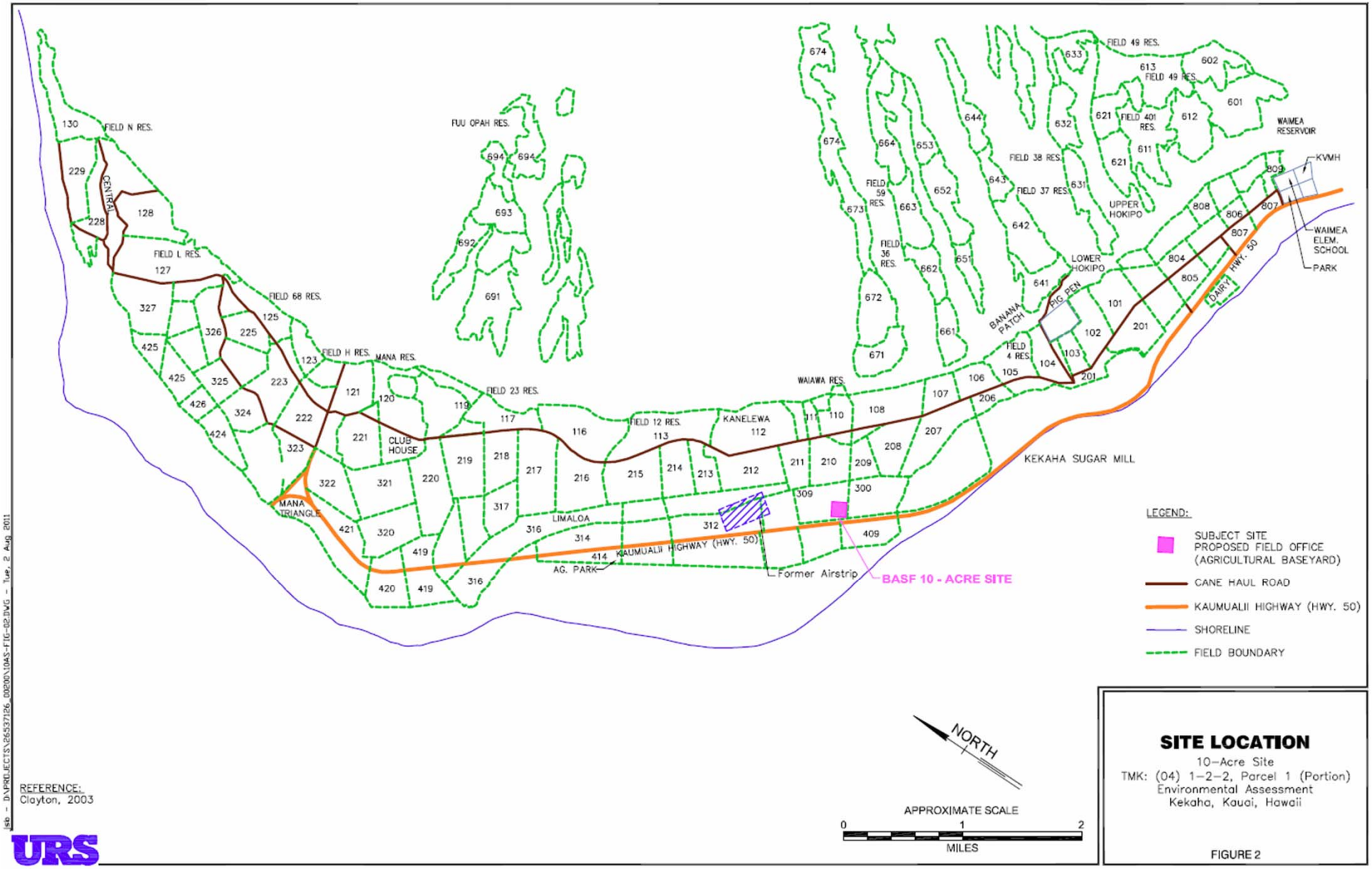


SITE AREA

10-Acre Site
TMK: (04) 1-2-2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

URS

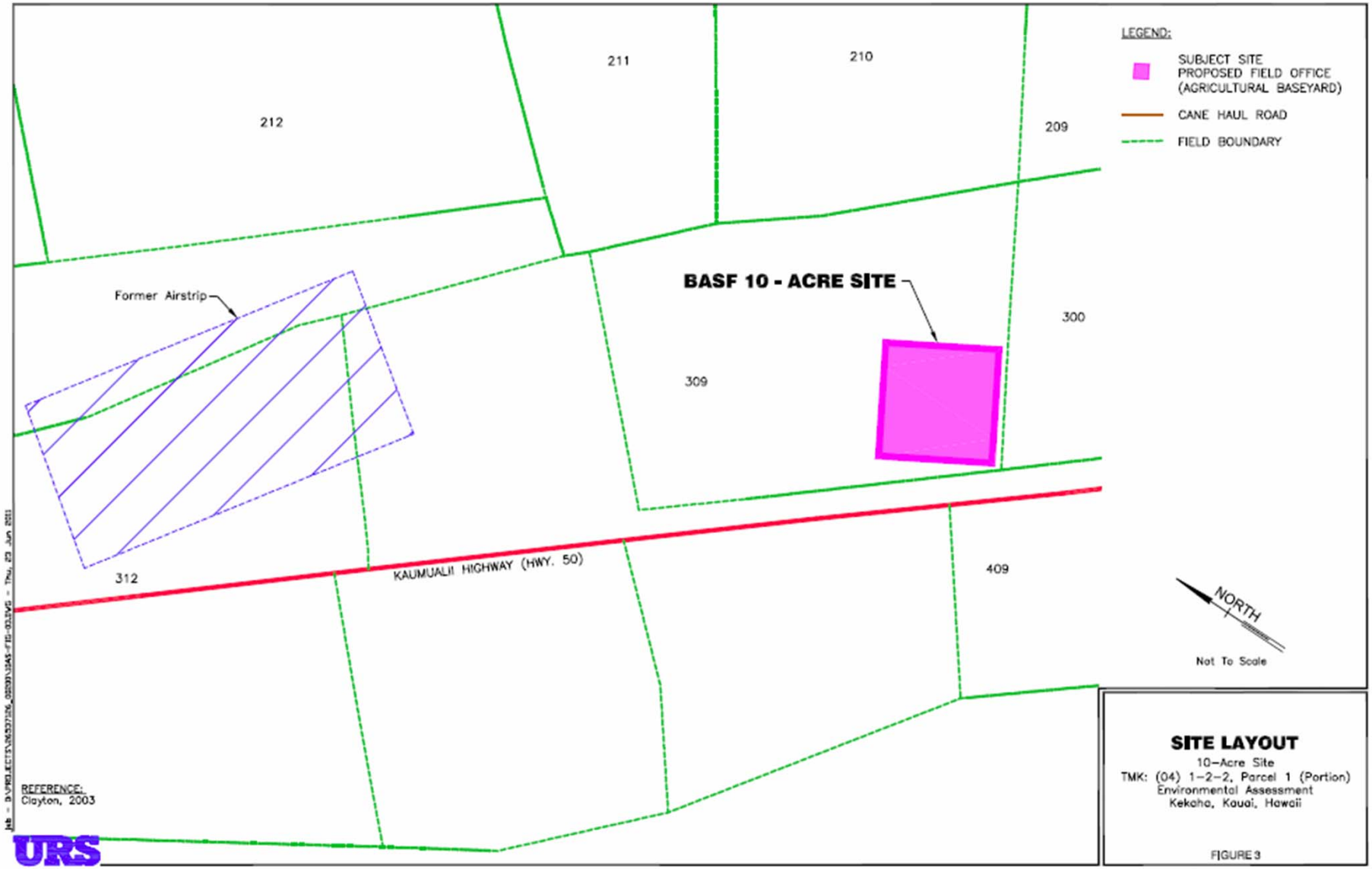
FIGURE 1



SITE LOCATION

10-Acre Site
TMK: (04) 1-2-2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

FIGURE 2



SITE LAYOUT

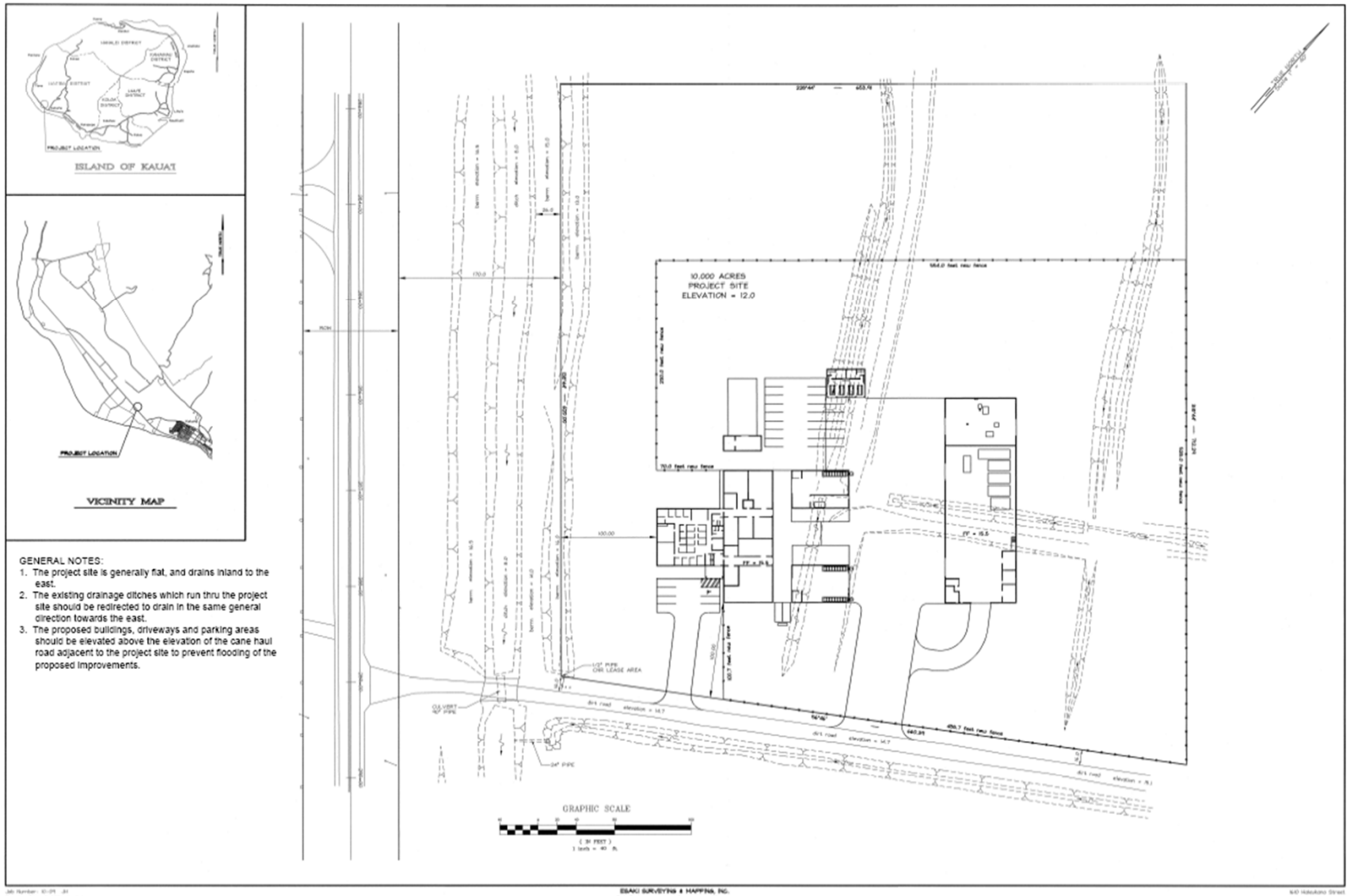
10–Acre Site
TMK: (04) 1–2–2, Parcel 1 (Portion)
Environmental Assessment
Kekaha, Kauai, Hawaii

FIGURE 3

Proposed Site Use

- The proposed action is to develop a field office including a research station, seed handling area, and machine storage area.
- Small bench top equipment would be used to thresh and clean very small quantities of seed.
- The field office would consolidate and centralize agricultural productions to decrease time lost during travel between the field and current location of the building/office site.

Site Plan


ISLAND OF KAUAI
PROJECT LOCATION
VICINITY MAP
PROJECT LOCATION
GENERAL NOTES:
1. The project site is generally flat, and drains inland to the east.
2. The existing drainage ditches which run thru the project site should be redirected to drain in the same general direction towards the east.
3. The proposed buildings, driveways and parking areas should be elevated above the elevation of the cane haul road adjacent to the project site to prevent flooding of the proposed improvements.
10,000 ACRES
PROJECT SITE
ELEVATION = 12.0
GRAPHIC SCALE
ESAKI SURVEYING & MAPPING, INC.
Civil Engineers - Land Surveyors - Planners

Site Progress Information

- BASF retained URS to assist them in the preparation of an EA
- The land is licensed to BASF from the State of Hawaii's Agribusiness Development Corporation (ADC) and BASF/URS are working with project manager, Mr. Matthew Rose.
- We are using an ADC-approved template based on the *Diesel Generator Installation FINAL EA* prepared by TEC in April 2010.
- The EA is being performed in accordance with the Hawaii Revised Statutes Chapter 343 and Hawaii Administrative Rules Title 11, Chapter 200.

Site Progress Information Continued

- URS and BASF are working with cultural and biological specialists to identify any site concerns.
  - Cultural Surveys Hawaii, Inc.
  - AECOS, Inc.
- A *Pre Draft EA* will be provided for an initial review and comment period prior to the *DRAFT EA* submittal.

Stakeholders

FEDERAL AGENCIES

- Pacific Islands Fish and Wildlife Office
- Region IX U.S. EPA
- U.S. Army Corps of Engineers
- U.S. Department of Agriculture
- US Fish and Wild life Service
- US Geological Survey

STATE AGENCIES

- Agribusiness Development Corporation (lead agency)
- Department of Land and Natural Resources Land Division
- Office of Environmental Quality Control
- State of Hawaii Department of Health Environmental Planning Office
- State Historic Preservation Division
- State of Hawaii Department of Transportation

Stakeholders Continued

COUNTY AGENCIES

- Kauai County Planning Department
- Kauai County Water Department

ADJACENT AND NEARBY PROPERTIES

- Kekaha Agricultural Association
- Pacific Missile Range Facility

LOCAL AND HAWAIIAN NATIVE ORGANIZATIONS

- Department of Hawaiian Homelands
- E Ola Mau Na Leo O Kekaha, Inc. (Kekaha Neighborhood Association)
- Hawaiian Homes Commissioners
- Kekaha Hawaiian Homesteads Association
- Office of Hawaiian Affairs

Proposed Schedule

- Project Kickoff Information for Stakeholders
  - Submitted by URS July 1st
  - Responses due from stakeholders July 11th
- Pre Draft EA
  - Submitted by URS September 26th
  - Preliminary responses due from stakeholders October 3
- Draft EA
  - Submitted to ADC October 17th for 30-day review and comment period
  - Responses due from stakeholders November 17th
- Final EA
  - Submitted to ADC December 15th
- Notice of Determination from Agency

Please provide questions, comments, or knowledge of any site specific information **by July 11th** to Ms. Robyn Goong, robyn_goong@urscorp.com

Thank You Very Much

Goong, Robyn

From: Robyn Goong
Sent: Monday, July 18, 2011 11:07 AM
To: Benzie, John CIV PMRF
Subject: RE: BASF - Project Kickoff Information for Stakeholders
Attachments: Google map - site relative to PMRF.pdf

Hi John -

The site is approximately 0.5 mile southeast of the south end of the PMRF. I attached an unofficial figure showing the site relative to PMRF.

Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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"Benzie, John CIV PMRF" <john.benzie@navy.mil>
07/05/2011 05:19 PM

To
<Robyn_Goong@URSCorp.com>

cc

Subject
RE: BASF - Project Kickoff Information for Stakeholders

Mahalo for the info. It is not clear from the maps included exactly where that piece of land is with respect to the Navy Base and the Landfill. Could you please clarify?

Mahalo
Jack

-----Original Message-----
From: Robyn_Goong@URSCorp.com [mailto:Robyn_Goong@URSCorp.com]
Sent: Tuesday, June 28, 2011 13:36
To: matthew.rose@hawaii.gov
Subject: BASF - Project Kickoff Information for Stakeholders

On behalf of BASF Corporation (BASF), URS Corporation (URS) was retained to prepare an Environmental Assessment (EA) for their proposed 10-acre site to build a field office in Kekaha on the island of Kauai. In discussions with BASF, they have already been working significantly with many of you so they felt this presentation was the best way to introduce this project. The project is already in progress in activities beyond the EA with meetings and planning activities. To that end, URS is pleased to provide this Project Kickoff Information for Stakeholders to orient you with their site and plans for their field office. Please review and comment on the enclosed presentation and respond to me by Monday, July 11th.

Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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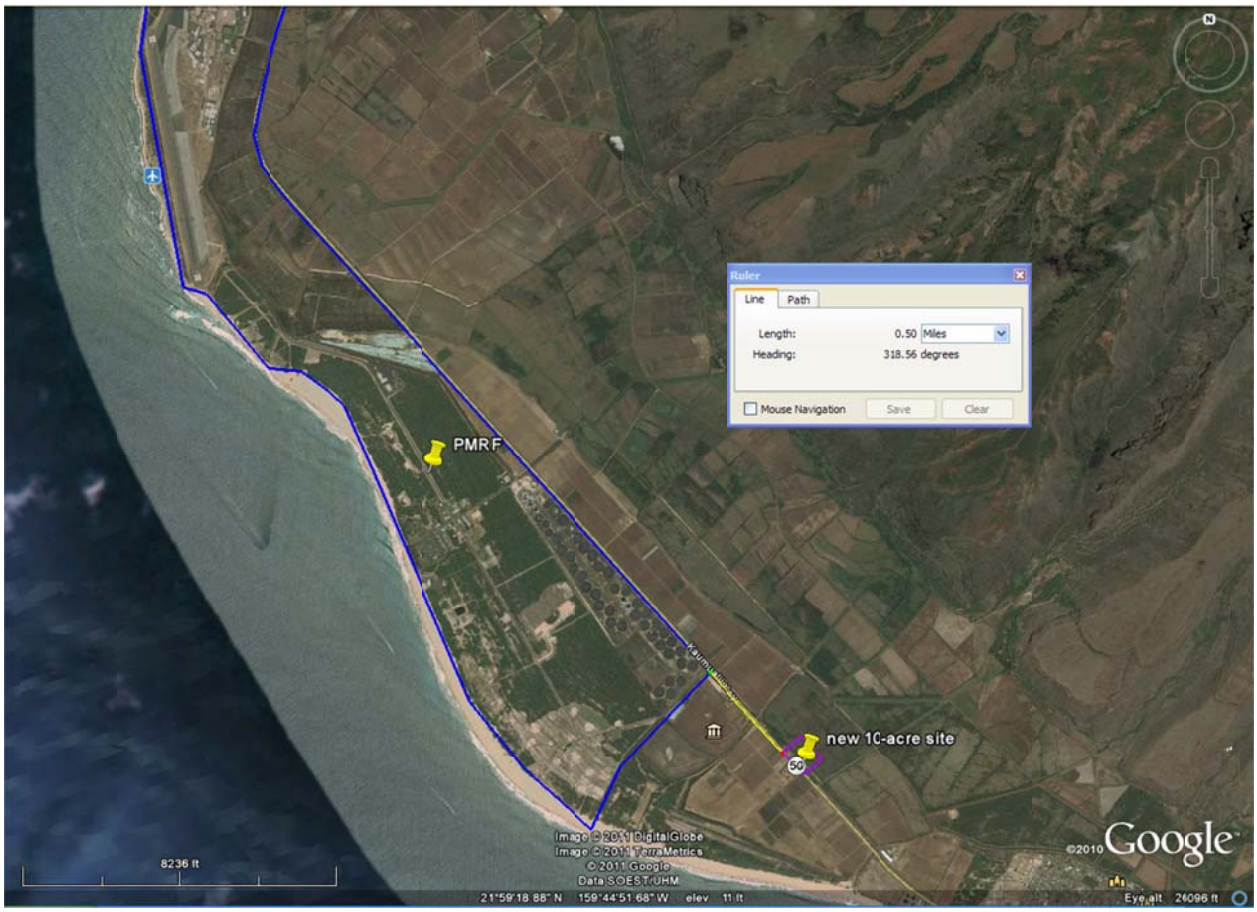
Ruler
Line
Path
Length:
0.50
Miles
Heading:
318.56 degrees
Mouse Navigation
Save
Clear
PMRF
new 10-acre site
50
Image © 2011 DigitalGlobe
Image © 2011 TerraMetrics
© 2011 Google
Data SOEST/UHM
8236 ft
21°59'18.88" N 159°44'51.68" W elev 11 ft
©2010 Google
Eye alt 24096 ft

APPENDIX E

PRELIMINARY DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS AND RESPONSES

Goong, Robyn

From: Goong, Robyn
Sent: Monday, November 07, 2011 12:45 PM
To: 'Matthew.Rose@hawaii.gov'
Subject: RE: Preliminary Draft EA: BASF 10-acre site_extension for review and comment

Dear Matt,

Thank you for your comments and responses. They will be incorporated into the Draft EA.

Sincerely,
Robyn Goong

From: Matthew.Rose@hawaii.gov [mailto:Matthew.Rose@hawaii.gov]
Sent: Tuesday, October 25, 2011 10:06 AM
To: Goong, Robyn
Subject: Fw: Preliminary Draft EA: BASF 10-acre site_extension for review and comment

Aloha Robyn,

Another minor error which my boss found that I didn't mention in my last e-mail. Pg. 1-1, Section 1.2, second sentence 'BASF leases approximately 900 acres....', leases should be changed to licenses. They have a land license for majority of acreage used. Further reference in the same paragraph should change lease to license, as well as any other parts of the document that reference lease, when in actuality is a license.

Mahalo,

Matthew Rose
Project Coordinator
STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION
235 South Beretania Street, Room 205
Honolulu, Hawaii 96813
P(808)586-0181
F(808)586-0189
E-mail: matthew.rose@hawaii.gov

----- Forwarded by Matthew Rose/DOA/StateHiUS on 10/25/2011 10:01 AM -----

Matthew Rose/DOA/StateHiUS

10/24/2011 01:14 PM

To "Goong, Robyn" <robyn.goong@urs.com>
cc
Subject RE: Preliminary Draft EA: BASF 10-acre site_extension for review and comment Link

Aloha Robyn,

Upon review, I only have one concern with release of this preliminary consult document, which I think warrants updating for the DEA.

Pg. ES-1 bottom paragraph, pg. 5-1, section 5.1, appear to state a FONSI declaration with no need for an EIS as already

occurring, when in fact the EA process, as far as I understand, is meant to be a consultative review process in order to make this determination. I would recommend changing the wording to infer that should a FONSI be determined, an EIS would not be required, rather than making assumptions before completing the DEA/FEA process.

Of course, I would also want to see any other feedback received for the pre-consult, prior to the DEA, just in case these inputs might present information that warrant attention. Please call me if you have further questions.

Mahalo,

Matthew Rose
Project Coordinator
STATE OF HAWAII
AGRIBUSINESS DEVELOPMENT CORPORATION
235 South Beretania Street, Room 205
Honolulu, Hawaii 96813
P(808)586-0181
F(808)586-0189
E-mail: matthew.rose@hawaii.gov

"Goong, Robyn" <robyn.goong@urs.com>

10/11/2011 01:19 PM

To "matthew.rose@hawaii.gov" <matthew.rose@hawaii.gov>, "Jasmina.M.Dobinchick@usace.army.mil" <Jasmina.M.Dobinchick@usace.army.mil>, "CEPOH-EC-R@usace.army.mil" <CEPOH-EC-R@usace.army.mil>, "George.p.young@usace.army.mil" <George.p.young@usace.army.mil>, "earl.j.yamamoto@hawaii.gov" <earl.j.yamamoto@hawaii.gov>, "loyal_mehrhoff@fws.gov" <loyal_mehrhoff@fws.gov>, "santhony@usgs.gov" <santhony@usgs.gov>, "gary.hooser@doh.hawaii.gov" <gary.hooser@doh.hawaii.gov>, "barbara.matsunaga@doh.hawaii.gov" <barbara.matsunaga@doh.hawaii.gov>, "pua.aiu@hawaii.gov" <pua.aiu@hawaii.gov>, "dlnr.land@hawaii.gov" <dlnr.land@hawaii.gov>, "glenn.okimoto@hawaii.gov" <glenn.okimoto@hawaii.gov>, "mdahilig@kauai.gov" <mdahilig@kauai.gov>, "gfujikawa@kauaiwater.org" <gfujikawa@kauaiwater.org>, "fpascual@kiuc.coop" <fpascual@kiuc.coop>, "ignacio@hawaii.rr.com" <ignacio@hawaii.rr.com>, "tom.clements@navy.mil" <tom.clements@navy.mil>, "roland.sagum@navy.mil" <roland.sagum@navy.mil>, "john.burger1.cpr@navy.mil" <john.burger1.cpr@navy.mil>, "dennis.rowley@navy.mil" <dennis.rowley@navy.mil>, "john.benzie@navy.mil" <john.benzie@navy.mil>, "danford@shredcohawaii.com" <danford@shredcohawaii.com>, "joshua.uyehara@syngenta.com" <joshua.uyehara@syngenta.com>, "kristen.ma@pioneer.com" <kristen.ma@pioneer.com>, "clyden@oha.org" <clyden@oha.org>, "buzasims_mary@yahoo.com" <buzasims_mary@yahoo.com>, "eolamaunaleookekaha@gmail.com" <eolamaunaleookekaha@gmail.com>, "mrb@hawaiilink.net" <mrb@hawaiilink.net>, "kiersten@historichawaii.org" <kiersten@historichawaii.org>, "dhhl.director@hawaii.gov" <dhhl.director@hawaii.gov>, "Elaine.G.Searle@hawaii.gov" <Elaine.G.Searle@hawaii.gov>, "kawaiwarren@hawaii.rr.com" <kawaiwarren@hawaii.rr.com>, "thomas.h.oi@hawaii.gov" <thomas.h.oi@hawaii.gov>

cc

Subject RE: Preliminary Draft EA: BASF 10-acre site_extension for review and comment

In response to stakeholder requests, the Preliminary Draft EA review has been extended to Wednesday, October 26th.

Thank You
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

From: Goong, Robyn
Sent: Wednesday, October 05, 2011 10:53 AM
To: 'matthew.rose@hawaii.gov'; 'Terri.Kojima@usace.army.mil'; 'earl.j.yamamoto@hawaii.gov'; 'loyal_mehrhoff@fws.gov'; 'santhony@usgs.gov'; 'gary.hooser@doh.hawaii.gov'; 'barbara.matsunaga@doh.hawaii.gov'; 'pua.aiu@hawaii.gov'; 'dlnr.land@hawaii.gov'; 'glenn.okimoto@hawaii.gov'; 'mdahilig@kauai.gov'; 'gfujikawa@kauaiwater.org'; 'fpascual@kiuc.coop'; 'ignacio@hawaii.rr.com'; 'tom.clements@navy.mil'; 'john.burger1.cpr@navy.mil'; 'dennis.rowley@navy.mil'; 'john.benzie@navy.mil'; 'danford@shredcohawaii.com'; 'joshua.uyehara@syngenta.com'; 'kristen.ma@pioneer.com'; 'clyden@oha.org'; 'buzasims_mary@yahoo.com'; 'eolamaunaleookekaha@gmail.com'; 'mrb@hawaiilink.net'; 'kiersten@historichawaii.org'; 'wendy@historichawaii.org'; 'dhhl.director@hawaii.gov'; 'Elaine.G.Searle@hawaii.gov'; 'kawaiwarren@hawaii.rr.com'; 'thomas.h.oi@hawaii.gov'
Subject: Preliminary Draft EA: BASF 10-acre site_Part 1 of 3

On behalf of BASF Corporation (BASF), URS Corporation (URS) was retained to prepare an Environmental Assessment (EA) for their proposed 10-acre site to construct a field office in Kekaha on the island of Kauai. In June 2011, we provided you with the *Project Kickoff Information for Stakeholders* presentation. In continuing with the EA process, we are providing a *Preliminary Draft EA* for your initial review and comment. Should you have any comments or concerns, please let us know so we may incorporate and work on them during the official Draft public comment and review period.

To that end, URS is pleased to provide this *Preliminary Draft EA of BASF Corporation Field Office*. Please review the enclosed document and provide your comments in the *Review Comments - Preliminary Draft EA October 2011* table and respond to me by Wednesday, October 12th.

Due to the size of this document, you will receive three emails.

Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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Goong, Robyn

From: Goong, Robyn
Sent: Monday, November 07, 2011 11:45 AM
To: 'Elaine.G.Searle@hawaii.gov'
Subject: RE: PreDraft EA: BASF 10-acre site

Hi Elaine,

On October 5, I spoke with you and you said that you would provide the Preliminary Draft EA to Planning Department (Darrell Yagodich, Camille Manuel) and Land Management (Julie Catrola, Linda Chin). Could you please provide contact information for each of these people (address, phone number, and e-mail addresses)?

Thank you very much for your assistance.
Robyn

From: Elaine.G.Searle@hawaii.gov [mailto:Elaine.G.Searle@hawaii.gov]
Sent: Wednesday, October 05, 2011 11:48 AM
To: Goong, Robyn
Subject: Re: PreDraft EA: BASF 10-acre site

Aloha Robyn,

I'm not certain if I should be getting this information. Might it have been sent in error?

Elaine Searle
Office of the Chairman
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, HI 96805
808-620-9504 / 808-620-9529 Fax
www.dhhl.hawaii.gov

DEPARTMENT OF HAWAIIAN HOME LANDS

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From: "Goong, Robyn" <robyn.goong@urs.com>
To: "matthew.rose@hawaii.gov" <matthew.rose@hawaii.gov>, "Terri.Kojima@usace.army.mil" <Terri.Kojima@usace.army.mil>, "earl.j.yamamoto@hawaii.gov" <earl.j.yamamoto@hawaii.gov>, "loyal_mehrhoff@fws.gov" <loyal_mehrhoff@fws.gov>, "santhony@usgs.gov" <santhony@usgs.gov>, "gary.hooser@doh.hawaii.gov" <gary.hooser@doh.hawaii.gov>, "barbara.matsunaga@doh.hawaii.gov" <barbara.matsunaga@doh.hawaii.gov>, "pua.aiu@hawaii.gov" <pua.aiu@hawaii.gov>, "dlnr.land@hawaii.gov" <dlnr.land@hawaii.gov>, "glenn.okimoto@hawaii.gov" <glenn.okimoto@hawaii.gov>, "mdahilig@kauai.gov" <mdahilig@kauai.gov>, "gfujikawa@kauaiwater.org" <gfujikawa@kauaiwater.org>, "fpascual@kiuc.coop" <fpascual@kiuc.coop>, "ignacio@hawaii.rr.com" <ignacio@hawaii.rr.com>, "tom.clements@navy.mil" <tom.clements@navy.mil>, "john.burger1.cpr@navy.mil" <john.burger1.cpr@navy.mil>, "dennis.rowley@navy.mil" <dennis.rowley@navy.mil>, "john.benzie@navy.mil" <john.benzie@navy.mil>, "danford@shredcohawaii.com" <danford@shredcohawaii.com>, "joshua.uyehara@syngenta.com" <joshua.uyehara@syngenta.com>, "kristen.ma@pioneer.com" <kristen.ma@pioneer.com>, "clyden@oha.org" <clyden@oha.org>, "buzasims_mary@yahoo.com" <buzasims_mary@yahoo.com>, "eolamaunaleookekaha@gmail.com" <eolamaunaleookekaha@gmail.com>, "mrb@hawaiilink.net" <mrb@hawaiilink.net>, "kiersten@historichawaii.org" <kiersten@historichawaii.org>, "wendy@historichawaii.org" <wendy@historichawaii.org>, "dhhl.director@hawaii.gov" <dhhl.director@hawaii.gov>, "Elaine.G.Searle@hawaii.gov" <Elaine.G.Searle@hawaii.gov>, "kawaiwarren@hawaii.rr.com" <kawaiwarren@hawaii.rr.com>,

"thomas.h.oi@hawaii.gov" <thomas.h.oi@hawaii.gov>
Date: 10/05/2011 09:46 AM
Subject: PreDraft EA: BASF 10-acre site

On behalf of BASF Corporation (BASF), URS Corporation (URS) was retained to prepare an Environmental Assessment (EA) for their proposed 10-acre site to construct a field office in Kekaha on the island of Kauai. In June 2011, we provided you with the *Project Kickoff Information for Stakeholders* presentation. In continuing with the EA process, we are providing a *Preliminary Draft EA* for your initial review and comment. Should you have any comments or concerns, please let us know so we may incorporate and work on them during the official Draft public comment and review period.

To that end, URS is pleased to provide this *Preliminary Draft EA of BASF Corporation Field Office*. Please review the enclosed document and provide your comments in the *Review Comments - Preliminary Draft EA October 2011* table and respond to me by Wednesday, October 12th.

Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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[attachment "PreDraft BASF EA.pdf" deleted by Elaine G Searle/DHHL/StateHiUS] [attachment "Review Comments - Preliminary Draft EA October 2011.docx" deleted by Elaine G Searle/DHHL/StateHiUS]

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

LUD – 4 1 2 002 001 – ID808
Prelim DEA BASF Corp Field Office

October 28, 2011

RECEIVED
NOV 03 2011
URS CORPORATION
Honolulu Office

Ms. Robyn Goong
URS Corporation
615 Piikoi Street 9th Floor
Honolulu, Hawaii 96814

Dear Ms. Goong:

Subject: Preliminary Draft Environmental Assessment for BASF Corporation Field Office
8315 Kekaha Road, Kekaha, Kauai,HI 96752 TMK (4) 1-2-002: 001

Thank you for allowing us the opportunity to comment on the Preliminary Draft Environmental Assessment for the BASF Corporation Field Office located in Kekaha, Kauai. We have the following comments to offer:

The subject project is located in the critical wastewater disposal area as determined by the Kauai Wastewater Advisory Committee.

Temporary facilities may be used to handle the generation of domestic wastewater during the construction phase of the project. However, a wastewater system will be required to be constructed in accordance with applicable provisions of Hawaii Administrative Rules (HAR), chapter 11-62, "Wastewater Systems" for the BASF Corporation Field Office.

All wastewater plans must conform to applicable provisions of HAR, chapter 11-62. We do reserve the right to review the detailed wastewater plans for conformance to applicable rules. Should you have any questions, please contact the Planning & Design Section of the Wastewater Branch at 586-4294 or fax to 586-4300.

Sincerely,

MARSHALL LUM, P.E., ACTING CHIEF
Wastewater Branch

LM:cle

c: DOH's Environmental Planning Office (EPO 11-531)
DOH-WWB's Kauai Staff – Ms. Lori Vetter

BASF
The Chemical Company

Helping Make
Products Better™

November 7, 2011

Mr. Marshall Lum
State of Hawaii Department of Health
Wastewater Branch
PO Box 3378
Honolulu Hawaii 96801-3378

Subject: Response Letter: Preliminary Draft Environmental Assessment
BASF 10-Acre Site located along Kaumualii Highway
Kekaha, Kauai, Hawaii 96752
Tax Map Key: (4) 1-2-002-001 (portion)

Dear Mr. Lum:

Thank you for taking the time to respond to our Preliminary Draft Environmental Assessment. We appreciate the time you spent to write the letter. We have addressed your concerns below.

Per the Kauai Wastewater Advisory Committee, the Subject property is identified to be located within the critical wastewater disposal area.

In Section 3.3.2, Affected Environment, following sentence 3, a sentence will be added stating that, "The project is located in a critical wastewater disposal area as determined by the Kauai Wastewater Advisory Committee."

In Section 4.3.1, proposed action for Infrastructure under the Environmental Consequences discussion, a revision will be made to sentence 5 from "In addition, wastewater…an IWS during operation," to "In addition, wastewater …an IWS during operation *constructed in accordance with applicable provisions of HAR, chapter 11-62.*"

BASF Plant Science
8315 Kekaha Road, Suite F
P.O. Box 127
Kekaha, Hawaii 96752
Tel: (808) 337-2065
Fax: (808) 337-2067

BASF

The Chemical Company

These comments will be incorporated into the Draft Environmental Assessment. Thank you again for your comments.

Sincerely,

BASF Corporation

Steven J. Lupkes
Research Station Manager

cc: Ms. Robyn Goong, URS Corporation

BASF Plant Science
427 Borden Avenue
P.O. Box 249
Sycamore, IL 60178
Tel: (815) 895-9689
Fax: (815) 895-9692

Goong, Robyn

From: Goong, Robyn
Sent: Monday, November 07, 2011 12:57 PM
To: 'kiersten@historichawaii.org'
Subject: RE: Preliminary Draft EA: BASF 10-acre site_Part 1 of 3

Dear Kiersten,

You have been added to our stakeholder list.

Thank you,
Robyn Goong

From: Wendy Wichman [mailto:Wendy@historichawaii.org]
Sent: Wednesday, October 05, 2011 10:58 AM
To: Goong, Robyn
Subject: Automatic reply: Preliminary Draft EA: BASF 10-acre site_Part 1 of 3

Aloha,
I will be leaving Historic Hawai`i Foundation at the end of August to complete my Ph.D. My last day is August 31, 2011. Please re-direct your email to Kiersten Faulkner, HHF's Executive Director, at kiersten@historichawaii.org or tel. 808-523-2900.

Thanks,
Wendy

Wendy Wichman
Director of Field Services
Historic Hawaii Foundation
680 Iwilei Rd., Ste. 690
Honolulu, HI 96817
Tel: 808-523-2900
FAX: 808-523-0800
Email: Wendy@historichawaii.org

WEB: www.historichawaii.org

Goong, Robyn

From: Ma, Kristen <Kristen.Ma@pioneer.com>
Sent: Tuesday, October 11, 2011 2:15 PM
To: Goong, Robyn
Subject: RE: Preliminary Draft EA: BASF 10-acre site_extension for review and comment

Hi Robyn,

My apologies; I was not notified to expect these documents, and so I was unaware of the reason they were provided. I will be sure to review them and determine whether we will have a response. Fortunately, I was able to retrieve the messages from my deleted items folder.

Thank you very much for the quick response.

Kristen Ma, M.S.
Senior Research Associate
Waimea Research Station
Office: 808-338-8300 ext 123
Pioneer Cell: 808-645-0757

From: Goong, Robyn [mailto:robyn.goong@urs.com]
Sent: Tuesday, October 11, 2011 2:10 PM
To: Ma, Kristen
Subject: RE: Preliminary Draft EA: BASF 10-acre site_extension for review and comment

Hi Kristen,

BASF is performing an EA for a prospective site located in the Kekaha area. Pioneer Hi-Bred is located in close proximity to the site. I contacted your office to find out who the appropriate person would be to review the EA documents and you were identified. All interested stakeholders were notified. Please let me know if there is another appropriate person within Pioneer Hi-Bred to send this information. If Pioneer Hi-Bred is not interested in responding, please let me know as well and I will remove Pioneer Hi-Bred from the stakeholder list.

Sincerely
Robyn Goong

From: Ma, Kristen [mailto:Kristen.Ma@pioneer.com]
Sent: Tuesday, October 11, 2011 2:03 PM
To: Goong, Robyn
Subject: RE: Preliminary Draft EA: BASF 10-acre site_extension for review and comment

Robyn,

I believe I received this message and other related messages in error, as I am not an employee of BASF or the state of Hawai‘i. I have deleted this and all related messages. Please let me know if there is a reason for me to have this information.

Thank you,

Kristen Ma, M.S.
Senior Research Associate
Pioneer Hi-Bred Int'l., Inc.
Waimea Research Station
Office: 808-338-8300 ext 123
Pioneer Cell: 808-645-0757

From: Goong, Robyn [mailto:robyn.goong@urs.com]
Sent: Tuesday, October 11, 2011 1:20 PM
To: matthew.rose@hawaii.gov; Jasmina.M.Dobinchick@usace.army.mil; CEPOH-EC-R@usace.army.mil; George.p.young@usace.army.mil; earl.j.yamamoto@hawaii.gov; loyal_mehrhoff@fws.gov; santhony@usgs.gov; gary.hooser@doh.hawaii.gov; barbara.matsunaga@doh.hawaii.gov; pua.aiu@hawaii.gov; dlnr.land@hawaii.gov; glenn.okimoto@hawaii.gov; mdahilig@kauai.gov; gfujikawa@kauaiwater.org; fpascual@kiuc.coop; ignacio@hawaii.rr.com; tom.clements@navy.mil; roland.sagum@navy.mil; john.burger1.cpr@navy.mil; dennis.rowley@navy.mil; john.benzie@navy.mil; danford@shredcohawaii.com; joshua.uyehara@syngenta.com; Ma, Kristen; clyden@oha.org; buzasims_mary@yahoo.com; eolamaunaleookekaha@gmail.com; mrb@hawaiilink.net; kiersten@historichawaii.org; dhhl.director@hawaii.gov; Elaine.G.Searle@hawaii.gov; kawaiwarren@hawaii.rr.com; thomas.h.oi@hawaii.gov
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Thank You
Robyn Goong

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Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

From: Goong, Robyn
Sent: Wednesday, October 05, 2011 10:53 AM
To: 'matthew.rose@hawaii.gov'; 'Terri.Kojima@usace.army.mil'; 'earl.j.yamamoto@hawaii.gov'; 'loyal_mehrhoff@fws.gov'; 'santhony@usgs.gov'; 'gary.hooser@doh.hawaii.gov'; 'barbara.matsunaga@doh.hawaii.gov'; 'pua.aiu@hawaii.gov'; 'dlnr.land@hawaii.gov'; 'glenn.okimoto@hawaii.gov'; 'mdahilig@kauai.gov'; 'gfujikawa@kauaiwater.org'; 'fpascual@kiuc.coop'; 'ignacio@hawaii.rr.com'; 'tom.clements@navy.mil'; 'john.burger1.cpr@navy.mil'; 'dennis.rowley@navy.mil'; 'john.benzie@navy.mil'; 'danford@shredcohawaii.com'; 'joshua.uyehara@syngenta.com'; 'kristen.ma@pioneer.com'; 'clyden@oha.org'; 'buzasims_mary@yahoo.com'; 'eolamaunaleookekaha@gmail.com'; 'mrb@hawaiilink.net'; 'kiersten@historichawaii.org'; 'wendy@historichawaii.org'; 'dhhl.director@hawaii.gov'; 'Elaine.G.Searle@hawaii.gov'; 'kawaiwarren@hawaii.rr.com'; 'thomas.h.oi@hawaii.gov'
Subject: Preliminary Draft EA: BASF 10-acre site_Part 1 of 3

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Due to the size of this document, you will receive three emails.

Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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Goong, Robyn

From: Goong, Robyn
Sent: Monday, November 07, 2011 12:54 PM
To: 'Clements, Tom H CIV PMRF'
Cc: Sagum, Roland D CIV NAVFAC HI, PRB
Subject: RE: PreDraft EA: BASF 10-acre site

Dear Tom,

Roland Sagum has been added to our stakeholder list.

Thank You,
Robyn Goong

-----Original Message-----
From: Clements, Tom H CIV PMRF [mailto:Tom.H.Clements@navy.mil]
Sent: Thursday, October 06, 2011 8:14 AM
To: Goong, Robyn
Cc: Sagum, Roland D CIV NAVFAC HI, PRB
Subject: RE: PreDraft EA: BASF 10-acre site

Aloha Robyn,
Please include Mr. Roland Sagum on your e-mail list for this project. Roland is our new Community Planning Liaison Officer.
Mahalo
Tom Clements
PMRF Public Affairs

-----Original Message-----
From: Goong, Robyn [mailto:robyn.goong@urs.com]
Sent: Wednesday, October 05, 2011 9:43
To: matthew.rose@hawaii.gov; Terri.Kojima@usace.army.mil; earl.j.yamamoto@hawaii.gov; loyal_mehrhoff@fws.gov; santhony@usgs.gov; gary.hooser@doh.hawaii.gov; barbara.matsunaga@doh.hawaii.gov; pua.aiu@hawaii.gov; dlnr.land@hawaii.gov; glenn.okimoto@hawaii.gov; mdahilig@kauai.gov; gfujikawa@kauaiwater.org; fpascual@kiuc.coop; ignacio@hawaii.rr.com; Clements, Tom H CIV PMRF; john.burger1.cpr@navy.mil; Rowley, Dennis CTR PMRF; Benzie, John CIV PMRF; danford@shredcohawaii.com; joshua.uyehara@syngenta.com; kristen.ma@pioneer.com; clyden@oha.org; buzasims_mary@yahoo.com; eolamaunaleookekaha@gmail.com; mrb@hawaiilink.net; kiersten@historichawaii.org; wendy@historichawaii.org; dhhl.director@hawaii.gov; Elaine.G.Searle@hawaii.gov; kawaiwarren@hawaii.rr.com; thomas.h.oi@hawaii.gov
Subject: PreDraft EA: BASF 10-acre site

On behalf of BASF Corporation (BASF), URS Corporation (URS) was retained to prepare an Environmental Assessment (EA) for their proposed 10-acre site to construct a field office in Kekaha on the island of Kauai. In June 2011, we provided you with the Project Kickoff Information for Stakeholders presentation. In continuing with the EA process, we are providing a Preliminary Draft EA for your initial review and comment. Should you have any comments or concerns, please let us know so we may incorporate and work on them during the official Draft public comment and review period.

To that end, URS is pleased to provide this Preliminary Draft EA of BASF Corporation Field Office. Please review the enclosed document and provide your comments in the Review Comments - Preliminary Draft EA October 2011 table and respond to me by Wednesday, October 12th.

Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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Goong, Robyn

From: Goong, Robyn
Sent: Tuesday, October 11, 2011 10:26 AM
To: 'Pua.Aiu@hawaii.gov'
Cc: 'matthew.rose@hawaii.gov'; 'Jasmina.M.Dobinchick@usace.army.mil'; 'CEPOH-EC-R@usace.army.mil'; 'George.p.young@usace.army.mil'; 'earl.j.yamamoto@hawaii.gov'; 'loyal_mehrhoff@fws.gov'; 'santhony@usgs.gov'; 'gary.hooser@doh.hawaii.gov'; 'barbara.matsunaga@doh.hawaii.gov'; 'dlnr.land@hawaii.gov'; 'glenn.okimoto@hawaii.gov'; 'mdahilig@kauai.gov'; 'gfujikawa@kauaiwater.org'; 'fpascual@kiuc.coop'; 'ignacio@hawaii.rr.com'; 'tom.clements@navy.mil'; 'roland.sagum@navy.mil'; 'john.burger1.cpr@navy.mil'; 'dennis.rowley@navy.mil'; 'john.benzie@navy.mil'; 'danford@shredcohawaii.com'; 'joshua.uyehara@syngenta.com'; 'kristen.ma@pioneer.com'; 'clyden@oha.org'; 'buzasims_mary@yahoo.com'; 'eolamaunaleookekaha@gmail.com'; 'mrb@hawaiilink.net'; 'kiersten@historichawaii.org'; 'dhhl.director@hawaii.gov'; 'Elaine.G.Searle@hawaii.gov'; 'kawaiwarren@hawaii.rr.com'; 'thomas.h.oi@hawaii.gov'
Subject: RE: Preliminary Draft EA: BASF 10-acre site_Part 1 of 3

Dear Ms. Aiu,

Thank you for your response. An *Archaeological Literature Review and Field Inspection Report* was prepared by Cultural Surveys Hawaii and is included as Appendix B of the Environmental Assessment. Cultural Surveys Hawaii submitted this report on September 27, 2011 on behalf of BASF and URS for review by the State Historic Preservation Division (SHPD). There were no significant findings made during this activity and therefore, per Cultural Surveys Hawaii, further investigation and an archaeologic inventory were not warranted. A hard copy of the Draft will be provided to the SHPD for your review and comment.

Sincerely,
Robyn Goong

From: Pua.Aiu@hawaii.gov [mailto:Pua.Aiu@hawaii.gov]
Sent: Tuesday, October 11, 2011 8:16 AM
To: Goong, Robyn
Cc: barbara.matsunaga@doh.hawaii.gov; buzasims_mary@yahoo.com; clyden@oha.org; danford@shredcohawaii.com; dennis.rowley@navy.mil; dhhl.director@hawaii.gov; dlnr.land@hawaii.gov; earl.j.yamamoto@hawaii.gov; Elaine.G.Searle@hawaii.gov; eolamaunaleookekaha@gmail.com; fpascual@kiuc.coop; gary.hooser@doh.hawaii.gov; gfujikawa@kauaiwater.org; glenn.okimoto@hawaii.gov; ignacio@hawaii.rr.com; john.benzie@navy.mil; john.burger1.cpr@navy.mil; joshua.uyehara@syngenta.com; kawaiwarren@hawaii.rr.com; kiersten@historichawaii.org; kristen.ma@pioneer.com; loyal_mehrhoff@fws.gov; matthew.rose@hawaii.gov; mdahilig@kauai.gov; mrb@hawaiilink.net; santhony@usgs.gov; Terri.Kojima@usace.army.mil; thomas.h.oi@hawaii.gov; tom.clements@navy.mil; wendy@historichawaii.org
Subject: Re: Preliminary Draft EA: BASF 10-acre site_Part 1 of 3

SHPD cannot accept this via e-mail, nor can we review within the timeframe requested. Please send hard copies to:

601 Kamokila Blvd Ste 555
Kapolei HI 96707

Was an archaeological survey filed separately?

Pua Aiu
Administrator
Historic Preservation Division
601 Kamokila Blvd Room 555
Kapolei, HI 96707
808-692-8016

"Goong, Robyn" <robyn.goong@urs.com>

10/05/2011 10:58 AM

To "matthew.rose@hawaii.gov" <matthew.rose@hawaii.gov>, "Terri.Kojima@usace.army.mil" <Terri.Kojima@usace.army.mil>, "earl.j.yamamoto@hawaii.gov" <earl.j.yamamoto@hawaii.gov>, "loyal_mehrhoff@fws.gov" <loyal_mehrhoff@fws.gov>, "santhony@usgs.gov" <santhony@usgs.gov>, "gary.hooser@doh.hawaii.gov" <gary.hooser@doh.hawaii.gov>, "barbara.matsunaga@doh.hawaii.gov" <barbara.matsunaga@doh.hawaii.gov>, "pua.aiu@hawaii.gov" <pua.aiu@hawaii.gov>, "dlnr.land@hawaii.gov" <dlnr.land@hawaii.gov>, "glenn.okimoto@hawaii.gov" <glenn.okimoto@hawaii.gov>, "mdahilig@kauai.gov" <mdahilig@kauai.gov>, "gfujikawa@kauaiwater.org" <gfujikawa@kauaiwater.org>, "fpascual@kiuc.coop" <fpascual@kiuc.coop>, "ignacio@hawaii.rr.com" <ignacio@hawaii.rr.com>, "tom.clements@navy.mil" <tom.clements@navy.mil>, "john.burger1.cpr@navy.mil" <john.burger1.cpr@navy.mil>, "dennis.rowley@navy.mil" <dennis.rowley@navy.mil>, "john.benzie@navy.mil" <john.benzie@navy.mil>, "danford@shredcohawaii.com" <danford@shredcohawaii.com>, "joshua.uyehara@syngenta.com" <joshua.uyehara@syngenta.com>, "kristen.ma@pioneer.com" <kristen.ma@pioneer.com>, "clyden@oha.org" <clyden@oha.org>, "buzasims_mary@yahoo.com" <buzasims_mary@yahoo.com>, "eolamaunaleookekaha@gmail.com" <eolamaunaleookekaha@gmail.com>, "mrb@hawaiilink.net" <mrb@hawaiilink.net>, "kiersten@historichawaii.org" <kiersten@historichawaii.org>, "wendy@historichawaii.org" <wendy@historichawaii.org>, "dhhl.director@hawaii.gov" <dhhl.director@hawaii.gov>, "Elaine.G.Searle@hawaii.gov" <Elaine.G.Searle@hawaii.gov>, "kawaiwarren@hawaii.rr.com" <kawaiwarren@hawaii.rr.com>, "thomas.h.oi@hawaii.gov" <thomas.h.oi@hawaii.gov>

cc

Subject Preliminary Draft EA: BASF 10-acre site_Part 1 of 3

On behalf of BASF Corporation (BASF), URS Corporation (URS) was retained to prepare an Environmental Assessment (EA) for their proposed 10-acre site to construct a field office in Kekaha on the island of Kauai. In June 2011, we provided you with the *Project Kickoff Information for Stakeholders* presentation. In continuing with the EA process, we are providing a *Preliminary Draft EA* for your initial review and comment. Should you have any comments or concerns, please let us know so we may incorporate and work on them during the official Draft public comment and review period.

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Due to the size of this document, you will receive three emails.

Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the e-mail and any attachments or copies.

Goong, Robyn

From: Hihara-Endo, Linda M@ POD <Linda.M.Hihara-Endo@usace.army.mil>
Sent: Thursday, October 06, 2011 7:53 AM
To: Goong, Robyn
Subject: RE: PreDraft EA: BASF 10-acre site (UNCLASSIFIED)

You're welcome.

-----Original Message-----
From: Goong, Robyn [mailto:robyn.goong@urs.com]
Sent: Wednesday, October 05, 2011 5:18 PM
To: Hihara-Endo, Linda M@ POD
Subject: RE: PreDraft EA: BASF 10-acre site (UNCLASSIFIED)

Hi Linda,

Thank you for the updated information. We appreciate your forwarding this information to the proper parties.

Sincerely,
Robyn Goong

-----Original Message-----
From: Hihara-Endo, Linda M@ POD [mailto:Linda.M.Hihara-Endo@usace.army.mil]
Sent: Wednesday, October 05, 2011 2:14 PM
To: Goong, Robyn
Cc: Kojima, Terri @ POD
Subject: FW: PreDraft EA: BASF 10-acre site (UNCLASSIFIED)

Robyn,
The three part email was erroneously sent to the Corps' Pacific Ocean Division (i.e. Terri Kojima). These types of reviews should correctly go to the Corps' Honolulu Engineer District. I have emailed the three part transmittal to our Honolulu Engineer District.

For future email transmittals of this type, please remove Terri Kojima and send instead to the following: Jasmina.M.Dobinchick@usace.army.mil and CEPOH-EC-R@usace.army.mil

Any hardcopies should be mailed to:

Honolulu Engineer District
Bldg 230
Fort Shafter, HI 96858-5440

Thank you for your attention to this matter.
Linda

Linda M. Hihara-Endo, Ph.D., P.E.
Team Leader, Planning and Policy
Corps of Engineers, Pacific Ocean

Phone (808)438-6977
Fax (808)438-7045

-----Original Message-----
From: Kojima, Terri @ POD
Sent: Wednesday, October 05, 2011 1:42 PM
To: Schiavoni, Richard F@ POD; Hihara-Endo, Linda M@ POD; Lichte, Thom E@ POD
Subject: RE: PreDraft EA: BASF 10-acre site (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Got it. Thank you very much. I'll be forwarding Parts 1, 2, and 3 by separate emails.

VR,
Terri

-----Original Message-----
From: Schiavoni, Richard F@ POD
Sent: Wednesday, October 05, 2011 1:39 PM
To: Hihara-Endo, Linda M@ POD; Lichte, Thom E@ POD
Cc: Kojima, Terri @ POD
Subject: FW: PreDraft EA: BASF 10-acre site (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Thom/Linda,
Please refer this to the appropriate person in POH.
Terri,
We'll handle the referral from here.

Rich

Richard F. Schiavoni, P.E.
Chief, Civil Works Integration Division Programs Directorate, USAEDPO
808-438-7062 (com)
808-554-3982 (cell)

-----Original Message-----
From: Kojima, Terri @ POD
Sent: Wednesday, October 05, 2011 1:15 PM
To: Schiavoni, Richard F@ POD
Subject: FW: PreDraft EA: BASF 10-acre site (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Greetings Rich,

Please advise me on who would be the proper person to coordinate review and any response to the below request from URS Corporation?

Thank you in advance for your guidance.

VR, Terri

-----Original Message-----
From: Goong, Robyn [mailto:robyn.goong@urs.com]
Sent: Wednesday, October 05, 2011 9:43 AM
To: matthew.rose@hawaii.gov; Kojima, Terri @ POD; earl.j.yamamoto@hawaii.gov; loyal_mehrhoff@fws.gov; santhony@usgs.gov; gary.hooser@doh.hawaii.gov; barbara.matsunaga@doh.hawaii.gov; pua.aiu@hawaii.gov; dlnr.land@hawaii.gov; glenn.okimoto@hawaii.gov; mdahilig@kauai.gov; gfujikawa@kauaiwater.org; fpascual@kiuc.coop; ignacio@hawaii.rr.com; tom.clements@navy.mil; john.burger1.cpr@navy.mil; dennis.rowley@navy.mil; john.benzie@navy.mil; danford@shredcohawaii.com; joshua.uyehara@syngenta.com; kristen.ma@pioneer.com; clyden@oha.org; buzasims_mary@yahoo.com; eolamaunaleookekaha@gmail.com; mrb@hawaiilink.net; kiersten@historichawaii.org; wendy@historichawaii.org; dhhl.director@hawaii.gov; Elaine.G.Searle@hawaii.gov; kawaiwarren@hawaii.rr.com; thomas.h.oi@hawaii.gov
Subject: PreDraft EA: BASF 10-acre site

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Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
Fax: 808-593-1198

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Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Goong, Robyn

From: Dobinchick, Jasmina M POH <Jasmina.M.Dobinchick@usace.army.mil>
Sent: Thursday, October 06, 2011 11:26 AM
To: Goong, Robyn
Subject: RE: Preliminary Draft EA: BASF 10-acre site (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Aloha Robyn:

Mr. Young may be reached at: George.p.young@usace.army.mil OR CEPOH-EC-R@usace.army.mil.

Jessie Dobinchick

-----Original Message-----
From: Goong, Robyn [mailto:robyn.goong@urs.com]
Sent: Thursday, October 06, 2011 11:21 AM
To: Dobinchick, Jasmina M POH
Subject: RE: Preliminary Draft EA: BASF 10-acre site (UNCLASSIFIED)

-----Original Message-----
From: Goong, Robyn
Sent: Thursday, October 06, 2011 6:44 AM
To: 'Dobinchick, Jasmina M POH'
Subject: RE: Preliminary Draft EA: BASF 10-acre site (UNCLASSIFIED)

Ms. Dobinchick,

Could you please provide an email address for Mr. Young?

Thank You,
Robyn Goong

-----Original Message-----
From: Dobinchick, Jasmina M POH [mailto:Jasmina.M.Dobinchick@usace.army.mil]
Sent: Thursday, October 06, 2011 5:13 AM
To: Goong, Robyn
Subject: RE: Preliminary Draft EA: BASF 10-acre site (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

We concur with the flood hazard designation provided on page 3-4 of the EA. The documents are being forwarded to Mr. George Young, Chief of our Regulatory Branch, to provide analysis on Department of the Army Permit requirements. For further information, please contact me (808) 438-8876.

Jasmina (Jessie) Dobinchick
Civil Works Technical Branch
US Army Corps of Engineers
Honolulu District

-----Original Message-----
From: Hihara-Endo, Linda M@ POD
Sent: Wednesday, October 05, 2011 2:02 PM
To: Dobinchick, Jasmina M POH; Young, George P POH
Subject: FW: Preliminary Draft EA: BASF 10-acre site_Part 1 of 3 (UNCLASSIFIED)

This came to POD erroneously. We usually send the hardcopies directly to POH. However, since these came in electronically, I am sending these to you per my discussions with Mike Wong and Bob Derouche. I will let URS POC know that future correspondence should either be mailed to POH, or emailed to Jessie and CEPOH-EC-R@usace.army.mil. This is one of three emails..

Linda M. Hihara-Endo, Ph.D., P.E.
Team Leader, Planning and Policy
Corps of Engineers, Pacific Ocean
Phone (808)438-6977
Fax (808)438-7045

-----Original Message-----
From: Kojima, Terri @ POD
Sent: Wednesday, October 05, 2011 1:43 PM
To: Hihara-Endo, Linda M@ POD; Lichte, Thom E@ POD
Cc: Schiavoni, Richard F@ POD
Subject: FW: Preliminary Draft EA: BASF 10-acre site_Part 1 of 3 (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

-----Original Message-----
From: Goong, Robyn [mailto:robyn.goong@urs.com]
Sent: Wednesday, October 05, 2011 10:56 AM
To: matthew.rose@hawaii.gov; Kojima, Terri @ POD; earl.j.yamamoto@hawaii.gov; loyal_mehrhoff@fws.gov; santhony@usgs.gov; gary.hooser@doh.hawaii.gov; barbara.matsunaga@doh.hawaii.gov; pua.aiu@hawaii.gov; dlnr.land@hawaii.gov; glenn.okimoto@hawaii.gov; mdahilig@kauai.gov; gfujikawa@kauaiwater.org; fpascual@kiuc.coop; ignacio@hawaii.rr.com; tom.clements@navy.mil; john.burger1.cpr@navy.mil; dennis.rowley@navy.mil; john.benzie@navy.mil; danford@shredcohawaii.com; joshua.uyehara@syngenta.com; kristen.ma@pioneer.com; clyden@oha.org; buzasims_mary@yahoo.com; eolamaunaleookekaha@gmail.com; mrb@hawaiilink.net; kiersten@historichawaii.org; wendy@historichawaii.org; dhhl.director@hawaii.gov; Elaine.G.Searle@hawaii.gov; kawaiwarren@hawaii.rr.com; thomas.h.oi@hawaii.gov
Subject: Preliminary Draft EA: BASF 10-acre site_Part 1 of 3

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Thank You,
Robyn Goong

URS Corporation
615 Piikoi Street, 9th floor
Honolulu, Hawaii 96814
Direct Line: 808-629-7871
Phone: 808-593-1116
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Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Classification: UNCLASSIFIED
Caveats: NONE

Goong, Robyn

From: Stephen S Anthony <santhony@usgs.gov>
Sent: Wednesday, October 05, 2011 10:05 AM
To: Goong, Robyn
Subject: Re: PreDraft EA: BASF 10-acre site

Hi Robyn,

I'm sorry but we do not have any staff available to review this document.

Steve

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Stephen S. Anthony, Director
USGS Pacific Islands Water Science Center
677 Ala Moana Blvd., Suite 415
Honolulu, HI 96813
Tel. 808-587-2406
Fax. 808-587-2401
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

From: "Goong, Robyn" <robyn.goong@urs.com>

To: "matthew.rose@hawaii.gov" <matthew.rose@hawaii.gov>, "Terri.Kojima@usace.army.mil" <Terri.Kojima@usace.army.mil>, "earl.j.yamamoto@hawaii.gov" <earl.j.yamamoto@hawaii.gov>, "loyal_mehrhoff@fws.gov" <loyal_mehrhoff@fws.gov>, "santhony@usgs.gov" <santhony@usgs.gov>, "gary.hooser@doh.hawaii.gov" <gary.hooser@doh.hawaii.gov>, "barbara.matsunaga@doh.hawaii.gov" <barbara.matsunaga@doh.hawaii.gov>, "pua.aiu@hawaii.gov" <pua.aiu@hawaii.gov>, "dlnr.land@hawaii.gov" <dlnr.land@hawaii.gov>, "glenn.okimoto@hawaii.gov" <glenn.okimoto@hawaii.gov>, "mdahilig@kauai.gov" <mdahilig@kauai.gov>, "gfujikawa@kauaiwater.org" <gfujikawa@kauaiwater.org>, "fpascual@kiuc.coop" <fpascual@kiuc.coop>, "ignacio@hawaii.rr.com" <ignacio@hawaii.rr.com>, "tom.clements@navy.mil" <tom.clements@navy.mil>, "john.burger1.cpr@navy.mil" <john.burger1.cpr@navy.mil>, "dennis.rowley@navy.mil" <dennis.rowley@navy.mil>, "john.benzie@navy.mil" <john.benzie@navy.mil>, "danford@shredcohawaii.com" <danford@shredcohawaii.com>, "joshua.uyehara@syngenta.com" <joshua.uyehara@syngenta.com>, "kristen.ma@pioneer.com" <kristen.ma@pioneer.com>, "clyden@oha.org" <clyden@oha.org>, "buzasims_mary@yahoo.com" <buzasims_mary@yahoo.com>, "eolamaunaleookekaha@gmail.com" <eolamaunaleookekaha@gmail.com>, "mrb@hawaiilink.net" <mrb@hawaiilink.net>, "kiersten@historichawaii.org" <kiersten@historichawaii.org>, "wendy@historichawaii.org" <wendy@historichawaii.org>, "dhhl.director@hawaii.gov" <dhhl.director@hawaii.gov>, "Elaine.G.Searle@hawaii.gov" <Elaine.G.Searle@hawaii.gov>, "kawaiwarren@hawaii.rr.com" <kawaiwarren@hawaii.rr.com>, "thomas.h.oi@hawaii.gov" <thomas.h.oi@hawaii.gov>

Date: 10/05/2011 09:46 AM

Subject: PreDraft EA: BASF 10-acre site

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Thank You,

Robyn Goong

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Phone: 808-593-1116
Fax: 808-593-1198

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