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HOUSING AND HUMAN CONCERNS
 COUNTY OF MAUI

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May 23, 2014

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REC'D DEPT. OF HOUSING
 & HUMAN CONCERNS

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2014 MAY 23 10:11 AM

Ms. Jessica Wooley, Director
 Office of Environmental Quality Control
 Department of Health, State of Hawai'i
 235 S. Beretania Street, Room 702
 Honolulu, Hawai'i 96813

Dear Ms. Wooley:

**Subject: Final Environmental Assessment and Finding of No Significant Impact
 for proposed Kulamalu Affordable Housing Project
 Pukalani, Makawao District, Maui, Hawai'i**

With this letter, the Department of Housing and Human Concerns, County of Maui, hereby transmits the final environmental assessment and finding of no significant impact (FEA-FONSI) for the Kulamalu Affordable Housing project situated at Tax Map Key (2) 2-3-066: 012, 013, 014, in the Makawao District on the island of Maui for publication in the next available edition of the Environmental Notice.

The Department of Housing and Human Concerns has included copies of comments and responses that it received during the 30-day public comment period on the draft environmental assessment and anticipated finding of no significant impact (DEA-AFONSI).

Enclosed is a completed OEQC Publication Form, two copies of the FEA-FONSI, an Adobe Acrobat PDF file of the same, and an electronic copy of the publication form in MS Word. Simultaneous with this letter, we have submitted the summary of the action in a text file by electronic mail to your office.

If there are any questions, please contact Wayde Oshiro in our Housing Division Office at (808) 270-7351.

Sincerely,

Jo-Ann T. Ridao
 Director of Housing and Human Concerns

Enclosures

**AGENCY ACTIONS
SECTION 343-5(B), HRS
PUBLICATION FORM (JULY 2012 REVISION)**

Project Name: Kulamalu Affordable Housing (Joint NEPA-343 HRS)
Island: Maui
District: Makawao
TMK: (2) 2-3-066: 012, 013, 014
Permits: Building Permit, Grading and Grubbing, NPDES (Sotrmwater Permit)
Proposing/Determination Agency: Department of Housing and Human Concerns
(Address, Contact Person, Telephone)

Jo-Ann T. Ridao, Director
2200 Main Street, Suite 546
Wailuku, Hawai'i 96793
Tel: 808-270-7805

Consultant:
(Address, Contact Person, Telephone)

R.M. Towill Corporation
Contact: Chester Koga, AICP email: chesterk@rmtowill.com
2024 North King Street, Suite 200
Honolulu, Hawai'i 96819-3494 Tel. (808) 842-1133

Status (check one only):

- DEA-AFNSI Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov); a 30-day comment period ensues upon publication in the periodic bulletin.
- FEA-FONSI Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqchawaii@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
- FEA-EISPN Submit the proposing agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov); a 30-day consultation period ensues upon publication in the periodic bulletin.
- Act 172-12 EISPN Submit the proposing agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqchawaii@doh.hawaii.gov). NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.
- DEIS The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to oeqchawaii@doh.hawaii.gov); a 45-day comment period ensues upon publication in the periodic bulletin.
- FEIS The proposing agency simultaneously transmits to both the OEQC and the accepting authority, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to oeqchawaii@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.

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___ Section 11-200-23
Determination

The accepting authority simultaneously transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the proposing agency. No comment period ensues upon publication in the periodic bulletin.

___ Section 11-200-27
Determination

The accepting authority simultaneously transmits its notice to both the proposing agency and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.

___ Withdrawal (explain)

Summary (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page):

The Department of Housing and Human Concerns, County of Maui, proposes to construct the Kulamalu Affordable Housing Project, a 64-unit affordable multi-family housing project on 4.179 acres on tax map keys(2) 2-3-066: 012, 013, 014. A total of six (6) two-story residential buildings will be constructed in addition to a multi-purpose building housing laundry facilities, an office and meeting facilities. Project start is schedule for the Fall 2014. The project is currently estimated to cost \$11 million. The project will be partially funded using funds from the Housing and Urban Development agency.

The project site is bounded by 'Ohi'a Ku Street and 'A'apueo Parkway, west of Kula Highway in Pukalani, Makawao District of Maui. The University of Hawai'i's Institute for Astronomy Maikalani Advanced Technology Research Center is located to the west of the project site, and to the east of the project site is the Kulamalu Shopping Center. Across from 'A'apueo Parkway and to the northeast of the property is a single-family residential housing area.

Final Environmental Assessment per Hawai'i Revised Statutes (HRS), Chapter 343

Kulamalu Affordable Housing Pukalani, District of Makawao, Maui, Hawai'i

Tax Map Keys: (2) 2-3-066: 012, 013, and 014

May 2014

County of Maui
Department of Housing and Human Concerns
2200 Main Street
Wailuku, Hawai'i 96793

Final Environmental Assessment per Hawai'i Revised Statutes (HRS), Chapter 343

Kulamalu Affordable Housing

Pukalani, District of Makawao, Maui, Hawai'i

Tax Map Keys: (2) 2-3-066: 012, 013, and 014

May 2014

County of Maui
Department of Housing and Human Concerns
2200 Main Street
Wailuku, Hawai'i 96793

Prepared by:

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55 Merchant Street, Suite 3020
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and

R. M. Towill Corporation
2024 North King Street
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ACRONYMS AND ABBREVIATIONS

ACOE	Army Corps of Engineers
AIS	Archaeological Inventory Survey
APE	Area of Potential Effect
ARS	Archaeological Reconnaissance Study
BMPs	Best Management Practices
B-CT	County of Maui, Country Town Business District
CCH	City and County of Honolulu
cdt	Census Designated Tract
CDP	Community District Plan
CDUP	Conservation District Use Permit
CoK	County of Kauaʻi
CoM	County of Maui
CWA	Clean Water Act of 1972, as amended
CWB	Clean Water Branch, Department of Health, State of Hawaiʻi
CZM	Coastal Zone Management
dba	Decibels
DLNR	State of Hawaiʻi Department of Land and Natural Resources
DWS	Department of Water Supply, County of Maui
EA	Environmental Assessment
ESA	Environmental Site Assessment
HAR	State of Hawaiʻi Administrative Rules
HRS	State of Hawaiʻi Revised Statutes
IAMATRC	Institute for Astronomy Maikalani Advanced Technology Research Center
KTS	Kulamalu Traffic Study
LID	Low Impact Development
MPH	Miles Per Hour
NEPA	National Environmental Policy Act
NOAA	National Oceanographic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System

ACRONYMS AND ABBREVIATIONS

OHA	Office of Hawaiian Affairs
SDOH	State of Hawai'i Department of Health
PGA	Peak Ground Acceleration
DOH-CWB	State of Hawai'i, Department of Health, Clean Water Branch
HDOT	State of Hawai'i, Department of Transportation
SHPD	State of Hawai'i, Historic Preservation Division
SIHP	State of Hawai'i, Inventory of Historic Places
SLUD	State of Hawai'i, Land Use District
SMA	Special Management Area
UH	University of Hawai'i
TIAR	Traffic Impact Analysis Report
TMK	Tax Map Key
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service

Note: Spelling of Hawaiian place names follows Pukui et al. *Place Names of Hawai'i* [1974]

1.0 Project Summary

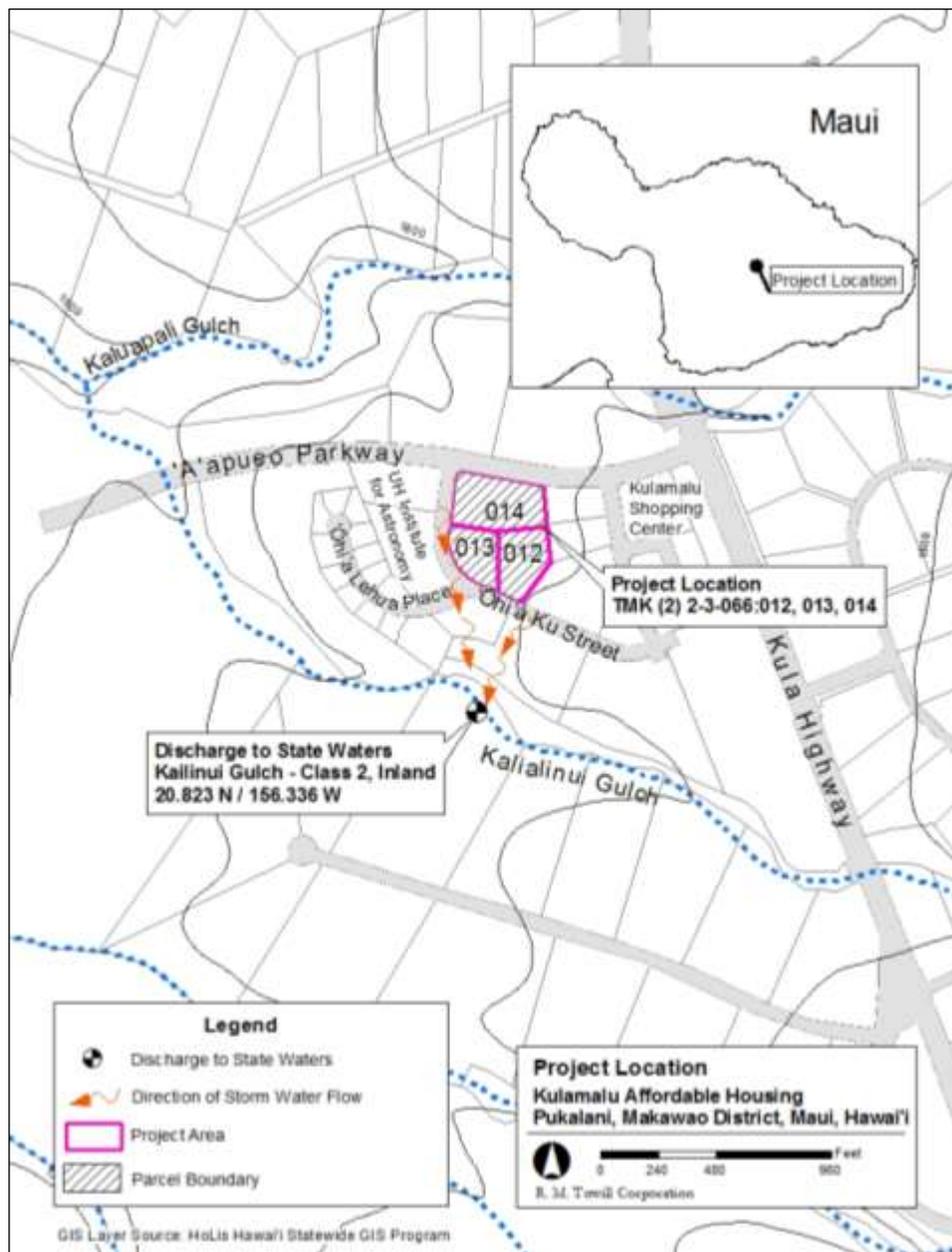
Project:	Kulamalu Affordable Housing	
Applicant:	County of Maui, Department of Housing and Human Concerns	
Approving Agency:	County of Maui, Department of Housing and Human Concerns Ms. JoAnn Ridao, Director	
Consultant:	R. M. Towill Corporation 2024 North King Street Suite 200 Honolulu, Hawai'i 96819 Contact Person: Mr. Chester Koga Contact Person's E-mail: chesterk@rmtowill.com Contact Person's Phone: (808) 842-1133	
Tax Map Keys:	(2) 2-3-066: 012, 013, and 014	
Proposed Action:	The proposed action involves the construction of an affordable multi-family housing project by the County of Maui consisting of a community center, six two-story buildings with 64 housing units, 128 parking stalls, one loading zone, and two concrete driveways connecting the project with 'Ōhi'a Kū Street.	
Land Area:	4.179 acres	
Zoning:	Country Town Business (B-CT) District	
State Land Use District:	Urban	
Existing Land Use:	Vacant	
Special Management Area:	No	
Permits That May be Required:	<u>County of Maui</u> Subdivision Building Permit; Certificate of Occupancy Permit; Country Town Design Review; Drainage Approval; Driveway Permit; Electrical Permit; Fire Protection Permit; Grading and Grubbing Permit; Planned Development Approval; Plumbing Permit; Work on County Highway Permit.	<u>State of Hawai'i</u> National Pollution Discharge Elimination System (NPDES) Permit.

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2.0 Introduction

2.1 Project Location and Area of Use

The Department of Housing and Human Concerns (DHHC), County of Maui (CoM), proposes to construct the Kulamalu Affordable Housing Project, a 64-unit multi-family housing project on 4.179 acres on tax map keys (TMKs) (2) 2-3-066: 012, 013, 014. The project site is bounded by 'Ōhi'a Kū Street and 'A'apueo Parkway, west of Kula Highway in Pukalani, Makawao District of Maui. See *Figure 2-1, Project Location*. The University of Hawai'i's Institute for Astronomy Maikalani Advanced Technology Research Center is located to the west of the project site, and to the east of the project site is the Kulamalu Shopping Center. Across from 'A'apueo Parkway and to the northeast of the property is a single-family residential housing area.



2.2 Purpose of the HRS Chapter 343 Environmental Assessment

This Environmental Assessment (EA) is prepared in accordance with Chapter 343, Section 5, Hawai'i Revised Statutes (HRS), which requires that an EA be prepared when state or county lands, or funds for development are used. Funding for the development of the Kulamalu Affordable Housing is partially derived from the United States Department of Housing and Urban and Development (HUD), and will be allocated through the CoM, DHHC. Accordingly, this allocation of federal and state funds triggers the need for the preparation of this document. The majority of funding for the proposed Kulamalu Affordable Housing project will come from the CoM's Affordable Housing Fund.

The applicant and accepting authority for this EA is the CoM, DHHC, has determined, in accordance with Chapter 343, HRS, and Chapter 11-200, Hawai'i Administrative Rules (HAR), that the proposed project is not expected to result in adverse environmental effects. Based on the review and analysis of the proposed project, the environmental conditions associated with the project, and the mitigation measures proposed to address the potential for adverse effects, a Finding of No Significant Impact (FONSI) will be issued.

2.3 Purpose and Need for the Proposed Project

The Kulamalu Affordable Housing project is being undertaken by CoM, DHHC in response to the growing demand for affordable multi-family housing on Maui which will result in approximately 10,845 units of unmet housing demand¹ by the year 2035.

The demand for affordable housing exists among households that pay more than 30 percent of their income on housing. According to HUD, "affordable housing should be priced below 30 percent of median area household income."² Under this definition, when households earning below median area income spend 30 percent or more of their income on housing, excluding the cost of utilities, they are considered "cost burdened" and therefore potentially less able to purchase basic necessities such as food, clothing, transportation and medical care. The CoM, DHHC, Housing Division, also uses HUD's definition of affordable housing.³ In 2011, 48.2 percent of CoM households devoted 30 percent or more of their income on housing. Within the Makawao-Pukalani-Kula District (otherwise referred to as Upcountry or the Upcountry region), the figures are more pronounced. According to HUD income guidelines, approximately 83.1 percent or approximately 7,606 households in the Makawao-Pukalani-Kula District paid 30 percent or more of their income on housing in 2011. Conversely, only 16.9 percent or approximately 1,547 households among Makawao-Pukalani-Kula District's total households (9,154) paid 30 percent or less of their income on housing in 2011⁴. For affordability indices for the County of Maui except for Hana, see *Table 2-1, Income Limits for Rental Units, County of Maui (2013)*.

¹ 2009, July. State of Hawai'i, Department of Business, Economic Development and Tourism. *Population and Economic Projections for the State of Hawaii to 2035: DBEDT 2035 Series*. Retrieved from: http://www.hawaiieconomicdata.com/DBFileDownload.ashx?file_id=687

² 2013, May 9. Housing and Urban Development. *Affordable Housing*. Retrieved from: <http://www.hud.gov/offices/cpd/affordablehousing/>

³ 2013, February 1. County of Maui, Department of Housing and Human Concerns, Housing Division. *Income Limits & Affordable Rent Guidelines*. Pp.9. Retrieved from: http://hi-auicounty.civicplus.com/documents/13/43/2013%20Workforce%20Hsg%20-%20Affordable%20Sales%20Guidelines%20Based%20on%202011%20AS%20Data_2013_01311256273559.pdf

⁴ 2011, November. Prepared for the County of Maui by the SMS Research & Marketing Services, Inc. *Hawaii Housing Planning Study, 2011*. Retrieved from: <http://www.co.maui.hi.us/index.aspx?NID=1826>

Table 2-1—Income Limits for Rental Units, County of Maui (2013)

	Percentage of Median Gross Monthly Income NOTE: \$78,600 was the median household income for the County of Maui in 2010.									
	Affordable (housing costs <30% of gross-monthly income)			Unaffordable (housing costs >30% of gross-monthly income over 12 months)						
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
No. of Persons										
1	\$5,500	\$11,000	\$16,510	\$22,010	\$27,510	\$33,010	\$38,510	\$44,020	\$49,520	\$55,020
2	\$6,290	\$12,850	\$18,860	\$25,150	\$31,440	\$37,730	\$44,020	\$50,300	\$56,590	\$62,880
3	\$7,070	\$14,150	\$21,220	\$28,300	\$35,370	\$42,440	\$49,520	\$56,590	\$63,670	\$70,740
4	\$7,380	\$15,270	\$23,580	\$31,440	\$39,300	\$47,160	\$55,020	\$62,880	\$70,740	\$78,600
5	\$8,490	\$16,980	\$25,470	\$33,960	\$42,440	\$50,930	\$59,420	\$67,910	\$76,400	\$84,890
6	\$9,120	\$18,240	\$27,350	\$36,470	\$45,590	\$54,710	\$63,820	\$72,940	\$82,060	\$91,180
7	\$9,750	\$19,490	\$29,240	\$38,990	\$48,730	\$58,480	\$68,220	\$77,970	\$87,720	\$97,460
8	\$10,380	\$20,750	\$31,130	\$41,500	\$51,880	\$62,250	\$72,630	\$83,000	\$93,380	\$103,750

Source: 2013, February 1. County of Maui, Department of Housing and Human Concerns, Housing Division. *Affordable Sales Price Guidelines*. Retrieved from: http://hi-maui-county.civicplus.com/documents/13/43/2013%20Workforce%20Hsg%20-%20Affordable%20Sales%20Guidelines%20Based%20on%202011%20AS%20Data_201301311256273559.pdf

Assumptions about the maximum affordable sales price:

- \$78,600** Median family income for County of Maui as established by the U.S. Department of Housing and Urban Development
- 2** Number of wage earning individuals living in households of 4 or greater persons
- 12** Gross monthly income estimates within this table are based on 12 months

3.0 Project Description

3.1 Introduction

The CoM, DHHC, proposes to construct Kulamalu Affordable Housing, an affordable multi-family housing project on a 4.179-acre parcel. This project will consist of six two-story buildings with 64 housing units, a community center, 128 parking stalls, one loading zone, and two concrete driveways connecting the project with 'Ōhi'a Kū Street. Each multi-family housing unit will vary in size from 592 and 812 square feet (sf), the majority of which will feature private lanais. Available unit types will range from one bedroom/one bathroom to two bedrooms/one bathroom. The single story community center building will be comprised of a large multipurpose room with adjoining rooms providing a laundry facility, office management, maintenance and security offices, and a kitchen. The community center building will also feature additional space for childcare services and two large covered lanais. See *Figure 3-1, Sheet A-1, Proposed Kulamalu Affordable Housing*, and *Figure 3-2, Sheet A-2, Proposed Kulamalu Community Center*.

3.2 Existing Land Uses

The entirety of the project site has been previously subject to mass grading and is devoid of trees except for the few street trees growing in tree wells in the adjacent sidewalk. Ground cover is presently limited to non-native grasses that have been regularly maintained by the CoM since it acquired the project site in 2011.

The project area is characterized by a mixture of rural and suburban land uses. The project site and the adjacent properties are part of the 53.67-acre Kulamalu Commercial Subdivision, which is located within the "Urban" State Land Use District (SLUD) and the CoM's "Country Town Business" (B-CT) district. Adjacent parcels are currently in urban use with established urban residential and small-scale rural service/commercial centers. In accordance with Hawai'i Revised Statutes (HRS), Section 205-2(b), Kulamalu Affordable Housing is a permitted use within the "Urban" SLUD district. The proposed project is also a permitted use within the Maui County Code Section 19.15.020(A)(21), which specifies that a permissible use within the "B-CT" district is "multifamily dwellings, duplexes, and bungalow courts, except on Molokai."

The proposed Kulamalu Affordable Housing project is also subject to the Kulamalu Commercial Subdivision design guidelines.⁵ Requirements set forth by Document Number A-47370363, entail a set of specifications for height and the overall nature of the design of all structures. These include but are not limited to maintaining a village-like setting and the use of minimal signage.

⁵ 2012, December 20. SPEC-0059 Addenda. Addendum 2-Kulamalu Town Center Declaration of Covenants, Conditions and Restrictions and subsequent amendments.
Retrieved from: https://atst.nso.edu/sites/atst.nso.edu/files/docs/contracts/SPEC-0059_A2.pdf

Figure 3-1—Proposed Kulamalu Affordable Housing

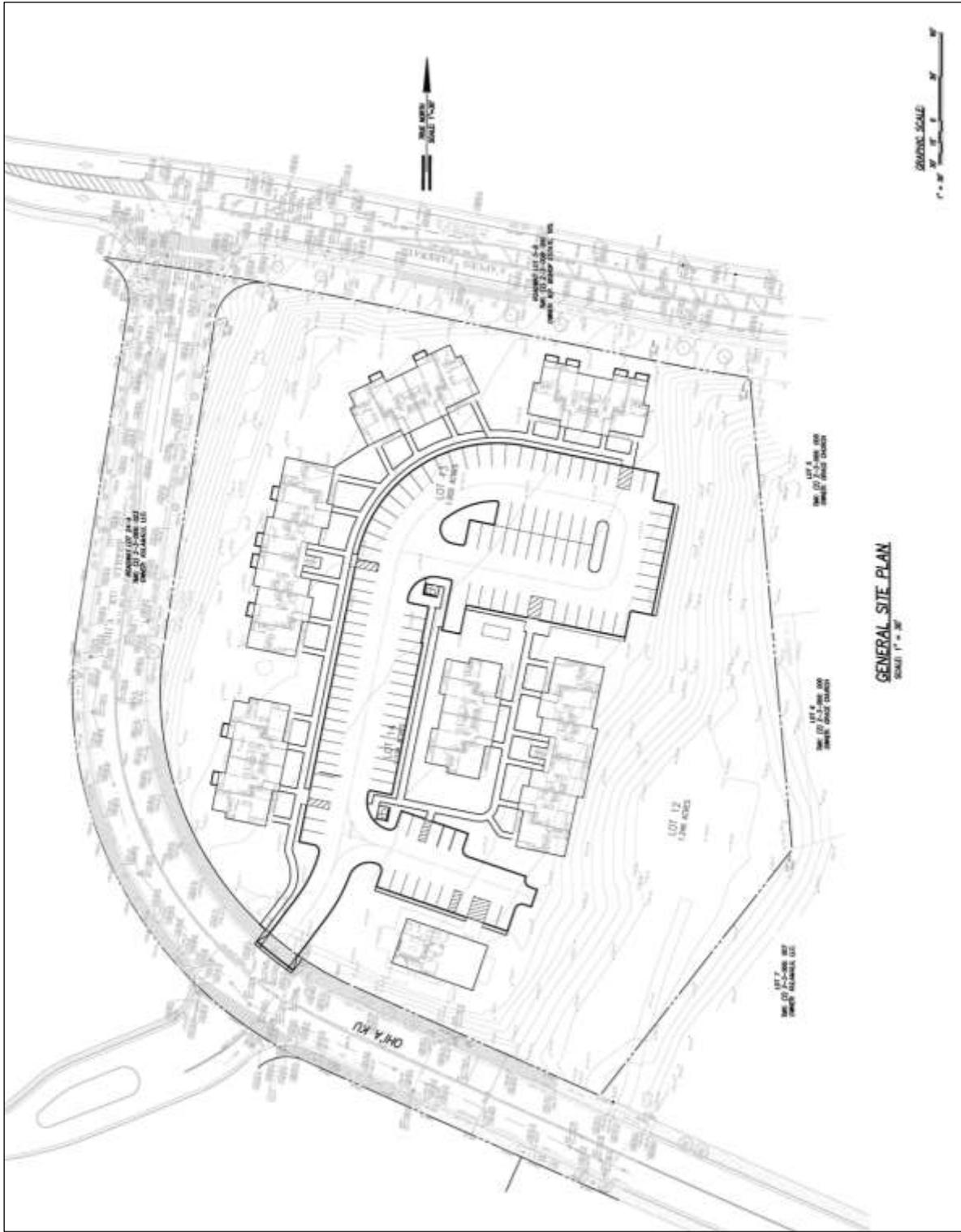
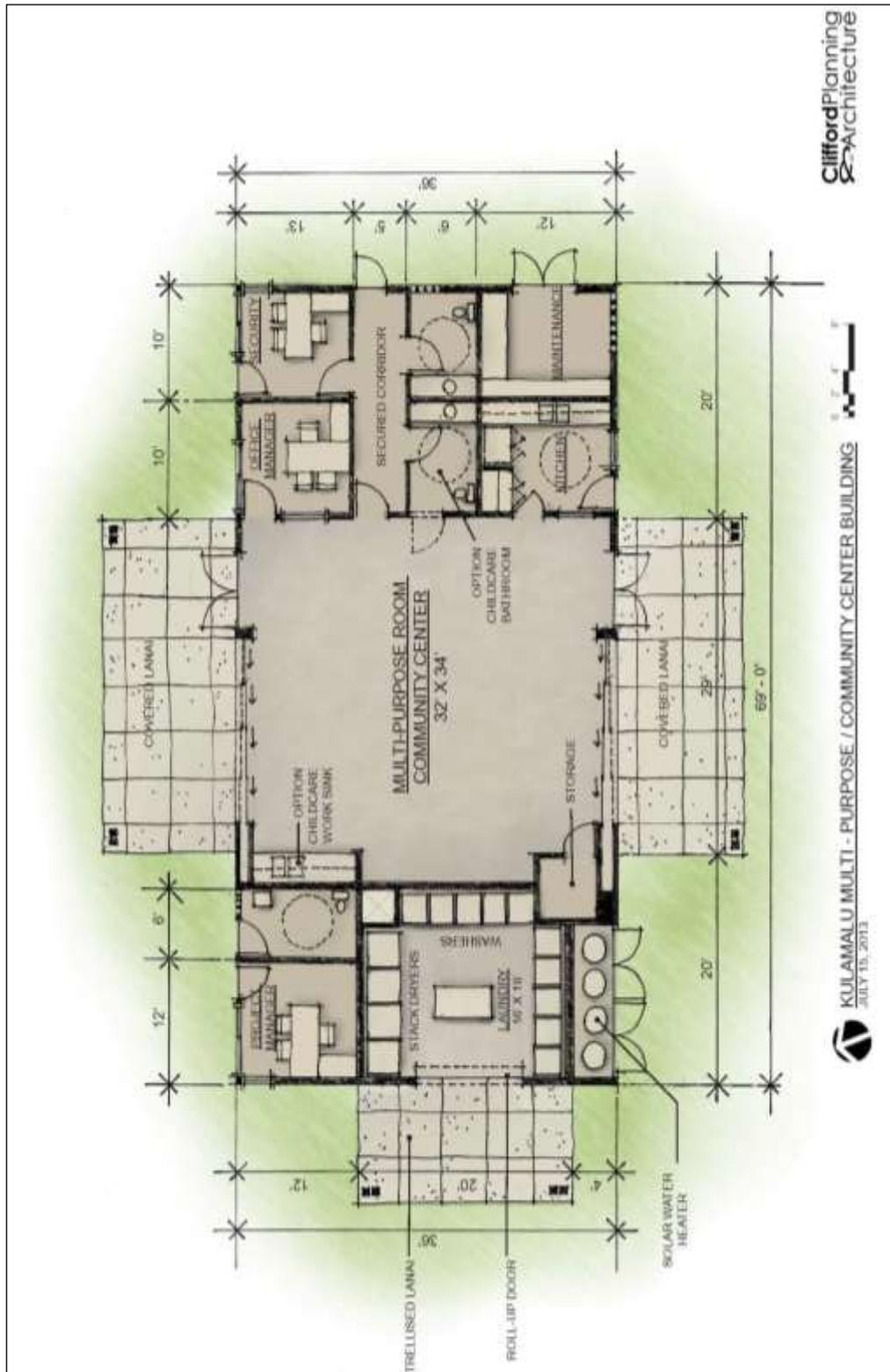


Figure 3-2—Proposed Kulamalu Community Center





Photograph 3-1: View of the multi-family housing residential housing area to the project's northeast.
Photo Credit: Clifford Planning and Architecture LLC. June 20, 2013.



Photograph 3-2: Trees growing on the project site's adjacent sidewalks.
Photo Credit: Clifford Planning and Architecture LLC. June 20, 2013



Photograph 3-3: Non-native grasses on the project site.
Photo Credit: Clifford Planning and Architecture LLC. June 20, 2013

3.3 Planned Facilities

The facilities planned for the subject project will include multi-family housing units, an open air parking lot with an access driveway, a community center, and utilities serving the project.

As a federally funded project, plans for the Kulamalu Affordable Housing project will be prepared in conformance with HRS, Chapter 103-50, Relating to Accessibility for Persons with Disabilities, which requires compliance with the Americans with Disabilities Act Accessibility Guidelines and the Federal Fair Housing Amendments Act. Six two-story buildings will be developed on the project site. Each of the buildings will contain eight or twelve units each. Unit types range from one to two bedrooms with one bathroom. Two of the buildings will be approximately 8,700 sf and the remaining four buildings will be 6,116 sf. The one bedroom units will have between 592 and 634 sf living area with a lanai that is between 33 and 36 sf. The two bedroom units will have between 728 and 812 sf of living area and a lanai that is between 30 and 36 sf. Parking facilities will be located within the center of the project. The building setback will be at least forty feet from the project site boundaries. Two concrete driveways will be constructed to provide street access to the proposed project.

The community center will be a 3,036 sf multi-purpose single story structure and will house common laundry facilities, a maintenance storage area, and a leasing manager's office. Additional space is available within the community center for other uses such as day care. The project site will be landscaped and open areas will be interspersed near each of the buildings. Hedge landscaping and fencing will enclose the property from the surrounding streets. The proposed on-site landscaping will complement the landscaping within the Kulamalu Commercial Subdivision.

Planned utilities for the proposed project will involve the connection to sewer and water laterals that will connect to existing six inch and eight-inch mains on 'Ōhi'a Kū Street, and the intersection of 'Ōhi'a Kū and 'Ōhi'a Lehua Street. Electrical utilities will be connected to Maui Electric Company (MECO) facilities that will provide electricity to the project. Separate electric metering will be provided for each unit. There are three existing ¾-inch water meters currently servicing the project site. The project may need to upsize meters to comply with the Department of Water Supply (DWS) meter sizing requirements.

3.4 Cost

The estimated cost of constructing Kulamalu Affordable Housing is \$11 million, \$9 million of which will be derived from the CoM and \$2 million through HUD.

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4.0 Environmental Setting: Potential Impacts and Proposed Mitigation Measures

4.1 Climate and Rainfall

The project site is located on the western slopes of Haleakalā in Upcountry Maui, a little more than 1 mile south of Pukalani town. In character with Upcountry Maui, Pukalani experiences annual average rainfall that ranges between 40 and 60 inches per year during the months of October to April. In addition, temperatures do not vary greatly, averaging in the 70s (degrees, Fahrenheit).

Potential Impacts and Proposed Mitigation

The proposed project is not expected to have any effect on the existing climate and therefore no mitigation is proposed.

4.2 Geology, Topography and Soils

Elevations at the site range from approximately 1,796 feet above mean sea level (msl) near 'Ōhi'a Kū Street and the easternmost and southwestern portions of the site, to 1,746 above msl near the corner of 'A'apueo Parkway and 'Ōhi'a Kū Street. The average difference in elevations between residential buildings is two feet.

Underlying the site and surrounding areas are soils belonging to the Waiakoa-Keahua-Moloka'i (WkM) association. These soils consist of moderately steep, well-drained soils that have moderately fine textured subsoil located on low uplands.

The specific soil type underlying the project site is Keahua cobbly silty clay (KnhC), has 7 to fifteen 15 percent slopes. This soil is characterized by slow to moderate runoff and slight to moderate erosion hazard.

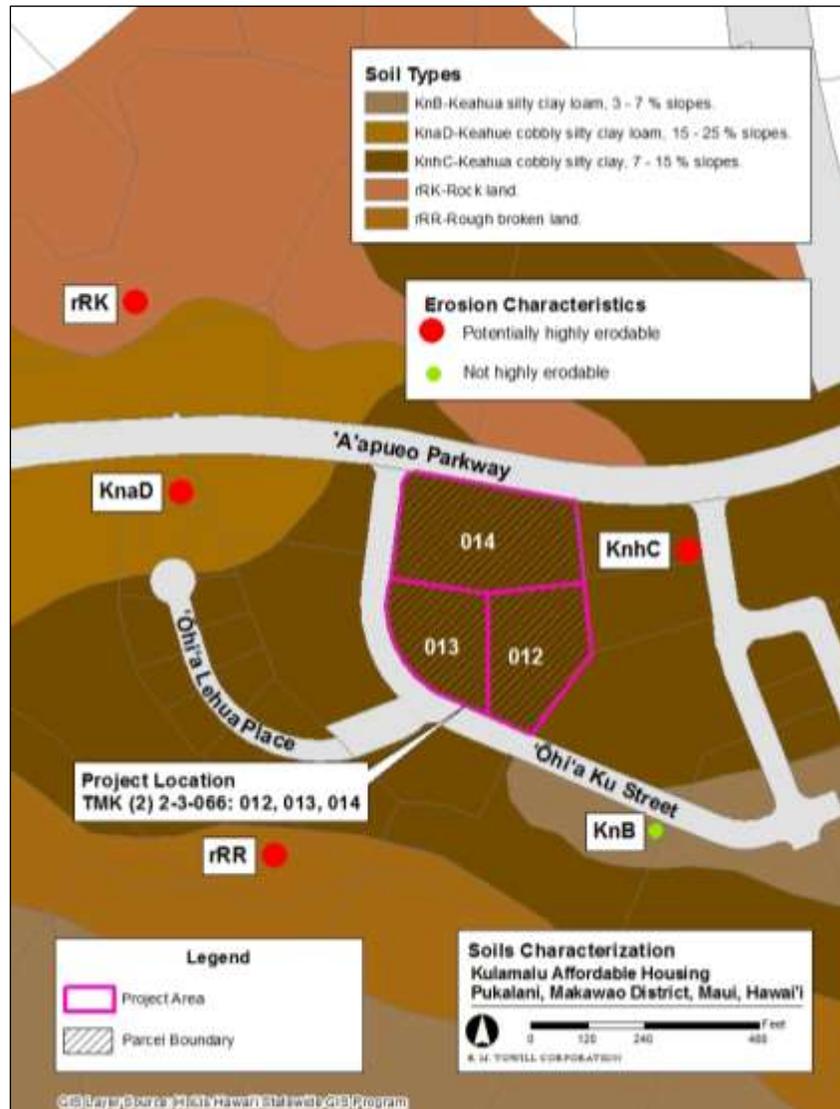
Keahua cobbly silty clay also underlies the nearby University of Hawai'i's Institute for Astronomy, the multi-family housing on the opposite side of 'A'apueo Parkway, and the small shopping center, Kulamalu Town Center, on the eastern side of Kupaoa Street. See *Figure 4-1, Soils Characterization*.

The project site was previously cleared and mass graded in 1997. Grading of the project site will be limited to the uppermost slope of the project site which comprises of a small portion of the entire site. Construction plans, and project activities will be subject to review and approval by the CoM, Department of Planning. An Erosion Control Plan (ECP) will also be prepared as part of the construction plans for the project. Erosion controls will be implemented in accordance with the County of Maui Department of Public Works. Construction and permanent best management practices (BMPs) will also be utilized to control soil erosion and dust.

Potential Impacts and Proposed Mitigation

No further mitigation measures beyond the use of specified erosion control measures are anticipated to be required to address erosion.

Figure 4-1 – Soils Characterization



4.3 Surface Waters and Groundwater

There are no surface waters or groundwater bodies at the project site. The non-perennial Kalialinui Gulch and Kaluapali Gulch, in the south and north respectively, are located nearest to the project site. Water servicing the project will be primarily derived from the surface waters of the Wailoa Ditch.⁶ The most recently observed storage capacity for Wailoa Ditch was approximately 82 million gallons.⁷ The Wailoa Ditch services Makawao District, an aquifer sub-system within one of five County of Maui,

⁶ County of Maui, Department of Water Supply. *Water Treatment Facilities*. Retrieved from: <http://www.co.maui.hi.us/index.aspx?NID=775>

⁷ 2013, June 21. County of Maui, Department of Water Supply. *Upcountry Water Report*. Retrieved from: http://www.co.maui.hi.us/documents/22/378/3765/Jun15to21_201306211837466330.pdf

Department of Water Services (DWS)-managed water districts.⁸ Groundwater sources that services Makawao District, are largely supplementary.

The cumulative production of surface and ground water for the Makawao District was 7,605 gallons,⁹ based on a twelve month average, between February 2013 to January 2014. This figure exceeds production levels during the same time period in West Maui, East Maui, and constituted approximately one third of water production in Central Maui. Water from the Wailoa Ditch, is treated at the Kamaole Water Treatment Plant.¹⁰ Average daily production is 3.6 million gpd for the Kamaole Water Treatment Plant,¹¹ which greatly surpasses cumulative production for the Upcountry water system. Future reservoir storage capacity of the entire Upcountry water system (Makawao-Pukalani-Kula and the Haiku portion of the Pa'ia-Haiku community plan region) may differ periodically from available reservoir levels as the system is nearly entirely comprised of surface water and more susceptible to dry weather conditions.

Upcountry Maui has previously undergone mandatory water rationing as a conservation measure during periods of drought. Recorded droughts in Maui have occurred in 1908, 1953, 1962, 1971, 1977-1978, 1980-1981, 1996, 1998-1999, 2000-2002.¹² Preventative measures implemented during drought conditions in the past have included advisories for voluntary water rationing and has been issued as recently as 2013.¹³ The proposed Kulamalu Affordable Housing project will utilize minimum low-flow fixtures in order to reduce the amount of water usage and to ensure compliance with HAR, Chapter 183 of Title 3.¹⁴ In addition, future residents of Kulamalu Affordable Housing will be encouraged to adopt voluntary water conservation. Anticipated increases in water usage by the Kulamalu Affordable Housing project are estimated to not exceed on average daily 18,000 gallons per day (gpd) or 20,000 gpd on peak days. This does not constitute a significant increase in water usage in Upcountry.

⁸ 2007, September. Chris Hart & Partners, Inc. *Maui County General Plan 2030-Maui Island Plan-Infrastructure and Public Facilities Technical Issue Paper*. Retrieved from: <http://www.co.maui.hi.us/documents/17/69/71/332/Infrastructure%20and%20Public%20Facilities%20Technical%20Issue%20Paper.pdf>

⁹ Department of Water Supply. County of Maui. *Monthly Water Production-Daily Averages*. Retrieved from: <http://www.co.maui.hi.us/index.aspx?NID=572>

¹⁰ County of Maui, Department of Water Supply. Olinda (Upper Kula) Water Treatment Facility. Retrieved from: <http://www.co.maui.hi.us/index.aspx?nid=569>

¹¹ 2013, June 21. County of Maui, Department of Water Supply. *Kamaole Weir*. Retrieved from: <http://www.co.maui.hi.us/index.aspx?NID=567>

¹² Commission on Water Resource Management. Department of Land and Natural Resources. State of Hawaii. *Hawai'i Drought Monitor*. Retrieved from: <http://state.hi.us/dlnr/drought/background.htm>

¹³ 2013, November, 13. Osher, Wendy. Maui Now. *Drought-Related Water Restrictions Lifted in upcountry, Maui*. Retrieved from: <http://mauiNOW.com/2013/11/13/drought-related-water-restrictions-lifted-in-upcountry-maui/>

¹⁴ Hawai'i Administrative Rules Title 3, Department of Accounting and General Services, Subtitle 14, State Building Code, Chapter 183, State Plumbing Code. Retrieved from: http://ags.hawaii.gov/wp-content/uploads/2012/09/approved_state_plumbing_code_2010.pdf.pdf

Potential Impacts and Proposed Mitigation

Groundwater and inland surface waters are not anticipated to be impacted and no further mitigation is proposed or anticipated to be required. Mitigation measures will be implemented to conserve water usage at the project site, and will include, but not be limited to: (1) the utilization of reclaimed or non-potable water for dust control, irrigation, and other non-potable uses; (2) encouraging water use after 7:00PM and 10:00AM; (3) preventing over-watering by automated systems such as rain sensors or soil-moisture sensors on all controllers; (4) maintaining fixtures to prevent leaks; (5) limiting the irrigation of turf; and (6) selecting climate adapted native plant species for landscaping.

Mitigation measures for water system capacity are currently under consideration by the CoM and can be found in the CoM Water Use and Development Plan, Upcountry DWS District Final Candidate Strategies, Appendix B-Specific Resource Options. Options under consideration by the County to improve capacity range from constructing a new well at Po'okela, to a raw water storage reservoir and intake collector system.¹⁵

4.4 Storm Water Runoff

Storm water runoff is defined as precipitation that flows over land or impervious surfaces without percolating into the ground, accumulating debris, chemicals, sediment or other pollutants.¹⁶ The proposed Kulamalu Affordable Housing project will increase the site's storm water runoff as it is the byproduct of impervious surfaces associated with the development of structures and access roadways. The estimated quantity of storm water runoff during construction when the greatest and/or maximum area of disturbance occurs is 2.01 cubic feet per second. The projected pattern of storm water runoff will leave the project site from its west and southeast, enter into the Kulamalu LLC private storm water collection system on 'Ōhi'a Kū Street, and run southwest. Only during inclement weather, when precipitation is particularly heavy, will storm water runoff from the project site enter into the Kalialinui Gulch. The Kalialinui Gulch eventually discharges into the Pacific Ocean at Kanaha Beach Park, a Municipal Separate Storm Sewer System (MS4) area.

Potential Impacts and Proposed Mitigation

Mitigative measures will be implemented during construction as to minimize storm water exposure to pollutants, and the amount of storm water runoff that leaves the site. To mitigate potential impacts from erosion and runoff, BMPs will be implemented to the maximum extent practicable during the construction phase. The BMPs will be specified within the National Pollutant Discharge Elimination System (NPDES), Construction Storm Water Permit application to address the handling and treatment of construction storm water runoff. In compliance with the Department of Health regulations governing the protection of state waters in HAR, Chapter 11-54, Water Quality Standards, and HAR, Chapter 11-55, Water Pollution Control, construction of the project will not commence until a NPDES permit is obtained and all compliance submittal documentation, including but not limited to a permission to discharge to the Kulamalu LLC and MS4 systems, is received by the State of Hawai'i Department of Health (DOH), Clean Water Branch.

¹⁵ County of Maui. *Water Use and Development Plan, Upcountry DWS District Final Candidate Strategies, Appendix B-Specific Resource Options*. Retrieved from: <http://www.co.maui.hi.us/documents/22/90/UpcFinCandStratApxB.PDF>

¹⁶ United States Environmental Protection Agency. National Pollutant Discharge Elimination System (NPDES). *Stormwater Program*. Retrieved from: http://cfpub.epa.gov/npdes/home.cfm?program_id=6

The gradual increases in storm water runoff after the project is constructed will be mitigated through the use of Low Impact Development (LID) design elements. LID involves the use of techniques that reduce a site's environmental impacts and restores or maintains the site's ability to absorb storm water runoff. Environmental impacts of storm water runoff involve: primary impacts, i.e., output of runoff and pollutants, secondary effects, i.e., flooding, and cumulative impacts, i.e., impacts to the site's watershed,¹⁷ without moving collected storm water off-site through a conveyance system.¹⁸ In accordance with HAR, Chapter 11-54, and HAR Chapter 11-55, the following LID design elements have been set forth for the proposed Kulamalu Affordable Housing project:

Conservation of Natural Areas, Soils, and Vegetation

Of the entire 4.18 acre site, only 2.71 acres will be graded. Project site soils have not been altered since mass grading occurred in 1997. For more information on project site soils, see *Section 4.2 Geology and Soils*. Upon the completion of the project, 2.38 acres will contain impervious surfaces. All remaining pervious surfaces will utilize open space design, and include the planting of climate adaptive native species.

Minimization of Disturbances to Natural Drainages

No natural drainage ways exist or run through the site. Site runoff currently sheet flows west to drainage facilities within the 'A'apueo Parkway and 'Ōhi'a Kū Street and this existing runoff pattern will be preserved after the project site is graded.

Minimization of Soil Compaction and Site Grading

Grading on the project site is limited to 4,400 cy of cut. This is consistent with site conditions as the existing topography limits the buildable area which helps to minimize the amount of area where soil can be compacted.

Minimization of Impervious Surfaces

Paved surfaces have been reduced by clustering the buildings around a central parking lot. Sidewalk widths have also been reduced to five feet in favor of open, landscaped areas.

Direct Runoff to Landscaped Areas

This site design strategy is applied in various locations around the site allowing sidewalk and roof runoff to sheet flow into grassed swales.

4.6 Natural Hazards

4.6.1 Floods

The property is located west of Kula Highway and is bound by 'A'apueo Parkway in the north and 'Ōhi'a Kū Street in the southwest. Kalia Gulch and Kaluapali Gulch are both located within approximately

¹⁷ State of Hawai'i, Office of Planning, Hawai'i Coastal Zone Management Program. Stormwater Impact Assessments: Connecting primary, secondary and cumulative impacts to Hawai'i's Environmental Review Process. Retrieved from: http://files.hawaii.gov/dbedt/op/czm/initiative/stomwater_impact/final_stormwater_impact_assessments_guidance.pdf

¹⁸ United States Environmental Protection Agency. National Pollutant Discharge Elimination System. *Low Impact Development (LID) and Other Green Design Strategies*. Retrieved from: <http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=124>

500 feet of the project site. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Map Number 150003INDOB (revised September 25, 2009), the project site is located in an area designated as Flood Zone X (shaded). The Zone X designation denotes an area of minimal flooding and low flooding risk and is used to denote areas located outside the 100-year floodplain¹⁹. See *Figure 4-2, FEMA Flood Plain Designations and Wetlands Areas*.

Potential Impacts and Proposed Mitigation

The proposed Kulamalu Affordable Housing project is not expected to be impacted based on its location within Zone X. No further mitigation measures are proposed or anticipated to be required.

4.6.2 Tsunami

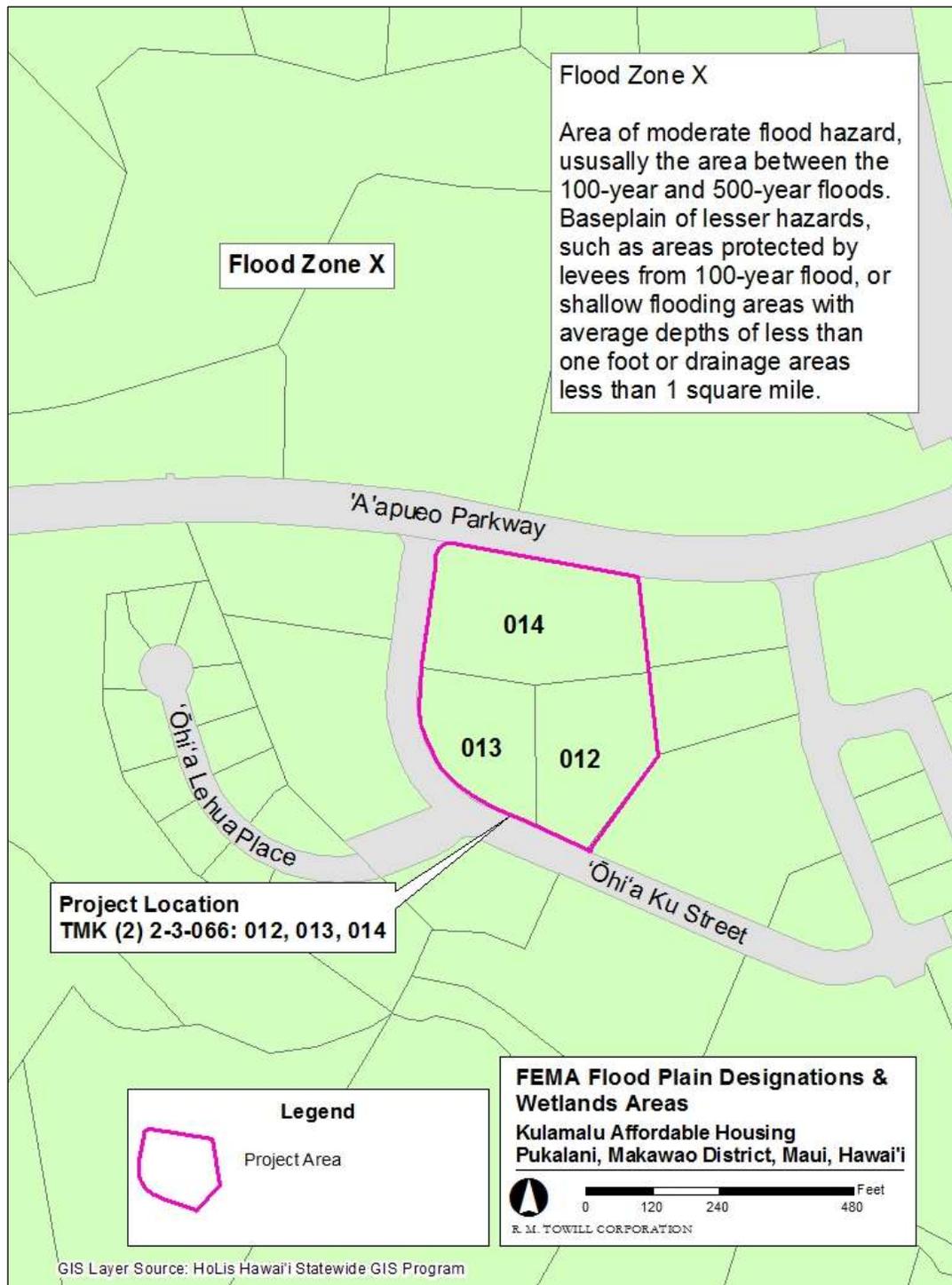
According to the National Oceanic and Atmospheric Administration (NOAA), coastal inundation areas are the low-lying coastal lands, otherwise dry, that become flooded during extreme weather events, such as tsunamis. The proposed Kulamalu Affordable Housing is located at least one thousand feet above msl, which is well outside the coastal inundation area. See *Figure 4-3, Island of Maui Driving Advisory Areas*. For a detailed listing of tsunami evacuations maps, see the County of Maui website: <http://www.co.maui.hi.us/index.aspx?nid=261>.

Potential Impacts and Proposed Mitigation

No impact is anticipated and therefore no mitigation is proposed.

¹⁹ Federal Emergency Management Agency (FEMA). *Definitions of FEMA Flood Zone Designations*. Retrieved from: <https://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%2520Flood%2520Zone%2520Designations>

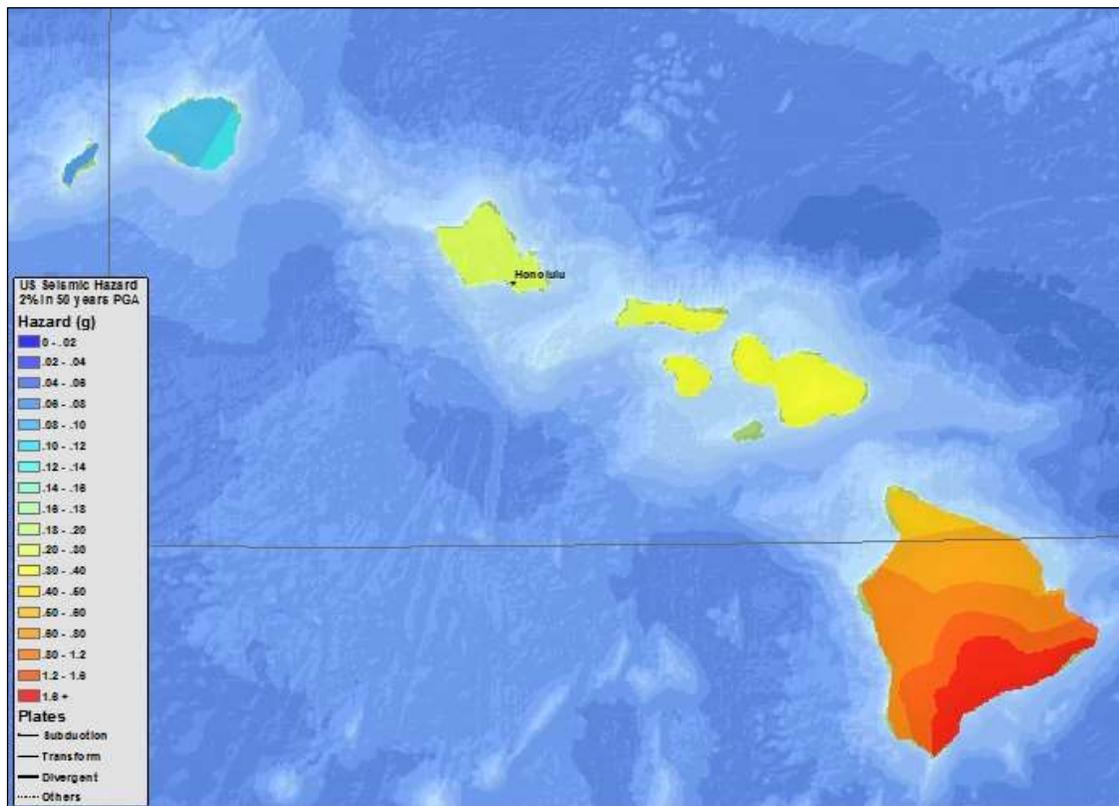
Figure 4-2—FEMA Flood Zone Designations and Wetland Areas



Potential Impacts and Proposed Mitigation

Overall, the risk of earthquakes affecting Maui Island is minimal. *Figure 4-4, Hawai'i Seismic Hazards Map*, uses a peak ground acceleration (PGA) to denote the frequency with which earthquakes are likely to occur in Hawai'i. The majority of the island of Maui lies within the forty to sixty percentile range, which means that based on observed historic seismic activity, the probabilistic event of an earthquake occurring on Maui within the next fifty years exceeding or equal to a two percent chance is between forty and sixty percent. It is also unlikely that the island of Maui will experience an earthquake in the next fifty years.²⁴ Because Kulamalu Affordable Housing will adhere to the CoM Building Code, structures and paved surfaces will be earthquake resistant. No further mitigation is proposed or anticipated to be required.

Figure 4-4—Hawai'i Seismic Hazards Map



Source: United States Geologic Survey, Earthquake Hazards Program
 Retrieved from: <http://earthquake.usgs.gov/earthquakes/states/hawaii/hazards.php>

Hurricanes are tropical cyclones with “maximum sustained winds of 74 miles per hour or higher.”²⁵ The incidence of hurricanes in the State of Hawai'i is relatively rare. Within the past sixty years, major hurricanes (i.e. tropical cyclones with maximum sustained winds of 111 miles per hour or greater) that

²⁴ United States Geological Survey, Hawaiian Volcano Observatory. *Recent Earthquakes in Hawaii*. Retrieved from: <http://hvo.wr.usgs.gov/seismic/tux/Maps/Maui.html>.

²⁵ 2013. National Oceanic and Atmospheric Administration National Weather Service, National Hurricane Center. *Tropical Cyclone Climatology*. Retrieved from: <http://www.nhc.noaa.gov/climo/>

occurred were 'Iwa (1982) and Iniki (1992), both of which struck the island of Kaua'i with the greatest severity. Due to the proposed project's distant proximity to the shoreline, it remains unaffected by the potential for coastal inundation associated with hurricanes. The proposed project may, however, be vulnerable to the high winds associated with hurricanes. Based on data collected between 1949 and 1997 of observed high winds and extreme cyclone weather events, the project is most likely to be affected by tropical depressions (td), with maximum sustained winds of 38 miles per hour or less. The last recorded td event on Maui Island was in 1950, and was associated with Hurricane Hiki (1950).

Among those with the greatest potential to be most financially affected by hurricanes, the CoM ranks third after the County of Kaua'i (CoK) and the City and County of Honolulu (CCH) in its annualized cost estimates associated with vulnerability to property loss.²⁶ If CoM were to experience an 'Iwa-strength storm, its estimated damages incurred would be between \$1.2 and \$2.2 billion. For an Iniki-strength storm, CoM would sustain damage estimated at \$4.2 and 7 billion dollars.²⁷ As a mitigative measure, hurricane home insurance can be obtained by the CoM²⁸ for the proposed Kulamalu Affordable Housing project. National Flood Insurance is obtainable separately; however the project location is situated in an area of minimal flooding risk (see *Section 4.4, A. Floods*).

Potential Impacts and Proposed Mitigation

Based on historical observations of the incidence of hurricanes and extreme winds on the island of Maui, the proposed project is not likely to be affected. Kulamalu Affordable Housing will be constructed in a manner that is consistent with current building safety codes in order to protect against hurricane and wind damage for winds less than 100 miles per hour (mph).²⁹ In order to mitigate natural hazards associated with extreme winds and hurricanes, the Kulamalu Affordable Housing will be built according to the County Building Code.³⁰ In the event that any tropical storm or hurricane activity should develop, the Central Pacific Hurricane Center issues watches, warnings, advisories usually within 36 hours of such a predicted weather event. This advance notice allows residents the opportunity to prepare and if necessary evacuate to the nearest emergency hurricane shelter in the King Kekaulike High School,³¹ located approximately half a mile away. Emergency evacuation procedures will be kept on the project site at all times which will also help inform residents in the event of a hurricane. Other mitigative measures include hurricane insurance that can be obtained by CoM for the Kulamalu Affordable Housing. The project is situated in an area of minimal flooding risk and well outside of the coastal inundation area. No further mitigation is proposed or anticipated to be required.

²⁶ 2010. Hawai'i State Civil Defense. *The State of Hawai'i Multi Hazard Mitigation Plan*. Retrieved from: http://www.scd.hawaii.gov/documents/30_chapter5_rva_2010_reqrevs09-28-2010_pub.pdf

²⁷ Hawai'i Coastal Hazard Mitigation Planning Project, Office of Planning, December 1993 as the original study with calculations updated by the University of Hawai'i, July, 2010.

²⁸ State of Hawai'i, Department of Commerce and Consumer Affairs, Insurance Division. A Consumer's Guide to Homeowner's Insurance in the State of Hawai'i. Retrieved from: http://hawaii.gov/dcca/home_rates/WEB_Jan_2013_Renters_Premiums.pdf

²⁹ 2009, October 13. State of Hawai'i. Chapter 180 Title 3, Hawaii Administrative Rules, State Building Code. Appendix W, Hawaii Wind design Provisions for New Construction. Retrieved from: http://www.scd.hawaii.gov/documents/35_Ch6_AppD_approved_state_building_code_2010.pdf

³⁰ New Maui County Code Chapter 16.08A. R301.2.11 Design Criteria. Retrieved from: http://www.co.maui.hi.us/documents/20/81/Ord3929_2006IRC_Mar20_1.PDF

³¹ County of Maui, Civil Defense Agency. Emergency shelters/center for Maui County. Retrieved from: <http://www.co.maui.hi.us/documents/10/Emergency%20Centers%20and%20Shelters.PDF>

4.7 Air Quality

Air quality throughout the State of Hawai'i is attributed in part to the consistent trade winds that quickly disperse concentrations of emissions. The state maintains 14 air monitoring stations on three islands: O'ahu, Hawai'i and Maui.³² Using data collected from these monitoring stations in 2012, the State of Hawai'i was found in attainment of the National Ambient Air Quality Standards established under the Clean Air Act.³³

Potential Impacts and Proposed Mitigation

Any airborne particulates resulting from construction-related activities may temporarily affect the ambient air quality within the immediate vicinity of the project site. Dust mitigation is a requirement of the Environmental Protection Act and The County of Maui Code, Section 20.08.035, Soil Erosion and Sedimentation Control, Minimum BMPs. The General Contractor will be directed to implement dust control measures that will include the use of BMPs, such as site watering to minimize dust and constructing dust fencing and silt fencing along the project perimeter, to control airborne dust and to lessen fugitive dust from the project area. The total amount of earth that will be graded/disturbed will be no more than approximately 4,400 cubic yards (cy). Excavation of native grades for the proposed Kulamalu Affordable Housing project will be limited to the uppermost slope of the project site which comprises of a small portion of the entire site. Truck loads will be involved in balancing the site. Haul out of excavated soil will only occur during working hours with the exception of peak traffic hours. The types of construction equipment utilized for the project will depend on the General Contractor, however combustion powered machinery and equipment will also be fitted out with mufflers as required by state and federal regulations. Any combustion powered machinery or equipment with engines and air emissions systems found to be in poor operating condition will be either repaired or replaced. BMPs will be implemented to the maximum extent practicable in order to reduce the amount of fugitive dust. After construction, the project is not anticipated to generate adverse impacts to air quality. Exposed earth will be landscaped at the earliest opportunity to reduce soil erosion and minimize dust impacts.

4.8 Noise

The project site is located in an urban area comprised of residential and small-scale commercial lots. There are no significant fixed noise generators in the project's vicinity. The site itself is vacant and therefore does not generate noise. The predominant existing background noise source closest to the project site is attributable to vehicles traveling along the nearby Kula Highway and other existing roadways. The proposed project will also not involve the development of fixed noise generators.

³² AirNow. *Air Quality Index, Hawaii*. Retrieved from: http://airnow.gov/index.cfm?action=airnow.local_state&stateid=12

³³ State of Hawai'i, Department of Health. *Hawai'i Ambient Air Quality Data*. Retrieved from: <http://emdweb.doh.hawaii.gov/air-quality/> and http://health.hawaii.gov/cab/files/2013/05/New_Years_Data_2013.pdf

Potential Impacts and Proposed Mitigation

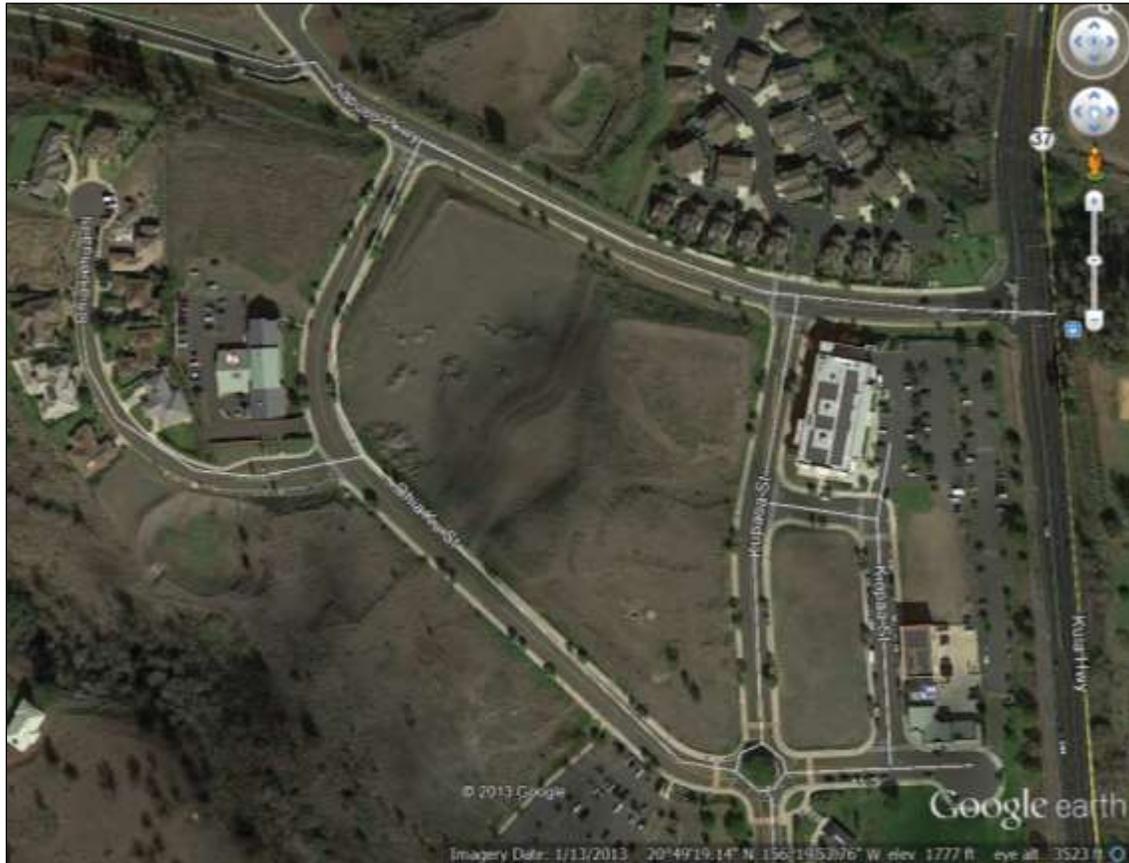
Although construction of the proposed project will generate construction-related noise, it is expected to be short-term in duration. The proposed project will also not involve the development of sources of high noise volumes normally associated with commercial or industrial activities. The General Contractor will be required to obtain a Community Noise Permit from the DOH, for any noise that exceeds allowable levels or is proposed to occur outside of the days and times permitted by DOH. A Noise Variance Permit must be obtained for all construction activities outside of 7:00AM to 6:00PM, Monday through Friday, and 9:00AM to 6:00PM on Saturdays, or construction that generates sound levels above seventy-eight decibels (dBA), or if jack hammers, hydraulic hammers (hoe rams) or pile drivers are used. Maximum permissible sound levels for Kulamalu are determined by its primary State and County land use designations, i.e., the Urban and B-CT zoning. The project is located within zoning Class District A, whereby exterior noise levels generated may not exceed 60 dBA between 7:00AM and 10:00PM, and 50 dBA between 10:00PM and 7:00AM. The General Contractor for the Kulamalu Affordable Housing project will be required to comply with these legally admissible standards in the Noise Pollution and Abatement Act of 1972 and the State of Hawai'i State Community Noise Control Rule.

4.9 Flora and Fauna Resources

The project site and surrounding area have been subject to extensive mass grading as part of prior development activities in the late 1990s/early 2000s for the Kulamalu Development. Vegetation including grasses, shrubs, trees, and vertical terrain features that may have once provided habitat and/or forage for plant and animal species have been removed and the present condition of the site is of a relatively flat and graded surface with some pockets of rock or rubble piles. The cleared condition of the site there has been recruitment of some alien grasses such as fireweed (*Chamerion angustifolium*) and other weed species (see *Figure 4-5*).

Since acquiring the property in 2011, CoM routinely maintains the project site and has not discovered the presence of listed, endangered or threatened species. During the maintenance of the site, no listed, endangered or threatened species have been discovered. However, mitigation measures for potentially impacted, endangered or threatened species set forth by the U.S. Fish & Wildlife Service (USFWS) will be pursued where necessary. USFWS will be contacted if habitat, forage sites, or individual species of the Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), Blackburn's Sphinx Moth (*Manduca blackburni*), and the Hawaiian Goose (*Branta sandvicensis*) are encountered at the proposed project site. The purpose for contacting the USFWS should these species be discovered is to ensure that appropriate mitigative measures can be applied to avoid the potential for adverse effects.

Figure 4-5—Google Earth Street View Image of Project Site



Potential Impacts and Proposed Mitigation

Non-native grasses are the only known ground cover on the project site. No terrestrial mammalian species are known to be present with the possible exception of rats, mice, or feral cats from the surrounding area.

Although the project site is not expected to serve as habitat or foraging area for the species, Hawaiian petrel (*Pterodroma sandwichensis*) and Newell's shearwater (*Puffinus auricularis newelli*), these species may overfly the area and become affected or injured by outdoor artificial lighting and utility lines. The CoM will recommend that the General Contractor shield and project downward lighting to mitigate any potential impacts to the Hawaiian Petrel and Newell's Shearwater. Protection against the potential for collisions with utility lines will also be considered and will be developed, as required, in consultation with the State of Hawai'i, Department of Land and Natural Resources.

The project site was surveyed during the month of April 2014 and approximately 4-6 weeks after a significant rainfall event for the non-native tobacco tree (*Nicotiana glauca*), to ascertain whether Blackburn's Sphinx Moth (*Manduca blackburni*) eggs, larvae, or any signs of larval feeding are present. If Blackburn's sphinx moth is discovered, the Service will be contacted for further guidance. In addition, the CoM will provide the USFWS recommended mitigation measures to the General Contractor, who will be responsible for informing all Subcontractors of any USFWS mitigation requirements.

Information disseminated to subcontractors by the County and its General Contractor will include a species profile report for each species with potential to be impacted by the proposed project. One set of copies of the species profile reports will be kept at the project site at all times during construction. Each

species profile report (Hawaiian hoary bat, Blackburn's sphinx moth, Hawaiian petrel and Newell's shearwater, and Hawaiian goose) will contain the species profile and photo, gathered from the USFWS Pacific Region website and is included in *Appendix B, Endangered Species in the Pacific Islands List*. In the event that any evidence of the subject threatened and endangered species are discovered, the USFWS will be contacted immediately for further guidance.

4.10 Scenic and Aesthetic Environment

The existing site has views of the surrounding area as well as the more distant slopes of Haleakalā and the West Maui Mountains. The proposed project is an infill urban development, and is not anticipated to significantly impact the scenic and aesthetic resources of the area. Multiple housing tracts exist to the northeast, southeast, and northwest of the project site. The Kulamalu Town Center is also located to the east of the project site.

Potential Impacts and Proposed Mitigation

The proposed project will change the proposed project site's scenic and aesthetic environment from its current vacant, undeveloped state, introducing seven new structures, irrigated landscaping, parking lots, and two concrete driveways connecting the proposed project to 'Ōhi'a Kū Street. The proposed Kulamalu Affordable Housing project has been designed with a mass, scale and overall appearance to conform to the character of the Kulamalu Commercial Subdivision. The proposed project's buildings will be no more than two stories and 35 feet in height, take up an area of no more than 0.432 acres (18,832 sf) each, and will have a setback distance of at least 40 feet from the project's boundaries. The site will also be landscaped. For these reasons, the proposed Kulamalu Affordable Housing project is a concentrated residential development that maximizes the use of landscaping and open space areas, does not obstruct the area's scenic and aesthetic environment, and strives to maintain the rural nature of Upcountry Maui. No further mitigation is proposed or anticipated to be required.

5.0 Public Services: Potential Impacts and Mitigation Measures

5.1 Traffic and Circulation

The nearest major arterial road providing access to the proposed Kulamalu Affordable Housing project is Kula Highway (State Route 37). Kula Highway is located to the east of the project site and has two lanes with a posted speed limit of 45 mph. The highway begins at the juncture of Haleakalā Highway and Haleakalā By-Pass Highway, connecting the Pukalani area with Kahului to the northwest. Kula Highway also connects with Pī'ilani Highway (State Route 31), and Haleakalā Highway (State Route 377), providing eastern Maui with access to nearby regions. A driveway will be built to connect the proposed project to a portion of 'Ōhi'a Kū Street, a two-lane roadway with a posted speed of 30 mph. These driveways will facilitate the movement of construction vehicles during the development phase and will remain permanent in order that residents of the Kulamalu Affordable Housing project can access local roads and outside communities. The project site will not have a direct linkage to Kula Highway or any other major arterial roadways.

Potential Impacts and Proposed Mitigation

It is not anticipated that the subject project will significantly impact traffic at the intersection of 'A'apueo Parkway and Kula Highway. The Kulamalu Commercial Subdivision, in which the proposed Kulamalu Affordable Housing project is located, was master planned to include roadways based on a planned build-out scheme to accommodate future development within the Subdivision. The proposed Kulamalu Affordable Housing project is therefore not anticipated to significantly increase traffic.

During construction, vehicular traffic to and from the site will be limited to construction vehicles, the majority of which will not be moved off-site for the period of work. After construction, the proposed project is not anticipated to significantly impact the nearby traffic network.

The proposed Kulamalu Affordable Housing project is well within the projected growth parameters for the Pukalani Project, within which the Kulamalu Commercial Subdivision is located, and its future traffic scenarios were addressed in the *Kulamalu Traffic Study*³⁴ (KTS), an appendix that was published with the Final EA for the Pukalani Project. While the Subdivision included 53.67 acres, the KTS encompassed a planning area of 251.04 acres, taking into account future development for the entire area (see *Figure 5-2 Vicinity Map*). Anticipated future development for the conceptual planning area in the KTS included as many as 324 single-family dwelling units, 80 multi-family dwelling units, 65 elderly dwelling units and a private school for about 500 students, and involved the construction of nearly the same number of roadways currently present in the Kulamalu Commercial Subdivision (see *Figure 5-3 Kulamalu Conceptual Planning Area*). The anticipated future traffic projections involved a Level of Service (LOS) E or F for the intersection of 'A'apueo Parkway and Kula Highway. Recommended improvements in the KTS included the construction of separate turn lanes for each direction of travel at the intersection of 'A'apueo Parkway and Kula Highway (see *Figure 5-4, Recommended Intersection Configurations (1996)*). The recommended improvements were implemented and separate turn lanes are currently in place at the intersection of 'A'apueo Parkway and Kula Highway.

³⁴ 1997, July. *Kulamalu Traffic Study*. Austin, Tsutsumi & Associates; 1997 *Final Environmental Assessment – Kulamalu Project, Appendix D Traffic Impact Study*. Retrieved from: http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Maui/1990s/1997-08-08-MA-FEA-KULAMALU.pdf

The most recent traffic report for the project area was completed in 2003 for the University of Hawaii's Institute for Astronomy Maikalani Advanced Technology Research Center (UH IAMATRC) Environmental Assessment.³⁵ The Traffic Impact Analysis Report (TIAR) accounted for the new 2005 goal enrollment of 1,100 students at the Kamehameha Schools Maui Campus along with housing projects in the Subdivision expected to be completed in 2005. Housing projects considered part of the 2005 development projection included the build out of the Kulamalu Hilltop Subdivision (southwest of the UH IAMATRC) and the Kulamalu Mauka Subdivision (northeast of UH IAMATRC). The build out those developments have yet to reach 100 percent.

While the assumptions within the TIAR differ somewhat from traffic originally anticipated in the planning of the Kulamalu Commercial Subdivision by the KTS, the Kulamalu Affordable Housing project is within the parameters of anticipated traffic in the area for the following reasons. Actual LOS observations in 2003 matched the 1996 projections for that time. In addition, TIAR projections for LOS at the intersection of 'A'apueo Parkway and Kula Highway with or without the UH IAMATRC for year 2005, and 2006 respectively was at a LOS E or F for peak hours, and with a LOS F for the northbound left-turning traffic during the peak PM period hours of school traffic, between 3:30PM-4:30PM. The anticipated number of peak hour trips was based on those estimated to be generated by the UH IAMATRC and known developments near the project would be almost entirely identical to year 2005, and 2006 respectively, with or without the construction of the project. This is due to the fact that the UH IAMATRC only anticipated having twenty employees. Signalization of the 'A'apueo Parkway and Kula Highway intersection has been implemented since the time the 2003 TIAR was conducted. No specific recommendations, however, were presented for the UH IAMATRC. In the event that traffic were to exceed 2006 projections, the TIAR recommended the construction of an eastbound double left turn lane on 'A'apueo Parkway and the widening Kula Highway to alleviate the PM peak hours of school traffic.

Traffic improvements that have been implemented in the Kulamalu Commercial Subdivision since 1997, are designated turn lanes for each direction of travel within the intersection of 'A'apueo Parkway and Kula Highway. In addition, a traffic signal was installed at the intersection of 'A'apueo Parkway and Kula Highway in 2005. The timing of the traffic signal at that intersection does in large part determine the duration of waiting time and the amount of traffic queue. This however is outside of the purview of the subject project. In the near term, no improvements to 'A'apueo Parkway or 'Ōhi'a Kū Street are planned.

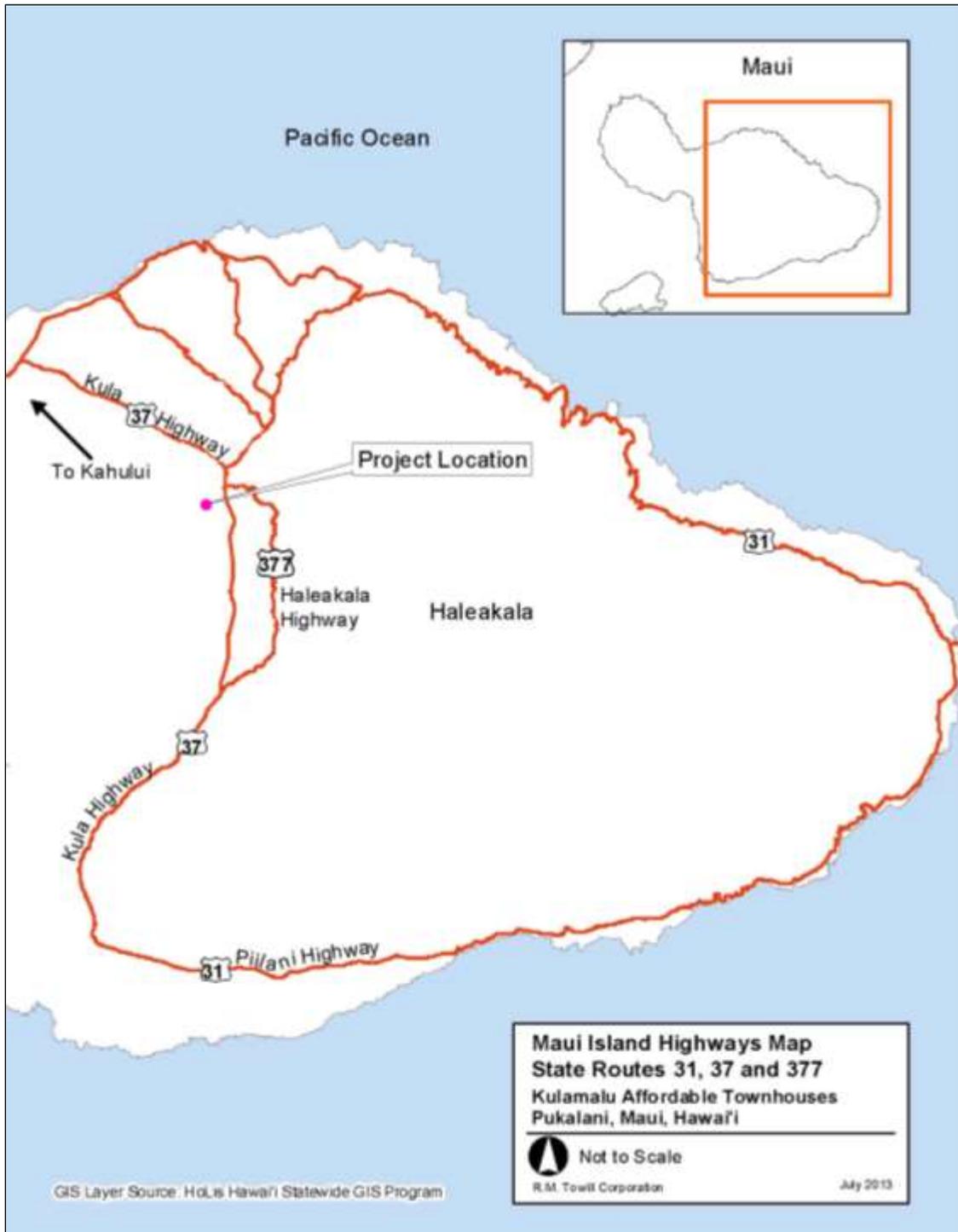
A roadway improvement that is currently under consideration by the State of Hawai'i Department of Transportation, Highways Division,³⁶ is the construction of a shared use path or sidewalk along Kula Highway between 'A'apueo Parkway and Makawao Avenue. A shared use path or sidewalk will facilitate improved access for bicyclists and pedestrians and will also help encourage the use of public transportation by the Kulamalu Commercial Subdivision. This expanded access to alternative forms of transportation will prove particularly beneficial to school-related traffic in the area. The proposed Kulamalu Affordable Housing project will not inhibit the implementation of the Statewide Pedestrian Master Plan. Access to public transportation is also being planned and coordinated with the County's Department of Transportation.

³⁵ 2004, January 15. Austin, Tsutsumi & Associates, Inc. *Traffic Impact Report for Institute of Astronomy Advanced Technology Center (Phase 1) and Advanced Technology and Research Center (Phase 2)*; 2004. *Final Environmental Assessment-Proposed Advanced Technology Center and Advanced Technology Research Center, Appendix C, Traffic Impact Analysis Report*. Retrieved from: http://oegc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Maui/2000s/2004-07-08-MA-FEA-UH-ADVANCED-TECHNOLOGY-CENTER.pdf

³⁶ 2011, August. State of Hawaii, Department of Transportation, Highways Division. *Statewide Pedestrian Master Plan*. Retrieved from: <http://www.hawaiipedplan.com/documents/Statewide%20Pedestrian%20Master%20Plan%20with%20Appendices.pdf>

Future coordination of proposed project(s) with the Department of Transportation will be undertaken by the County as part of general plan review processes. Additional requirements to address the sufficiency of traffic controls will be discussed or addressed as may be required.

Figure 5-1—Maui Island Highways Map State Routes 31, 37, and 377



5.2 Wastewater

Approximately 12,800 gallons per day (gpd)³⁷ of wastewater is estimated to be generated by the proposed project upon the completion of construction and habitation of all residential units. Presently, wastewater is not generated from the undeveloped parcel.

Wastewater generated from the project will go to the project's sewer collection system that will connect to a Hawai'i Water Services facility and will be handled appropriately thereafter. The on-site sewer collection system will be constructed to provide the necessary infrastructure to support transmission of wastewater flows to the wastewater treatment facility.

Potential Impacts and Proposed Mitigation

The anticipated increase in wastewater generated by the proposed project will be handled by the Hawai'i Water Services through its existing wastewater treatment system. No adverse impacts are anticipated and therefore no further mitigation is proposed or projected.

5.3 Potable Water and Energy

Three existing ¾-inch water meters already service the project site. In accordance with DWS meter sizing requirements, the meters may have to be upsized and/or consolidated to meet flow requirements of the project, but cannot exceed the cumulative assigned allocation of 20, 895 gpd. The project's estimated usage ranges between 15,000 to 18,000 gpd on average with peak days at 18,000 to 20,000 gpd.

Recent water quantity and quality testing confirms adequate capacity and good quality of drinking water sources in the Makawao-Kula-Pukalani District. See *Table 5-1, County of Maui Department of Water Upcountry Water Report*, and *Table 5-2, 2012 Water Quality Monitoring Results for Makawao*.

Potential Impacts and Proposed Mitigation

The potential for adverse effects to the CoM's potable water supply is not anticipated as there is sufficient capacity of EPA compliant drinking water to support the project. Mitigative measures to reduce the overall water demand will be employed and could include, but are not limited to, the use of drought tolerant vegetation for landscaping and groundcover; the use of low-flow or low water use lavatory fixtures and appliances; and, a recommended schedule prohibiting the irrigation of area vegetation during the mid-day (e.g., between 12:00P.M. to 4:00P.M.) when evaporation and evapotranspiration losses are greatest.

The use of energy to support the proposed project is not anticipated to result in adverse environmental effects. The minimal amount needed of fossil fuels will be utilized in the construction and development of the project. This use of fuel will be temporary and will last only for the duration of construction. No adverse effects are anticipated.

³⁷ Estimate is based on the 6,000 gallon per month ceiling charge for multi-family housing dwellings. This amount is multiplied by the number of units (64) that will be constructed at Kulamalu Affordable Housing.

Source: *County of Maui Department of Environmental Management Wastewater Services Information*.

Retrieved from: <http://www.mauicounty.gov/index.aspx?NID=808>

Table 5-1 — County of Maui Department of Water Upcountry Water Report

6/25/2013
DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
UPCOUNTRY WATER REPORT

DATE	AVAILABLE SUPPLY								DEMAND															
	WAILOA DITCH		WAIKAMOI		KAHAKAPAO		PIHULO RESERVOIR		TREATMENT FACILITY (million gallons)						PUMPING				TOTAL					
	MGD	%	MG	%	MG	%	MG	%	Kamole	Kaupakaha	Waia	Po'ohala	Piholo	Other	FROM LOWER LINE	FROM Piholo Well	UPPER LINE							
6/15/2013	82.0	41.1	0.0	0.0	0.0	0.0	30.1	75.2	37.8	75.8	47.7	95.4	123.7	0.1	0.0	0.5	0.3	0.0		5.4	2.1	0.0	0.0	0.0
6/16/2013	70.0	35.1	0.0	0.0	0.0	0.0	37.5	75.0	37.0	74.0	49.2	98.4	123.7	2.3	0.0	0.7	0.3	0.0	3.3	1.7	0.0	0.0	0.0	8.3
6/17/2013	85.6	32.8	0.0	0.0	0.0	0.0	36.6	73.2	36.4	72.8	49.4	98.8	122.4	2.2	0.0	0.7	0.3	0.0	2.2	1.7	0.0	0.0	0.0	7.1
6/18/2013	60.0	30.0	0.0	0.0	0.0	0.0	35.8	71.6	35.9	71.2	48.1	96.2	119.5	2.3	0.0	0.7	0.3	0.0	3.4	1.6	0.0	0.0	0.0	8.3
6/19/2013	57.2	28.6	0.0	0.0	0.0	0.0	38.6	69.2	34.6	69.2	48.4	96.8	117.6	2.3	0.0	0.6	0.3	0.0	2.3	1.8	0.0	0.0	0.0	7.3
6/20/2013	52.6	26.3	0.0	0.0	0.0	0.0	34.2	68.4	34.0	68.0	46.7	93.4	114.9	2.3	0.0	0.7	0.3	0.0	3.6	2.1	0.0	0.0	0.0	9.0
6/21/2013	59.3	29.7	0.0	0.0	0.0	0.0	34.2	68.4	34.9	69.8	46.7	93.4	114.9	2.3	0.0	0.6	0.3	0.0	3.1	1.6	0.0	0.0	0.0	7.9

The Upcountry area includes Haiku, Makawao, Olinda, Haliimaile, Pukalani, Omaopio/Pulehu, Kula, Keokea, Ulupalakua, and Kanaloa.

03/15/13 - Director Taylor lifted the Drought Watch for Upcountry Maui.

NOTES

- This report is to provide the reader with information on the Department's Upcountry Water Systems.
- Available Surface Water Supply
 - Wailoa Ditch maximum flow is 199.7 million gallons per day.
 - Figures for the Waikamoi Reservoir includes two reservoirs. The total storage capacity (both reservoirs) is 30 million gallons.
 - Figures for the Kahakapao Reservoir includes two reservoirs. The total storage capacity (both reservoirs) is 100 million gallons.
 - Pihulo Reservoir has a storage capacity of 50 million gallons.
 - The amount in the TOTAL column is obtained by adding the quantities for Waikamoi, Kahakapao, and Pihulo Reservoirs.
- Surface Water Demand
 - The numbers under the heading TREATMENT FACILITY represent the quantity of water sent out from the respective plants.
 - The figure under the heading "Kamole to Piholo Pumping" represents the quantity of water pumped from the Kamole Plant into the untreated water reservoir at Piholo.
 - The actual demand on the Kamole Plant is the amount shown less the "Kamole to Piholo Pumping" amount.
 - The TOTAL column is obtained by adding the demand quantities for the three plants less the amount pumped into the Piholo Reservoir from Kamole WTF.
- Total water used for the day is the sum of Surface Water Production plus Groundwater Production.
- Rounding differences may result in this report.
- Legends:
 - MGD = Million Gallons per Day
 - MG = Million Gallons
 - % = Percentage of Total Capacity
- The Upcountry Water System:
 - Wailoa Ditch serves the Kamole Treatment Facility.
 - Waikamoi and Kahakapao Reservoirs serve the Olinda Treatment Facility.
 - Pihulo Reservoir serves the Piholo Treatment Facility.
 - Breakdown of service areas:
 - Kamole Treatment Facility serves Haiku, Haliimaile, Pukalani, and parts of Makawao.
 - Piholo Treatment Facility serves parts of Makawao, Lower Kula, Omaopio, and Pulehu.
 - Olinda Treatment Facility serves Olinda, Upper Kula, Keokea, Waiohuli, Ulupalakua, and Kanaloa.
 - Kaupakaha Well serves parts of Haiku.
 - Haiku Well serves parts of Haiku.
 - Po'ohala Well supplements the Kamole Treatment Facility (parts of Haiku, Haliimaile, Pukalani, Makawao).

Hexavalent Chromium	ppb	2012	ND - 1.2	Naturally occurring element; used for chrome plating, dyes and pigments, and wood preservation	EPA uses the Unregulated Contaminant Monitoring Rule (UCMR) to collect data for contaminants suspected to be present in drinking water but do not have health-based standards set under the Safe Drinking Water Act. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should be regulated.
Strontium	ppb	2012	ND - 110	Naturally occurring element; historically used in the faceplate glass of cathode-ray tube televisions	
Vanadium	ppb	2012	ND - 13	Naturally occurring elemental metal; used as vanadium pentoxide which is a chemical intermediate and a catalyst	
1,2,4 Trimethylbenzene	ppb	2012	ND - 0.74	Leaching of tank repair materials	
Di-n-butylphthalate	ppb	2012	ND - 1.3	Leaching of tank repair materials	

LEAD/COPPER Rule Compliance Monitoring

Contaminant	Sample Date	Unit of Measure	90 th Percentile Reading	Action Level	# of Samples Above Action Level	Is Your Water Safe? Compliance Met?
Lead	2010	ppb	< 5	1.5	1	✓ Yes
Copper	2010	ppm	0.02	1.3	0	✓ Yes

The next round of testing for the Makawao System is 2013.

Infants and young children are typically more vulnerable to Lead in drinking water than the general population. It is possible that Lead levels at your home may be higher than at homes in the community as a result of material used in your home's plumbing. If you are concerned about elevated Lead levels in your home's water, you may wish to have your water tested. **As a general practice, you should flush your tap for 30 seconds to 2 minutes before using the tap water, if you have not used it for 4-6 hours.** Additional information is available from the Safe Drinking Water Hotline at 1-800-426-4791.

5.4 Solid Waste

On a short-term basis, construction activities will require the disposal of construction-related solid waste at the Central Maui Landfill. The CoM, DHHC will work with the General Contractor to minimize the amount of solid waste generated during the construction of the project. As appropriate, Maui Demolition & Construction (C&D) Landfill, privately owned and operated by Decoite, Inc.,³⁸ will be utilized by the General Contractor for the disposal of construction waste materials.

In the long-term, solid waste collection for the project will be provided by a commercial waste disposal service.

Potential Impacts and Proposed Mitigation

According to the CoM Integrated Solid Waste Management Plan,³⁹ capacity at the Central Maui Landfill is expected to run out in 2026. The proposed project is expected to be constructed and occupied within three years of its approval, which is well before additional solid waste capacity will be required for the Central Maui Landfill. Determination has been received by the CoM, Department of Environmental Management (DEM) for confirmation (see *Appendix A, Record of Consultations*). A construction waste management plan will be developed in coordination with the CoM, DEM, Solid Waste Division prior to the commencement of construction activities.

Upon the project's completion, solid waste collection and disposal for all 64 units will be provided by a private waste collection company. The proposed project is expected to be constructed and occupied well before additional capacity will be required for the Central Maui Landfill. Furthermore, the proposed project is not anticipated to significantly impact the long-term capacity of the County's Central Maui Landfill. No further mitigation is proposed or anticipated for the project.

5.5 Power

The Maui Electric Company (MECO) runs a transmission circuit along 'Ōhi'a Kū Street and will provide electricity to the project site to accommodate all residential units for the proposed Kulamalu Affordable Housing project.

Potential Impacts and Proposed Mitigation

Upon project completion, electrical service will be provided to the Kulamalu Affordable Housing multi-family units by MECO. The proposed project will be constructed in accordance with the 2006 International Energy Conservation Code,⁴⁰ and the design of the units will utilize high energy efficiency measures, such as but not limited to the installation of Energy Star certified appliances, low-flow water fixtures and compact fluorescent lamps. This provision of energy for the proposed residential use of the project site is not anticipated to result in adverse environmental effects.

³⁸ 2009, February 17. Prepared for County of Maui, Department of Environmental Management Solid Waste Division by Gershman, Brickner & Bratton, Inc. *Integrated Solid Waste Management Overview*. Retrieved from: <http://www.co.maui.hi.us/documents/11/29/93/Overview%20of%20final%20ISWMP.PDF>

³⁹ 2009. County of Maui Solid Waste Management Program. Retrieved from: <http://www.co.maui.hi.us/index.aspx?nid=881>

⁴⁰ 2006. International Code Council, Inc. *2006 International Energy Conservation Code*. As Incorporated into the County of Maui Ordinance No. 3685, Bill No. 73 (2009). Retrieved from: http://www.co.maui.hi.us/documents/20/81/Ord%203685_EnergyCode_Eff_Dec20-09.PDF

Lighting, if required for the illumination of streets, will be shielded and cast downward to prevent glare and to reduce the potential for effects to overflights of threatened or endangered seabirds such as Newell's shearwater (*Puffinus auricularis newelli*), Hawaiian petrel (*Pterodroma sandwichensis*), or other affected species.

5.6 Police Protection

Police protection for the Makawao-Pukalani-Kula Community Plan Region (CPR) is provided the Maui Police District (MPD) District I—Wailuku (Central) Patrol Division which is also serves as the County Police Department headquarters. It is located approximately twelve miles away from the proposed project.⁴¹ Additional police protection is provided by the Police substation located approximately two miles away at the Eddie Tam Park Community Center.⁴²

Potential Impacts and Proposed Mitigation

The proposed Kulamalu Affordable Housing project is an infill project adjacent to existing residential areas in the Pukalani community and does not require an extension of the existing police service area. No further mitigation measures are proposed or anticipated to be required.

5.7 Fire Protection

Fire prevention, suppression, and protection services for the project area are provided by the County Department of Fire and Public Safety's Makawao Fire Station which is located approximately one mile north of the project site near Haleakalā Highway in Pukalani.

Potential Impacts and Proposed Mitigation

Fire protection service requirements are not anticipated to be adversely affected by the proposed project. The proposed Kulamalu Affordable Housing project is an infill development and will not extend service area limits for fire protection services.

A letter of consultation was sent to the County of Maui Fire Chief on August 13, 2013. A response was received from the Lieutenant of the Fire Prevention Bureau on August 30, 2013. The letter stated that mitigation methods should include compliance with the new County of Maui Fire Code which takes effect June 2014. Further mitigation measures to be considered for Kulamalu Affordable Housing includes fire sprinklers within each unit. See *Appendix A, Record of Consultations*.

5.8 Health Care and Emergency Services

Maui Memorial Medical Center (MMC) is one of three licensed hospitals on the island of Maui, and is the only acute care facility. MMC is located approximately thirteen miles away from the project site. It possesses Maui's largest portion of acute care hospital beds and offers the largest array of patient services in the County of Maui.

Kula Hospital, another licensed hospital on Maui, is the hospital closest to the project site. It is characterized by a small number of acute care beds, approximately 200 inpatient skilled nursing and

⁴¹ 2007. County of Maui and R.M. Towill Corporation. *Public Facilities Assessment for the County of Maui*.

⁴² Eddie Tam Park <http://www.co.maui.hi.us/facilities/Facility/Details/163>

intermediate care beds, and is the only on-island long-term care facility for the developmentally disabled.

There are only two private, for-profit long-term nursing care facilities for the elderly and are operated by the same licensed hospital, Hale Makua, in Wailuku and Kahului. Both of these elderly nursing care facilities are located approximately thirteen and ten miles respectively from the project site.

There are three specialty care substance abuse treatment facilities, Maui Farm, Ho'omaka House, and Aloha House, located in Pa'ia, which is about nine miles away from the project site.⁴³

As of 2007, Emergency Medical Services (EMS) in the Makawao-Pukalani-Kula area consisted of an ambulance facility in Kula, which has one 12-hour a day staffed primary vehicle.⁴⁴

Potential Impacts and Proposed Mitigation

The proposed project is not anticipated to adversely affect access to and the provision of health care and emergency medical services. As an urban infill project, the development will not extend service area limits for health care and emergency medical services. No further mitigation measures are proposed or anticipated to be required.

5.9 Parks and Recreation

Open space resources are planned within the project site. Landscaping on the project site will provide visual relief in addition to recreational open air space for residents. See *Figure 2-1, Sheet A-1, Proposed Kulamalu Affordable Housing*. Nearby existing open space and park resources include the Mayor Hannibal Tavares Community Center and Upcountry Pool, the Harold Rice Park, and the Eddie Tam Park, all of which are County-owned and operated facilities located within two miles, and seven miles respectively of the project site. The Mayor Hannibal Tavares Community Center and Upcountry Pool comprise twenty acres and offers an aquatic center, baseball/softball fields, basketball courts, a community center, locker rooms, parking, restrooms, a soccer field, telephones, tennis courts and water. The Harold Rice Park is 3.8 acres and offers parking, picnic tables, restrooms, telephones and potable water for drinking fountains and restroom facilities. The Eddie Tam Park has a gymnasium, a community center with a multipurpose meeting room, a County Department of Health Office, and a Police substation. It also has a number of baseball/softball fields, tennis courts, a basketball court, two soccer fields, a playground, picnic areas and public restrooms.⁴⁵

Potential Impacts and Proposed Mitigation

The proposed Kulamalu Affordable Housing project will not affect the area's open space and recreational resources. The proposed project is not anticipated to place any significant new demands on recreational activities particularly because the project site will feature several open space areas. The CoM, Department of Parks has deemed that the proposed project is exempt from park assessment fees

⁴³ 2011. County of Maui Office of Economic Development, and Hawai'i Small Business Development Center. Maui County Data Book. Hawai'i Business Research Library.

⁴⁴ 2007. County of Maui and R.M. Towill Corporation. *Public Facilities Assessment for the County of Maui*.

⁴⁵ County of Maui, Department of Parks and Recreation. Mayor Hannibal Tavares Community Center & Upcountry Pool. Retrieved from: <http://www.mauicounty.gov/facilities/Facility/Details/124>
Harold Rice Park. Retrieved from: <http://www.co.maui.hi.us/facilities/Facility/Details/168>
Eddie Tam Park. Retrieved from: <http://www.co.maui.hi.us/facilities/Facility/Details/163>

because the subject property is owned by the County of Maui. See *Appendix A, Record of Consultations*. For these reasons, no mitigation measures are proposed or are anticipated to be required.

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6.0 Socioeconomic and Related Environment: Potential Impacts and Mitigation Measures

6.1 Socioeconomic Characteristics

As of 2010, the total population for the CoM was 154,834, the majority of which resided on the island of Maui (2010, U.S. Census). The total population of Upcountry Maui was 19,934 in 2010, making it the fourth most populated area on the island. Estimates for the Upcountry region are comprised of census designated tracts (cdt) for Kula (cdt 303.01),⁴⁶ Pukalani (cdt 304.02),⁴⁷ and Makawao (cdt 304.03)^{48,49}. Among these three census designated tracks, Pukalani had the largest population (7,574), which was seven percent larger than Makawao and fifteen percent larger than Kula. Population demographics were similar in all three cdt's, as racial distribution was predominantly comprised of Caucasian, two or more races, and Asian.⁵⁰ In addition, these three cdt's were overwhelmingly characterized by a population between the ages of 18 and 64, which is the range encompassing the entry level legal working age and the traditional retirement age. Among Upcountry Maui's working population only about seven percent have their primary place of work in the community.⁵¹ This means that a large portion of Upcountry Maui's working population commutes outside of the community for work, spending a larger share of their income on transportation costs than residents of the more concentrated urban areas of the island such as Kahului.

The projected population growth for the County of Maui is 2.2 percent per year⁵² and is based on growth rates observed during the past ten years. This population growth is anticipated to outpace housing units' construction, and DBEDT projects that by the year 2030 there will be an unmet demand of 10,845 housing units.

The demand for multi-family affordable housing is particularly pronounced in Upcountry Maui, a "bedroom community," where a significant portion of families reside and commute great distances (i.e. 13 to 20 miles respectively) to the urban centers of Kahului and Kihei where more jobs are located. Median average income for the entire County of Maui was \$78,600 in 2010. The average price of a single

⁴⁶ 2013, June 27. United States Census Bureau. Kula CDP QuickFacts.

Retrieved from: <http://quickfacts.census.gov/qfd/states/15/1541600.html>

⁴⁷ 2013, June 27. United States Census Bureau. Pukalani CDP QuickFacts.

Retrieved from: <http://quickfacts.census.gov/cgi-bin/qfd/extract?1565900>

⁴⁸ 2013, June 27. United States Census Bureau. Makawao CDP QuickFacts.

Retrieved from: <http://quickfacts.census.gov/qfd/states/15/1548050.html>

⁴⁹ 2011. County of Maui Office of Economic Development, and Hawaii Small Business Development Center. Maui County Data Book. Hawai'i Business Research Library.

⁵⁰ Ibid. 2012. U.S. Census. PEPSR6H-Sex-Both Sexes Year-April 1, 2010 Census Hispanic Origin-Total: Annual Estimates of the Resident Population by Sex, Race, and Hispanic Origin for the United States, States, and Counties: April 1, 2010 to July 1, 2012. Retrieved from: https://www.google.com/search?q=PEPSR6H-Sex-Both+SexesYearApril+1%2C+2010+CensusHispanic+Origin-Total%3A+Annual+Estimates+of+the+Resident+Population+by+Sex%2C+Race%2C+and+Hispanic+Origin+for+the+United+States%2C+States%2C+and+Counties%3A+April+1%2C+2010+to+July+1%2C+2012&rlz=1C1ARAB_enUS523US523&og=PEPSR6H-Sex-Both+SexesYear-April+1%2C+2010+CensusHispanic+Origin-Total%3A+Annual+Estimates+of+the+Resident+Population+by+Sex%2C+Race%2C+and+Hispanic+Origin+for+the+United+States%2C+States%2C+and+Counties%3A+April+1%2C+2010+to+July+1%2C+2012&aqs=chrome.0.69i57.878j0&sourceid=chrome&ie=UTF-8

⁵¹ 2011. County of Maui Office of Economic Development, and Hawai'i Small Business Development Center. Maui County Data Book. Hawai'i Business Research Library.

⁵² 2012, December 28. Maui Island Plan: General Plan 2030. Retrieved from: <http://www.co.maui.hi.us/index.aspx?nid=1503>

family home and condominium is about half a million dollars for Kula, Pukalani and Makawao towns. At the low end, the average price was \$475,113 in Pukalani, \$546,648 in Makawao, and at the high end, the average price is \$740,443 in Kula.⁵³

Potential Impacts and Proposed Mitigation

Given the size and scope of the proposed action, the potential for adverse effects to Upcountry Maui's population is not expected. The project is anticipated to accommodate some of the local demand for affordable housing among current Upcountry residents. Any increase or change in population in the Makawao-Pukalani-Kula district should be within expected growth parameters of the Maui General Plan 2030. No further mitigation is proposed or anticipated to be required.

6.2 Land Use and Ownership

The project site is bordered to the north by 'A'apueo Parkway and to the northwest there is a private residential housing development. To the west is 'Ōhi'a Kū Street and beyond is the University of Hawai'i's Institute for Astronomy Maikalani Advanced Technology Research Center. To the east, the land appears vacant and covered with non-native grasses similar to the project site. To the east of Kupaoa Street is the Kulamalu Town Center. See *Photograph 6-1, View of Longs from the Project Site*.

The project site is owned by the County of Maui and it has elected to use this land for the proposed project. There are several nearby existing and planned residential areas, including single and multi-family housing lots.

Potential Impacts and Proposed Mitigation

The proposed project is an infill development within an existing urban area and is therefore consistent with established land uses in the region. There are no anticipated adverse impacts to the land use or ownership at the proposed project location nor are there any proposed or foreseen mitigation measures that will be required.

⁵³ 2013, February 1. County of Maui, Department of Housing and Human Concerns, Housing Division. *Affordable Sales Price Guidelines*. Retrieved from: http://hi-maui-county.civicplus.com/documents/13/43/2013%20Workforce%20Hsg%20-%20Affordable%20Sales%20Guidelines%20Based%20on%202011%20AS%20Data_201301311256273559.pdf



Photograph 6-1: View of Longs from the Project Site
Photo Credit: Clifford Planning and Architecture LLC. June 20, 2013.

6.3 Historic and Archaeological Resources

The project site consists of open, undeveloped area that was subject to previous extensive mass grading in 1977 for the Kulamalu Project (TMK (2) 2-3-008:por. 038, 039).⁵⁴ Prior to mass grading, an Archaeological Reconnaissance Study (ARS) (1996, February), and an Archaeological Reconnaissance Survey (AIS) (1996, March, PHRI) and were undertaken for TMK (2) 2-3-008: portion of lot 005, which encompasses the Kulamalu Commercial Subdivision.

Findings from the ARS included one petroglyph site was found near the project boundary and was subsequently handled according to the State of Hawai'i Historic Preservation Division's (SHPD) recommendations. Other sites included two previously recorded sites, ((State Inventory of Historic Places (SIHP) # 50-50-10-1061 and 50-50-10-1062) and are located outside of the project area in the adjacent gulches identified previously. Two newly recorded sites (SIHP # 50-50-10-4179 and 50-50-10-4178) were also found in branches of the two gulches identified along with two unrecorded collections of rock in the adjoining property.

According to the Archaeological Impact Survey (AIS)-44-Acre Pukalani Terrace Subdivision III (1997), also performed by PHRI (1996), there were no recorded historical, cultural or archaeological sites discovered within the Area of Potential Effect (APE) for the Kulamalu Affordable Housing project. See *Figure 6-1, Site Locations and Area of Potential Effect*. The closest recorded site to the project's APE is SIHP # 50-50-10-4181, which was located where the present 'A'apueo Parkway has been constructed. SIHP # 50-50-10-4181, was subject to two test unit excavations which determined that the site was used for historic to modern agriculture, and is no longer considered significant. Accordingly, the study recommended no further archaeological work.⁵⁵

During the process of mass grading for the Kulamalu Commercial Subdivision, no archaeological or historical remains were found. The Kulamalu Affordable Housing property has been subject to previous site disturbance and largely consists of fill material with the maximum depth of twelve feet or 3.7 meters.

Potential Impacts and Proposed Mitigation

An archaeological monitoring plan will be developed by a SHPD-approved archaeologist and will be submitted to SHPD prior to the commencement of any construction activities for the proposed project. Excavation of native grades for the Kulamalu Affordable Housing will be limited to the uppermost slope of the project site which comprises of a small portion of the entire site. Once grading activities commence for the proposed project, if cultural or archaeological remains are found, construction will halt immediately and SHPD will be contacted for further guidance and a qualified archaeologist will be on-site for all ground altering activities during the early phases of the project, and for all excavations that are planned to proceed below one meter in depth. However, if the excavation proves to be entirely contained within sterile fill, then monitoring activities may be switched to an on-call basis following direct consultation with SHPD.

⁵⁴ 1997. *Final Environmental Assessment-Kulamalu Project*. Retrieved from: [http://oeqc.doh.hawaii.gov/Shared%20Documents/EA and EIS Online Library/Maui/1990s/1997-08-08-MA-FEA-KULAMALU.pdf](http://oeqc.doh.hawaii.gov/Shared%20Documents/EA%20and%20EIS%20Online%20Library/Maui/1990s/1997-08-08-MA-FEA-KULAMALU.pdf)

⁵⁵ *Ibid.* Pages 1, and 6-9.

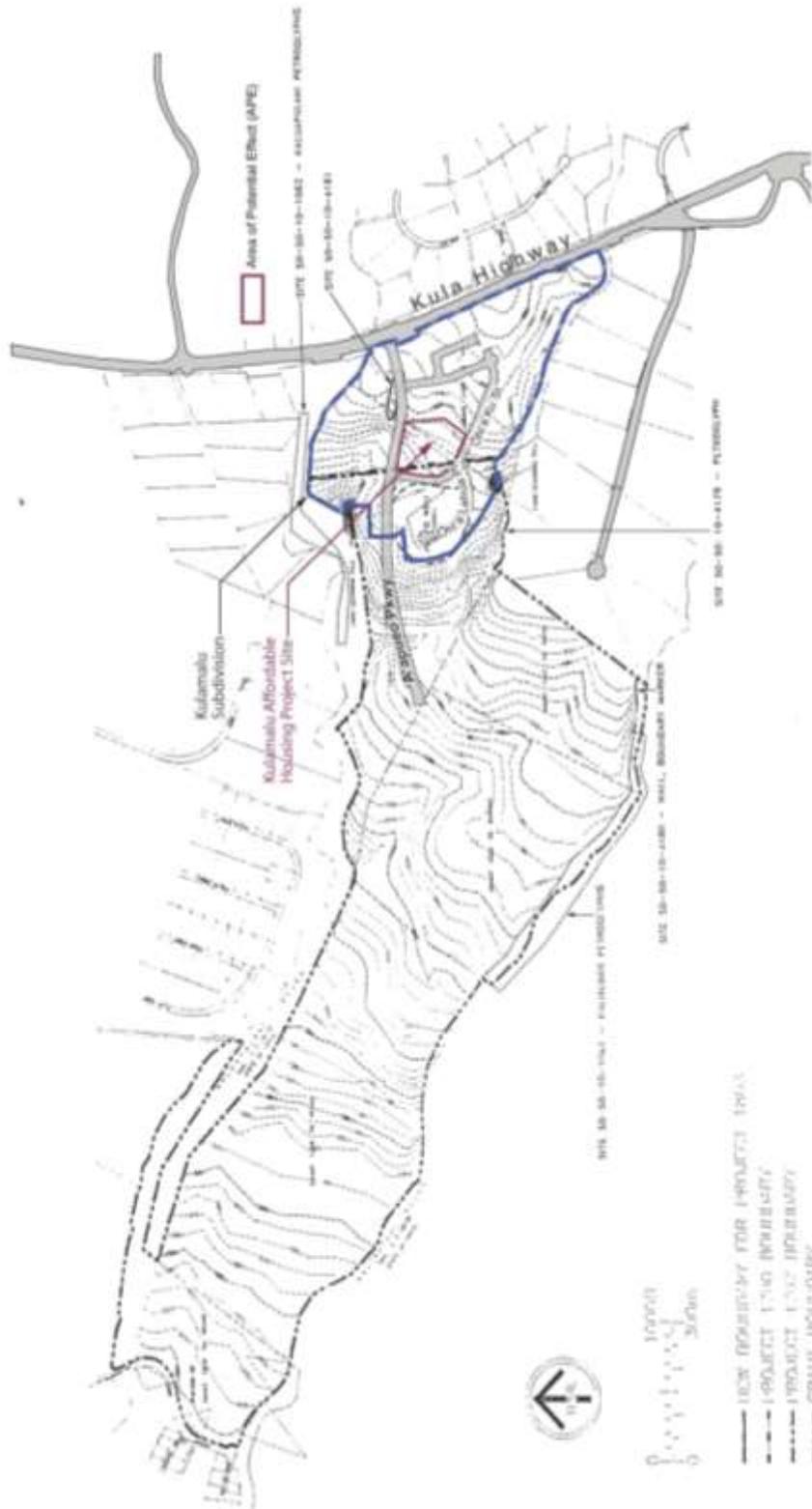
6.4 Cultural Impact Assessment

The proposed Kulamalu Affordable Housing project site has been previously altered and the site is devoid of cultural remains. Further, prior ground altering activities have cleared the site of all indigenous botanical resources. Thus, if traditional cultural practices were conducted on the site, those practices have ceased long ago.

Potential Impacts and Proposed Mitigation

An archaeological monitoring plan will be developed by a SHPD-approved archaeologist and will be submitted to SHPD prior to the commencement of any construction activities for the proposed project. In the event that culturally significant remains are found, SHPD will be contacted and a qualified archaeologist will be on-site for all ground altering activities during the early phases of the project, and for all excavations that are planned to proceed below one meter in depth. However, if the excavation proves to be entirely contained within sterile fill, then monitoring activities may be switched to an on-call basis following direct consultation with SHPD.

Figure 6-1—Site Locations and Area of Potential Effect



7.0 Relationship to Land Use Plans, Policies and Controls of the Potentially Affected Area

7.1 Overview

State of Hawai'i and County of Maui land use policies, plans, and controls are established to guide development in a manner that enhances the environment and quality of life. They are also designed to help ensure that the long-term social, economic, environmental, and land use needs of the community and region can be met.

The proposed project's relationship to land use policies, plans, and controls for the region and proposed activity are as discussed in the following subsections.

7.2 Hawai'i State Plan

The Hawai'i State Plan, adopted in 1978, and promulgated in Chapter 226, HRS, consists of three major parts:

Part I, describes the overall theme, including Hawai'i's desired future and quality of life as expressed in goals, objectives, and policies.

Part II, Planning Coordination and Implementation, describes a statewide planning system designed to coordinate and guide all major state and county activities and to implement the goals, objectives, policies, and priority guidelines of the Hawai'i State Plan.

Part III, Priority Guidelines, which express the pursuit of desirable courses of action in major areas of statewide concern.

The proposed project is consistent with the objectives and policies of the Hawai'i State Plan because Kulamalu Affordable Housing advances §19(3) of the Hawai'i State Plan's Objectives and Policies for Socio-Cultural Advancement by enhancing accessibility to affordable housing for Maui Island residents.

*§226-19 Objectives and policies for socio-cultural advancement—housing. (a)*⁵⁶

Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:

- (1) Greater opportunities for Hawai'i's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawai'i's population.*
- (2) The orderly development of residential areas sensitive to community needs and other land uses.*
- (3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawai'i's people.*

(b) To achieve the housing objectives, it shall be the policy of this State to:

⁵⁶ Hawai'i State Planning Act. Part I Overall Theme, Goals, Objectives and Policies. Chapter 226 Section 19. Objectives and policies for socio-cultural advancement—housing. (a).

Retrieved from: http://hawaii2050.org/images/uploads/HRS226_StatePlanningAct.pdf

- (1) Effectively accommodate the housing needs of Hawai'i's people.*
- (2) Stimulate and promote feasible approaches that increase housing choices for low income, moderate-income, and gap-group households.*
- (3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.*
- (4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.*
- (5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.*
- (6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.*
- (7) Foster a variety of lifestyles traditional to Hawai'i through the design and maintenance of neighborhoods that reflect the culture and values of the community.*

The design and development of this project will further address the housing demands of the community by providing affordable, multi-family housing. The project will be developed in accordance with all laws and regulations necessary to ensure that adverse environmental effects are mitigated.

7.3 State Land Use Law

Pursuant to HRS, §205, all lands in the state have been placed into one of four major land use districts by the State Land Use Commission. These are designated "Urban," Rural," "Agricultural," and "Conservation." Kulamalu Affordable Housing is located within the "Urban" land use district. Housing is a permitted use on "Urban" land. The proposed project is consistent with the objectives and policies of the State Land Use Designations (SLUD) therefore no mitigation is proposed.

7.4 Coastal Zone Management Program

All land and water use activities in the state must comply with HRS, §205A, Hawai'i Coastal Zone Law. The State of Hawai'i designates the Coastal Zone Management Program (CZMP) within the Office of Planning to manage the intent, purpose and provisions of HRS, §205A-2, as amended. The CZMP maintains jurisdiction of the areas from the shoreline to the seaward limit of the State's jurisdiction, and any other area which a lead agency may designate for the purpose of administering the CZMP.

HUD assistance programs are not listed by the Hawai'i CZMP as subject to federal consistency review (see *Appendix A, Consultations*), therefore the following assessment is provided for the project with respect to the CZMP objectives and policies set forth in HRS, §205A-2.

1. Recreational resources

Objective: Provide coastal recreational opportunities accessible to the public.

Policies:

- A) Improve coordination and funding of coastal recreational planning and management; and*
- B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:
 - (i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
 - (ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or**

- requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;*
- (iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
 - (iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
 - (v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*
 - (vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*
 - (vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and*
 - (viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6.*

The proposed Kulamalu Affordable Housing project is located approximately 15 miles away from the nearest coastline and therefore does not impede or determine coastline accessibility and the availability of recreational resources. Furthermore, project funding is derived from HUD, which does not provide funding to coastal recreational planning and management.

2. Historic resources

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

Policies:

- (A) Identify and analyze significant archaeological resources;*
- (B) Maximize information retention through preservation of remains and artifacts or salvage operations; and*
- (C) Support state goals for protection, restoration, interpretation, and display of historic resources.*

As per HRS, §205A-2, the entire state of Hawai'i is defined to be within the Coastal Zone Management Area. Natural and manmade historic and prehistoric resources that are significant in Hawaiian and American history and culture have not been recorded within the project Area of Potential Effect, PHRI (1996; 1996) (see *Section 6.3 Historic and Archaeological Resources*).

However, in accordance with HRS, Chapter 6E, and the requirements of SHPD, DLNR, an archaeological monitoring report will be prepared and submitted to SHPD prior to project construction, and should any historic resources, including human skeletal and other significant cultural remains, be identified during project activities: (1) Work will cease in the immediate vicinity of the find; (2) The find will be protected from any additional disturbance; and (3) SHPD, will be contacted immediately at (808) 692-8015 for further instructions including the conditions under which project activities may resume.

3. Scenic and open space resources

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

Policies:

- (A) Identify valued scenic resources in the coastal zone management area;*
- (B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural land forms and existing public views to and along the shoreline;*
- (C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and*
- (D) Encourage those developments that are not coastal dependent to locate in inland areas.*

The Kulamalu Affordable Housing project does not alter open space resources as it is an infill project within an existing urban area. The development is compliant with applicable state and county zoning ordinances, the latter of which mandates the maintenance of viewsheds of the surrounding area. In addition, design elements, such as height and building character, of Kulamalu Affordable Housing is compatible with the surrounding visual environment.

4. Coastal ecosystems

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

Policies:

- (A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*
- (B) Improve the technical basis for natural resource management;*
- (C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*
- (D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*
- (E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

LID will be incorporated into the design elements of the Kulamalu Affordable Housing project (see Section 4.4 Storm Water Runoff).

6. Coastal hazards

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

Policies:

- (A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;*
- (B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;*
- (C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and*
- (D) Prevent coastal flooding from inland projects.*

The proposed project is located well outside the coastal inundation zone (see *Figure 4-3, Island of Maui Driving Advisory Areas*), where the populace and property is most vulnerable to storm surge events, e.g. tsunami and hurricanes.

7.5 Special Management Area (SMA) Rules and Regulations

The proposed project does not involve Special Management Area (SMA) lands. SMA rules and regulations therefore are not applicable to the proposed project.

7.6 County of Maui General Plan 2030

Kulamalu Affordable Housing is conformant with the goals of the Maui County General Plan 2030, and addresses the priority areas of housing, land use, and directed growth plans. Within the Maui County General Plan 2030, the Countywide Policy Plan (adopted March 3, 2010) establishes the broad goals, objectives, policies, and implementing action and provides the policy framework employed in the Maui Island Plan and each of Maui's Community Plans.

The following [Maui] Countywide Policy Plan goals and objectives are relevant to the proposed action.

E. Expand Housing Opportunities for Residents

Goal: Quality, island-appropriate housing will be available to all residents.

Objective 1. Reduce the affordable housing deficit for residents.

Objective 2. Increase the mix of housing types in towns and neighborhood to promote sustainable land use planning, expand consumer choice, and protect the County's rural and small-town character.

Objective 3. Increase and maintain the affordable housing inventory.

J. Promote Sustainable Land Use and Growth Management

Goal: Community character, lifestyles, economies, and natural assets will be preserved by managing growth and using land in a sustainable manner.

Objective 1. Improve land use management and implement a directed-growth strategy.

Objective 3. Design all developments to be in harmony with the environment and to protect each community's sense of place.⁵⁷

Kulamalu Affordable Housing with its 64 multi-family housing units, offers expanded opportunities for access to mixed, affordable housing. The Maui County General Plan 2030 designates the land use district within the project location as B-CT, which allows for a mixture of retail, offices, residential, entertainment enterprises, and related accessory uses. According to Maui County Code Section 19.15.020(A)(21), "multifamily dwellings, duplexes, and bungalow courts, except on Molokai" are permissible uses within the B-CT district. The proposed Kulamalu Affordable Housing project therefore constitutes an acceptable use within the B-CT district.

7.7 Makawao-Pukalani-Kula Community Plan⁵⁸

The subject parcel for the proposed project falls under the purview of the Makawao-Pukalani-Kula Community Plan (1996), which is one of nine CoM established regions with a Community District Plan

⁵⁷ 2010. County of Maui 2030 General Plan, Countywide Policy Plan. Ordinance No. 3732. Retrieved from: <http://www.co.maui.hi.us/documents/17/69/241/PublishedWholeCWPPredo121510.PDF>

⁵⁸ 1996, July. The Makawao-Pukalani-Kula Community Plan. Retrieved from: <http://www.co.maui.hi.us/documents/17/69/240/makawao.pdf>

(CDP). Planning for each region is guided by the respective Community Plans, which are designed to implement the Maui County General Plan 2030. Each Community Plan contains recommendations and standards that intended to guide the sequencing, patterns, and characteristics of future development in the region.

The Kulamalu Affordable Housing Project is conformant with the Maui County General Plan's objectives and policies for the following:

Land Use

Objectives and Policies:

6. *"Encourage new residential developments in areas which are contiguous extensions of, or infills within the established residential pattern, and which do not adversely affect agricultural uses."*

The proposed Kulamalu Affordable Housing is an infill project within an existing area. Furthermore, the project site has not been used for agricultural purposes for several decades.

Housing

Objectives and Policies:

3. *"Provide a mixture of housing types, smaller lot sizes, and coordinated assistance programs aimed at lowering housing costs and expanding housing opportunities."*

The Makawao-Pukalani-Kula Community Plan (1996) identifies the lack of affordable housing as one of the area's major challenges. With its 64 multi-family units on less than five acres of land, the Kulamalu Affordable Housing project is able to offer lower cost rentals to area residents. The subject project's space efficiency allows for cost effectiveness as the cost of land is usually the greatest contributing factor to the high cost of housing.

Urban Design

3. *Utilize design standards for multi-family residential uses which respect Upcountry's rural residential lifestyle.*

5. *Preserve the unique characteristics of all of the Upcountry towns by recognizing and respecting architectural styles as described in the Country Town Design Guidelines.*

6. *Support the development of pedestrian, equestrian and bikeway connections which provide safe and convenient linkages within and between Upcountry communities.*

7. *Encourage the use of appropriate landscaping, with greenways where possible, along major roadways, parking areas and land use transition areas to establish and maintain landscape themes which are consistent with the character of the each Upcountry community.*

In compliance with the County Town Design Guidelines, the proposed Kulamalu Affordable Housing project will be designed to be consistent with the Upcountry rural residential lifestyle and its traditional architecture. The proposed project is sited appropriately for the development of pedestrian and bikeway connections to surrounding streets. Landscaping themes will also be maintained within the project site by landscaping a substantial amount of the project site open areas.

8.0 Alternatives to Proposed Action

8.1 Introduction

The proposed project is based on the consideration of the No-Action, Delayed Action, and developed project alternatives.

8.2 No-Action Alternative

The No Action Alternative proposes to maintain the vacancy of the project site, leaving it unchanged. Without the construction of new buildings and the demand placed on utilities' services, the No Action Alternative will avoid the potential for environmental impacts. The No Action Alternative however does not address the purpose of the project which is to help meet some of the demand for affordable housing on Maui. Because the No Action Alternative would fail to address this requirement, it is removed from further consideration.

8.3 Delayed Alternative Action

The Delayed Action Alternative was also considered among the options available to the proposed action. This alternative would develop the project, but will postpone construction to a later, undetermined time. Construction expenditures for the proposed project would be averted in the short-term but would eventually be required at a future date when the project is undertaken. The cost of constructing the proposed project at a later time is expected to be higher due to increases in inflation and price escalation of labor and materials. Producer price indexes, as reported by the U.S. Census Bureau, indicate that construction materials' costs have continued to rise over time and have risen by a total average of 39 percent between 1990 and 2010.⁵⁹ Between 2011 and 2012 the U.S. average weekly wage increased by 4.7 percent to \$1,000 in the fourth quarter of 2012.⁶⁰

The potential for environmental impacts associated with delaying the proposed action are expected to be similar to the preferred alternative and would not involve significant adverse impacts.

The Delayed Alternative similar to the No-Action Alternative would not address the objectives of this project. Housing demand on Maui is expected to continue as a result of the projected population increase, and with time more households would continue to experience difficulty in meeting the financial requirements for the purchase of a new home, i.e., producing a conventional down payment of approximately 20 percent of the purchase cost, and meeting sufficient income requirements. The Delayed Action Alternative would therefore fail to address the purpose of the proposed project; to provide affordable and available housing. For this reason, this alternative is also removed from further consideration.

8.4 Preferred Alternative

The Preferred Alternative is to proceed with the proposed project involving the construction of an affordable multi-family housing project on an approximately four acre parcel. The project will provide six two-story buildings with 64 housing units, a community center, and 128 parking stalls with a connection

⁵⁹ 2010. United States Census Bureau, Statistical Abstract of the United States. *Table 962. Construction Materials—Producer Price Indexes: 1990 to 2010*. Retrieved from: <http://www.census.gov/compendia/statab/2012/tables/12s0962.pdf>

⁶⁰ 2013, June 27. United States Department of Labor, Bureau of Labor Statistics. *County Employment and Wages Summary*. Retrieved from: <http://www.bls.gov/news.release/cewqtr.nr0.htm>

to 'Ōhi'a Kū Street. See *Figure 3-1, Proposed Kulamalu Affordable Housing, Sheet A-1*, and *Figure 3-2, Proposed Kulamalu Community Center*. The Preferred Alternative addresses the demand for affordable housing, and conforms to existing zoning and land use regulations of the state and county, and would be developed in such a manner as to avoid the potential for adverse environmental effects as documented in this environmental assessment.

9.0 Permits and Approvals That May Be Required

9.1 State of Hawai'i

- Department of Health National Pollutant Discharge Elimination System (NPDES) Permit.

9.2 County of Maui

- Building Permit (building, electrical, plumbing, fire);
- Certification of Occupancy Permit;
- Country Town Design Review;
- Driveway Permit;
- Grading, Grubbing and Drainage;
- Subdivision; and
- Work on County Highway Permit.

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10.0 Agencies, Organizations and Individuals Consulted in Preparation of the Final Environmental Assessment

10.1 Federal Government

Environmental Protection Agency, Region 9;
Department of the Army, U. S. Army Corps of Engineers;
U.S. Fish and Wildlife Service.

10.2 State of Hawai'i

Department of Accounting and General Services;
Department of Business, Economic Development and Tourism;
Department of Education;
Department of Health, Indoor and Radiological Health Branch;
Department of Land and Natural Resources, State Historic Preservation Branch, and State Parks;
Department of Transportation;
Hawai'i Housing Finance and Development Corporation;
Office of Hawaiian Affairs;
Office of Planning, Coastal Zone Management Program.

10.3 County of Maui

Each Member of the Maui County Council;
Department of Environmental Management;
Department of Fire and Public Safety;
Department of Parks and Recreation;
Department of Public Works;
Department of Water Supply;
Planning Department;
Police Department.

10.4 Organizations and Individuals

Dowling Company;
Hawaiian Telcom;
Maui Campus, Kamehameha Schools;
Kula Community Association;
Oceanic Time Warner Cable of Hawai'i;
University of Hawai'i Institute for Astronomy.

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11.0 Summary of Impacts and Significance Determination

11.1 Short-Term Impacts

The potential for short-term impacts resulting from the proposed project includes:

- Increased noise due to the operation of construction machinery and equipment;
- Disruption to local area traffic due to the movement of construction vehicles transporting equipment and work crews, and the delivery of building materials by suppliers; and
- Increased generation of dust and the potential for construction related erosion of soils during storm events.

Short term impacts due to noise will be addressed through compliance with the provisions of HAR, Chapter 11-43, Community Noise Control. All internal combustion powered vehicles and equipment will be equipped with mufflers or other noise attenuation devices as required by state and county laws and regulations.

Disruption to local area traffic will be limited to the University of Hawai'i Institute for Astronomy Maikalani Advanced Technology Research Center and residences along 'Ōhi'a Kū Street, a commercial center adjoining Kupaoa Street to the east, and private residences located to the north, across from 'A'apueo Parkway. There are presently no developments to the immediate south and northwest of the project. Disruption to local area residents, business, and commercial users will be addressed with the use of appropriate construction signage and flag personnel when moving heavy equipment, or when deliveries are made.

The potential for dust generation will be addressed through the use of water or soil amendment. Water will be spread using a tanker truck on exposed surfaces susceptible to the generation of dust. In order to conserve water, the minimal amount of water will be used to wet the soils without causing runoff. Alternatively, a soil amendment may be applied to exposed surfaces to reduce the generation of windblown dust and sediments. The CoM will recommend that the General Contractor regularly monitor the project site to ensure that dust control is practiced when needed, especially during high wind conditions that exceed 10 – 15 mph.

Protection against the erosion of construction related soils and sediments will be addressed through compliance with the conditions of a NPDES Construction Storm Water Permit, which will be filed for this proposed project. BMPs and other methods, measures, and controls will be applied to the project so as to control storm water related runoff from the site. The controls implemented may include but are not limited to the use of vegetative, structural and management measures as prescribed in HAR, Chapter 11-55, Water Pollution Control.

The potential for short-term impacts listed above, are not anticipated to result in secondary or cumulative impacts beyond the planned temporary period of construction. All anticipated short-term impacts will be addressed through the use of appropriate mitigation measures and BMPs to either minimize or eliminate the potential for adverse effects.

11.2 Long-Term Impacts

The construction of the proposed project is not anticipated to result in significant adverse long-term effects to the surrounding climate, water or air quality, biological resources, or socioeconomic conditions in the area or region, due to the application of the proposed mitigative measures as provided in this environmental assessment.

The proposed project will be limited to the development of a site that has been subject to previous extensive grading and earthwork. Development of the project site will be limited to the construction of an affordable housing project within a limited area with no further expansion or development proposed. There are no plans for other residential, business, or commercial uses within the proposed project site.

To ensure against the potential for adverse effects to any historic or archaeological resources that may be inadvertently uncovered, an archaeological monitoring plan will be submitted to SHPD for review and approval prior to the commencement of construction activities. In addition, the CoM will recommend that the General Contractor adhere to the legal requirements of HRS, Chapter 6E, Historic Preservation, and will immediately stop all work in the area if remains are found. SHPD will be immediately notified at (808) 692-8015 at its main office in Honolulu, or (808) 243-1285, on Maui, for further instruction and appropriate action. Work will only be allowed to be resumed upon the approval of SHPD.

11.3 Significance Criteria Evaluation

In accordance with the content requirements of HRS, Chapter 343, and the significance criteria in HAR, Section 11-200-12, an applicant or agency must determine whether an action may have significant impacts on the environment, including all phases of the project, both primary and secondary expected consequences, cumulative impact with other projects, and short and long term effects. In making the determination, the established thirteen “Significance Criteria” are applied to identify whether significant environmental impacts will occur. According to HAR, Section 11-200-12, an action shall be determined to have a significant impact on the environment if it meets any one of the following criteria.

Criteria 1 - Involves an irrevocable commitment to loss or destruction of natural or cultural resources;

The proposed project does not commit resources or energy that will involve an irrevocable commitment to loss or destruction of natural or cultural resources. Because the site was previously cleared and graded, the natural features of the land have been altered. Further, there are not cultural features on the project site.

Criteria 2 - Curtails the range of beneficial uses of the environment;

The project site is located on undeveloped land. The planned area of use is presently unused, with rocky soil and little vegetation. Development of the site is not anticipated to significantly detract from the function or use of the environment. Potential for negative adverse environmental impacts will be addressed through adherence to the mitigation measures and practices as described in this document.

Criteria 3 - Conflicts with the State’s long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS

The proposed project is consistent with the environmental policies, goals, and guidelines expressed in HRS, Chapter 343. Potential sources of adverse impacts have been identified within this FEA and appropriate measures have been developed to either mitigate or minimize the potential for impacts.

Criteria 4 - Substantially affects the economic or social welfare of the community or State

The proposed project will be limited to the construction of a relatively small scale residential development comprising a total of 64 multifamily housing units. Although the project may provide construction activity and employment opportunities to the construction industry, the work will be of limited duration and will end upon the completion of the project.

The availability of the affordable multifamily housing units, however, will make rentals available to several families who might not otherwise be provided with the opportunity to purchase their own home.

Criteria 5 – Substantially affects the public health

Factors affecting public health, including air quality, water quality, solid waste, noise, and other items were assessed in the FEA and will be addressed through the application of appropriate mitigation measures and practices. Mitigation measures and practices have been identified within this FEA to address the potential for negative adverse impacts to public health and safety of the community.

Criteria 6 – Involves substantial secondary impacts, such as population changes or effects on public facilities

Development of the proposed project will not result in substantial secondary or cumulative impacts to the natural or built environment or to the social and economic wellbeing of the community. The proposed project will not stimulate an unexpected change in population, but will accommodate a small part of the existing market for affordable housing on Maui. The proposed project will utilize an existing undeveloped site and will require the construction of appropriate utility connections to public and private facilities, i.e. roads, water and wastewater, and power and communications utilities, but will not place significant additional burden on those facilities.

Criteria 7 – Involves a substantial degradation of environmental quality

Analysis of air and water quality, soils and topography, flora and faunal resources, and land use associated with the construction of the proposed project has determined that environmental quality will not be substantially degraded.

Criteria 8 – Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions

The proposed project will be developed in accordance with federal, state, and county laws, regulations, and policies. The proposed facility is under development to provide for the provision of 64 affordable housing units. Although the project will not meet the total demand for affordable housing on Maui, there are no further plans for expansion or development.

Criteria 9 - Substantially affects a rare, threatened, or endangered species, or its habitat;

The potential for adverse effects to rare, threatened or endangered species or habitat is not anticipated. The project site has been heavily modified by grading and earthwork and vegetation present is routinely maintained by CoM.

As noted in *Section 4.7 Flora and Fauna*, of this Environmental Assessment, the project site is not expected to serve as habitat or forage area for Newell's shearwater (*Puffinus auricularis newelli*) and Hawaiian petrel (*Pterodroma sandwichensis*). These species however may overfly the area and become affected or injured by outdoor artificial lighting and utility lines. Mitigation to reduce the potential for adverse impacts to these species should include all USFWS recommendations.

Criteria 10 – Detrimentially affects air or water quality or ambient noise levels;

As required, any potential impacts to air, water quality, or noise levels will be addressed through the implementation of appropriate mitigation measures described in this Environmental Assessment as per HRS, Chapter 343.

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

The project is not located in the 100-year or 500-year floodplain, the tsunami inundation area, near a shoreline or erosion-prone area or a geologically hazardous area, and is not immediately adjacent to any water body.

Criteria 12 – Substantially affects scenic vistas and view planes identified in county or state plans or studies;

The project development will change the area's aesthetic environment by adding seven building structures, irrigated landscaping, a parking lot, and two driveways connecting the project to the 'Ōhi'a Kū Street. However, this will not obstruct views to Haleakalā and the West Maui Mountains.

Criteria 13 – Requires substantial energy consumption.

The facilities identified in this project will not consume a substantial amount of energy. Construction activities will result in a short-term increase in power demand, but the increase will be of short duration and will cease upon project completion.

11.4 Preliminary Determination

Based on the HAR, Section 11-200-12, Significance Criteria, the evaluation along with the information contained in this FEA, it is preliminarily determined that a FONSI will be issued for the Kulamalu Affordable Housing project.

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APPENDIX A. RECORD OF CONSULTATIONS

APPENDIX A. RECORD OF CONSULTATIONS

Federal Consultations

- Environmental Protection Agency, Region 9;
- Department of the Army, U.S. Army Corps of Engineers;
- U.S. Fish and Wildlife Services.

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:
13-0161
Kulamalu Project

August 23, 2013

Mr. Chester Koga, AICP
R. M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819

Dear Mr. Koga:

**SUBJECT: Request for Determination of Compliance with the Toxic/Hazardous/Radioactive Materials, Contamination, Chemicals or Gases Act (24 CFR 58.5(i)(2)) for the Proposed Kulamalu Affordable Housing Draft Environmental Assessment
TMK: (2) 2-3-066: 012, 013, and 014, Makawao District, Maui, Hawaii**

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your letter dated August 13, 2013. Thank you for allowing us to review and comment on the subject document. The document was routed to the Department of Health's Solid & Hazardous Waste Branch, Indoor Radiological Health Branch, Hazard Evaluation & Emergency Response Office and the Maui District Health Office. They will provide specific comments to you if necessary. EPO recommends that you review the Standard Comments found on our website: <http://health.hawaii.gov/epo/home/landuse-planning-review-program/>. You are required to adhere to all Standard Comments specifically applicable to this application.

EPO suggests that you examine the many sources available on strategies to support the sustainable design of communities, including the:

- U.S. Environmental Protection Agency's report, "Creating Equitable, Health and Sustainable Communities: Strategies for Advancing Smart Grants, Environmental Justice, and Equitable Development" (Feb. 2013), <http://www.epa.gov/smartgrowth/pdf/equitable-dev/equitable-development-report-508-011713b.pdf>;
- U.S. Environmental Protection Agency's sustainability programs: www.epa.gov/sustainability;
- U.S. Green Building Council's LEED program: www.new.usgbc.org/leed; and
- World Health Organization, www.who.int/hia.

The DOH encourages everyone to apply these sustainability strategies and principles early in the planning and review of projects. We also request that for future projects you consider conducting a Health Impact Assessment (HIA). More information is available at www.cdc.gov/healthyplaces/hia.htm. We request you share all of this information with others to increase community awareness on sustainable, innovative, inspirational, and healthy community design.

We wish to receive notice of the environmental assessment's availability when it is completed. We request a written response confirming receipt of this letter and any other letters you receive from DOH in regards to this submission. You may mail your response to: 919 Ala Moana Blvd., Ste. 312, Honolulu, Hawaii 96814. However, we would prefer an email submission to epo@doh.hawaii.gov. We anticipate that our letter(s) and your response(s) will be included in the final document. If you have any questions, please contact me at (808) 586-4337.

Mahalo,

A handwritten signature in black ink, appearing to read "Laura Leialoha Phillips McIntyre".

Laura Leialoha Phillips McIntyre, AICP
Manager, Environmental Planning Office

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



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

LORRIN W. PANG, M.D., M.P.H.
DISTRICT HEALTH OFFICER

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, HAWAII 96793

August 28, 2013

Mr. Chester Koga, AICP
Project Coordinator
R. M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819

Dear Mr. Koga:

**Subject: Request for Determination of Compliance with
Toxic/Hazardous/Radioactive Materials, Contamination, Chemicals or
Gases Act for the Proposed Kulamalu Affordable Housing Draft
Environmental Assessment, Makawao District, Maui, Hawaii
TMK: (2) 2-3-066:012, 013, and 014**

Thank you for the opportunity to review this project. We have the no comments to offer.

It is strongly recommended that the Standard Comments found at the Department's website: <http://health.hawaii.gov/epo/home/landuse-planning-review-program/> be reviewed, and any comments specifically applicable to this project should be adhered to.

Should you have any questions, please call me at 808 984-8230 or E-mail me at patricia.kitkowski@doh.hawaii.gov.

Sincerely,

A handwritten signature in blue ink that reads "Patti Kitkowski".

Patti Kitkowski
District Environmental Health Program Chief

c EPO

2024 N. King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Project and Construction Management

October 21, 2013

Ms. Laura Leialoha Phillips McIntyre, Manager
Environmental Planning Office
Department of Health
State of Hawai'i
P.O. Box 3378
Honolulu, Hawai'i 96801-3378

Dear Ms. Phillips McIntyre:

Request for Determination of Compliance with the Toxic/Hazardous/ Radioactive Materials, Contamination, Chemicals or Gases Act (24 CFR 58.5(i)(2)) for the Proposed Kulamalu Affordable Housing Draft Environmental Assessment TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i

Thank you for your letter dated August 23, 2013, concerning the proposed project. We acknowledge the Department of Health's (DOH) standards relating to land use, planning and best management practices. We will further examine your recommended strategies for sustainable design. Comments received by you will be included in the project's Draft Environmental Assessment.

Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Project and Construction Management

October 21, 2013

Ms. Patti Kitowski, District Environmental Health Program Chief
Maui District Health Office
Department of Health
State of Hawai'i
54 High Street
Wailuku, Hawai'i 96793

Dear Ms. Kitowski:

**Request for Determination of Compliance with the Toxic/Hazardous/ Radioactive
Materials, Contamination, Chemicals or Gases Act (24 CFR 58.5(i)(2)) for the
Proposed Kulamalu Affordable Housing Draft Environmental Assessment
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated August 28, 2013 concerning the proposed project. We acknowledge the Department of Health's (DOH) standards relating to land use, planning and best management practices. We will further examine your recommended strategies for sustainable design. Comments received by you will be included in the project's Draft Environmental Assessment.

Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridaio, Director, Alan Murata
Department of Housing and Human Concerns, County of Maui

Honolulu Engineer District, U.S. Army Corps of Engineers



DEPARTMENT OF THE ARMY
HONOLULU DISTRICT, U.S. ARMY CORPS OF ENGINEERS
FORT SHAFTER, HAWAII 96858-5440

September 10, 2013

Regulatory Branch

File Number **POH-2013-00160**

R.M. Towill Corporation
Attention: Chester Koga
2024 North King Street, Suite 200
Honolulu, Hawaii 96819-3494

NO PERMIT REQUIRED

Dear Mr. Koga:

This responds to your August 13, 2013 letter requesting the Department of the Army (DA) comments for a draft Environmental Assessment (EA) prepared for the proposed Kulamalu Affordable Housing project at TMKs (2) 2-3-066: 012, 013, and 014, Pukalani, Makawao District, Maui Isle, Hawaii. Reference number **POH-2013-00160** is assigned this project. Please cite this reference number in any future correspondence concerning this project.

We have completed review of the information submitted pursuant to our authorities under Section 10 of the Rivers and Harbors Act of 1899 (Section 10) and Section 404 of the Clean Water Act (Section 404). For your information, Section 10 requires that a DA permit be obtained from the U.S. Army Corps of Engineers (Corps) prior to undertaking any construction, dredging, or other activity occurring in, over, or under or affecting navigable waters of the U.S. For tidal waters, the shoreward limit of the Corps' jurisdiction extends to the Mean High Water Mark. Section 404 requires that a DA permit be obtained for the discharge (placement) of dredged and/or fill material into waters of the U.S., including wetlands. For tidally influenced waters, in the absence of adjacent wetlands, the shoreward limit of the Corps' jurisdiction extends to the High Tide Line, which in Hawai'i may be approximated by reference to the Mean Higher High Water Mark. For non-tidal waters, the lateral limits of the Corps' jurisdiction extend to the Ordinary High Water Mark or the approved delineated boundary of any adjacent wetlands.

Based on the information you submitted, it appears the project site consist entirely of uplands and absent of waters of the U.S. We anticipate the proposed 4.179-acre housing development project and appurtenant structures will not involve the discharge of fill material into waters of the U.S.; **therefore, a DA permit is not required.** This determination does not relieve you of the responsibility to obtain any other permits, licenses, or approvals that may be required under County, State, or Federal law for your proposed work.

Thank you for contacting us regarding this project and providing us with the opportunity to comment. Should you have any questions, please contact Ms. Joy Anamizu at 808-835-4308 or via e-mail at Joy.N.Anamizu@usace.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Young".

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

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



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Planning
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Project and Construction Management

October 21, 2013

Mr. George P. Young, Chief
Honolulu Engineer District
United States Army Corps of Engineers
Building 230, Room 302
Fort Shafter, Hawai'i 96585

Dear Chief Young:

Floodplain Management (24 CFR 55, Executive Order 11988), Wetlands Protection (Executive Order 11988), and Flood Disaster Protection Act (24 CFR 58.6) Consultation for the Proposed Kulamalu Affordable Housing Draft Environmental Assessment TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i Reference File Number POH-2013-00160

Thank you for your letter dated September 10, 2013, relating to the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

Based on the information you submitted, it appears the project site consist entirely of uplands and absent of waters of the U.S. We anticipate the proposed 4.179-acre housing development project and appurtenant structures will not involve the discharge of fill material into waters of the U.S.; therefore, a DA permit is not required.

We acknowledge your assessment that a Department of the Army (DA) permit is not required for Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act. Comments received by DA branches will be included in the project's Draft Environmental Assessment in accordance with Hawai'i Revised Statues, Chapter 343; the National Environmental Policy Act; and, U. S. Department of Housing and Urban Development.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

Pacific Island Fish & Wildlife Office, U.S. Department of the Interior



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122
Honolulu, Hawaii 96850

In Reply Refer To:
2013-TA-0420

Mr. Chester Koga
Project Coordinator
R.M. Towill Corporation
2024 North King Street
Honolulu, Hawaii 96819-3494

SEP 11 2013

Subject: Technical Assistance for the Proposed Kulamalu Housing Complex, Maui

Dear Mr. Koga:

The U.S. Fish and Wildlife Service (Service) received your letter on July 14, 2013, requesting comment on the proposed development of a 64-unit housing complex on 4.179 acres at the Kulamalu Town Center [TMK (2) 2-3-008:038, 039], on Maui.

Project Description

The proposed project involves the construction of 64 housing units, a community center, 133 parking stalls, a loading zone, and two driveways on vacant land within the Kulamalu Town Center west of the Kula Highway on Maui. Proposed construction is anticipated to begin in the late summer or fall of 2014.

Species Affected

Based on information you provided and pertinent information in our files, including data compiled by the Hawaii Biodiversity and Mapping Program, five species protected by the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*), may occur within, or transit through, the proposed action area and could be impacted by the proposed action: the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), Blackburn's sphinx moth (*Manduca blackburni*), Hawaiian goose (*Branta sandvicensis*), Hawaiian petrel (*Pterodroma sandwichensis*), and the threatened Newell's shearwater (*Puffinus auricularis newelli*).

To help you minimize potential impacts to listed species, the Service is providing you the following avoidance and minimization measures. Please note that implementation of these measures does not ensure that impacts to listed species can be avoided, and further coordination with the Service on compliance with the ESA may be required.

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- The Hawaiian hoary bat is known to occur throughout the island of Maui. This bat roosts in both exotic and native woody vegetation and, while foraging, leaves young unattended in "nursery" trees and shrubs. If trees or shrubs suitable for bat roosting are cleared during the hoary bat breeding season (June 1 to September 15), there is a risk that young bats could inadvertently be harmed or killed. As a result, the Service recommends that woody plants greater than 15 feet tall should not be removed or trimmed during the Hawaiian hoary bat breeding season.
- The Blackburn's sphinx moth may presently breed and feed within the proposed action area. Adult moths feed on nectar from native plants, including beach morning glory (*Ipomoea pes-caprae*), iliee (*Plumbago zeylanica*), and maiapilo (*Capparis sandwichiana*); larvae feed upon non-native tree tobacco (*Nicotiana glauca*) and native aiea (*Nothocestrum latifolium*). Blackburn's sphinx moth pupae may occupy the soil within 35 feet of larval host plants for up to a year. The Service recommends that a qualified biologist survey the project area, and areas adjacent to the project footprint, for the presence of native and non-native Blackburn's sphinx moth host plants. We also recommend that these surveys be conducted during the wettest portion of the year (usually November-April) and approximately four to eight weeks following a significant rainfall event. Surveys should include looking for eggs, larvae, and signs of larval feeding (chewed stems, frass, or leaf damage). If presence of the Blackburn's sphinx moth is confirmed, the Service should be contacted for further guidance.
- Due to its range and foraging behavior, the Hawaiian goose may be present in the vicinity of the proposed action at any time of the year. If a Hawaiian goose appears within 100 feet of ongoing construction work, all activity shall be temporarily suspended until the bird moves off to a safe distance of its own volition. Moreover, if any number of Hawaiian geese are observed loafing or foraging within the area of the proposed project during the Hawaiian goose breeding season (October through April), a biologist familiar with the nesting behavior of the Hawaiian goose should survey in and around the proposed construction footprint prior to the resumption of any work, or after any subsequent delay of work of three or more days (during which the birds may attempt to nest). If a nest is discovered within a radius of 150 feet of proposed construction work, or a previously undiscovered nest is found within said radius after work begins, all work must cease immediately and the Service contacted for further guidance.
- The Hawaiian petrel and Newell's shearwater, collectively referred to as seabirds, may transit through the proposed action area while flying between the ocean and nesting sites in the mountains during their breeding season (March through December). Seabird fatalities resulting from collisions with artificial structures that extend above the surrounding vegetation have been documented in Hawaii where high densities of transiting seabirds occur. Additionally, outdoor artificial lighting such as flood lighting for construction work, security, and outdoor illumination can adversely impact seabirds by causing disorientation which may result in collision with utility lines, buildings, fences, and vehicles. Fledging seabirds are especially affected by artificial lighting and have a tendency to exhaust themselves while circling the light sources and become grounded. Too weak to fly, these birds become vulnerable to depredation by feral

predators such as dogs, cats, and mongoose. Therefore, the Service recommends that project-related lighting should be minimized. All project-related lights should be shielded so the bulb is not visible at or above bulb-height.

The Service also recommends that a biosecurity assessment be conducted to address the potential impacts of invasive species introduction and transport due to the advent of construction-related materials and heavy vehicles into the action area during the construction phase of the proposed project. Accordingly, the Service can provide guidelines for invasive species containment and mitigation through Best Management Practices upon request.

If you have any questions concerning the recommendations or comments provided in this letter, please contact Ian Bordenave, Fish and Wildlife Biologist, at (808) 792-9400.

Sincerely,



Jess Hunter
for Loyal Mehrhoff
Field Supervisor

State Consultations

- Department of Accounting and General Services
- Department of Education
- Department of Health
- Division of State Parks, Department of Land and Natural Resources
- Historic Preservation Division, Department of Land and Natural Resources
- Department of Transportation
- Office of Planning

Department of Accounting and General Services



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAII 96810-0119

(P)1183.3

AUG 26 2013

Mr. Chester Koga, AICP
R. M. Towill Corporation
2024 North King Street
Honolulu, Hawaii 96819-3494

Dear Mr. Koga:

Subject: Proposed Kulamalu Affordable Housing Draft EA
TMK: (2) 2-3-066:012,013,014 Makawao District
Makawao District, Maui, Hawaii

Thank you for the opportunity to provide comments for the subject project. The proposed project location does not impact any Department of Accounting and General Services' existing facilities in the area and we have no comments to offer at this time.

If you have any questions, please call me at 586-0400 or your staff may call Mr. Alva Nakamura of the Public Works Division at 586-0488.

Sincerely,

A handwritten signature in blue ink, appearing to read "D. Seki", followed by a horizontal line.

DEAN H. SEKI
Comptroller

cc: Ms. JoAnn Ridao, Dept. of Housing and Human Concerns, County of Maui
Mr. Danny Agsalog, Dept. of Finance, County of Maui
Mr. Wade Shimabukuro, DAGS Maui office

2024 North King Street
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Honolulu, Hawaii 96819-3494
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October 21, 2013

Mr. Dean H. Seki, Comptroller
Department of Accounting and General Services
State of Hawai'i
1151 Punchbowl Street
Honolulu, Hawai'i 96813

Dear Mr. Seki:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated August 26, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

The proposed project location does not impact any Department of Accounting and General Services' existing facilities in the area and we have no comments to offer at this time.

We acknowledge that the State of Hawai'i Department of Accounting and General Services does not have any comments to offer as the proposed project location does not impact any Department of Accounting and General Services' existing facilities in the area.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridaio, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui
Maui District Office, Department of Accounting and General Services, State of Hawai'i

Danny Agsalog, Director
Department of Finance, County of Maui



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

OFFICE OF SCHOOL FACILITIES AND SUPPORT SERVICES

August 29, 2013

Mr. Chester Koga
Project Coordinator
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96707

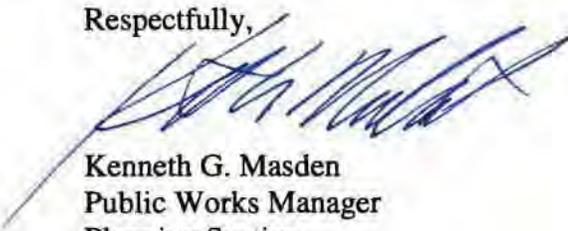
Dear Mr. Koga:

SUBJECT: Consultation Prior to the Draft Environmental Assessment for Kulamalu Affordable Housing, Makawao District, Maui, Hawaii

The Department of Education (DOE) is responding to your letter of August 13, 2013 requesting preliminary comments on a proposed housing project with 64 multi-family units in Pukalani, Maui. There is sufficient space in the DOE schools that serve Pukalani to accommodate students who will live in the project.

Thank you for this opportunity to offer our comments. Should you have any questions, please call Heidi Meeker of the Facilities Development Branch at 377-8301.

Respectfully,



Kenneth G. Masden
Public Works Manager
Planning Section

KGM:jmb

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Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



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October 21, 2013

Ms. Katharyn Matayoshi, Superintendent
Department of Education
State of Hawai'i
1390 Miller Street
Honolulu, Hawai'i 96813

Dear Ms. Matayoshi:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated August 29, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

There is sufficient space in the DOE schools that serve Pukalani to accommodate students who will live in the project.

Thank you for informing us that the State of Hawai'i Department of Education (DOE) has sufficient space in the DOE schools that serve the Pukalani area to accommodate students who will live in the project.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

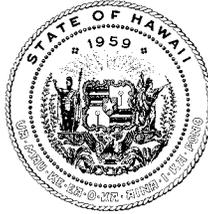
Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

Alvin Shima, Complex Area Superintendent
Baldwin-Kekaulike-Maui, Department of Education

Historic Preservation Division, Department of Land and Natural Resources



**HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ESTHER KIA'AINA
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
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HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

September 19, 2013

Mr. Chester Koga
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu HI 96819

LOG NO: 2013.4842
DOC NO: 1309JP11
Archaeology

Aloha Mr. Koga:

**SUBJECT: Chapters 6E-42 and 343 Historic Preservation Review-
Consultation for the Kulamalu Affordable Housing Draft Environmental Assessment
A'apueo Ahupua'a, Makawao District, Maui Island
TMK: (2) 2-3-066:012, 013, and 014 (Formerly portion of 2-3-008:044)**

Thank you for the opportunity to provide consultation regarding the submittal letter for the proposed Kulamalu affordable housing project, which was received by our office on August 14, 2013. The Department of Housing and Human Concerns, County of Maui proposed to construct Kulamalu Affordable Housing, a project consisting of four two-story buildings with 64 housing units, a community center, 133 parking stalls, one loading zone, and two concrete driveways.

The 4.179 acre project site is located in Pukalani, adjacent to the University of Hawai'i Institute for Astronomy and west of Kula Highway. The proposed project will be developed on vacant land within the 53.67 acre Kulamalu Town Center, also known as the Kulamalu Commercial Subdivision. We previously provided comments for the Kulamalu development (*Doc 9712BD35-36; Log 1998.20843, Doc 9801CD18; Log 1999.24075, Doc 9909RC06; Log 1999.23869, Doc 9905CD03; Log 1999.23869, Doc 9907CD31; Log 2000.25597, Doc 0006CD07; Log 2000.28125, Doc 0008CD31; Log 2001.26839, Doc 0101MK08; Log 2001.30948, Doc 0102CD01; Doc 0210MK16; Doc 0210CD23; Log 2003.26931, Doc 0301CD07; Log 2003.2175, Doc 0310MK20; Log 2003.2176, Doc 0310MK21; Log 2003.0053, Doc 0303CD42; Log 2003.0363, Doc 0304CD28; Log 2003.0364, Doc 0304CD29; Log 2003.0953, Doc 0306MK30; Log 2003.1151, Doc 0307CD12; Log 2003.2123, Doc 0310MK16; Log 2003.2124, Doc 0310MK17; Log 2003.2175, Doc 0310MK20; Log 2005.0403, Doc 0503MK02; Log 2005.2405, Doc 0511MK31; and Log 2006.2667, Doc 0608MK02*).

Contrary to the information submitted in your request for consultation, there have been several historic properties documented within the Kulamalu development and listed on the State Inventory of Historic Places (SIHP), including the Kalialinui Petroglyphs in the southwest portion of Kulamalu (SIHP 50-50-10-1061) and the Kaluapulani Petroglyphs (SIHP 50-50-10-1062). Two additional petroglyph panels were documented in a branch (possibly Ha'akakai Gulch) of the same gulch (SIHP 50-50-10-4179). An agricultural site (SIHP 50-50-10-4181) and a boundary wall were also recorded (SIHP 50-50-10-4180).

Mass excavation activities for the originally proposed retention basin at Kulamalu uncovered a significant historic archaeological site (SIHP 50-50-10-5173). The site was identified beneath the pineapple till zone and is comprised of a Historic Cemetery with at least 15 individuals (8 burials in wooden coffins and 7 in pit features), water worn grave markers, 5 associated burning episodes, 4 unexcavated pit features, and 1 disturbed animal burial. A rock mound was also documented with associated fire vestige that yielded a date of A.D. 1450-1660 (SIHP 50-50-10-5469) and a drainage or irrigation ditch (SIHP 50-50-10-5470).

There are significant historic archaeological sites in the vicinity, including at least 32 petroglyphs located on a panel across the Kula Highway northeast (upslope) of the subject area (SIHP 50-50-10-2920). The Pukalani Petroglyphs (SIHP 50-50-10-1231) and the Hamakua Burial Cave (SIHP 50-50-10-1264) are both located at a lower elevation in the same gulch.

The Cemetery (50-50-10-5173) and petroglyph sites (50-50-10-1061, 1062, and 4179) are designated for permanent preservation. We consistently recommended archaeological monitoring for ground altering activities at Kulamalu. We have accepted an archaeological monitoring plan (Archaeological Services Hawaii, LLC.) indicating that archaeological monitoring shall be conducted in all areas where original soils will be encountered.

Some areas have been previously monitored and consist of "fill" and much of the area previously consisted of rock/cinder that was blasted. In contrast, some of the areas still consist of original undisturbed soil. At this time, our records do not adequately reflect information to determine the status of the exact location of previously disturbed and original contexts. We also do not have any construction plans for the proposed affordable housing project so we are unable to provide mitigation recommendations at this time.

Subsequently, we recommend that additional information be submitted with respect to the proposed project, in order to identify, document, or provide mitigation recommendations for documented or potentially undocumented cultural features that may be encountered during the project. Please contact Jenny Pickett at (808) 243-1285 or Jenny.L.Pickett@Hawaii.gov for any questions or concerns about this letter.

Mahalo,

A handwritten signature in black ink, appearing to read 'Theresa Donham', with a horizontal line extending to the right.

Theresa Donham
Archaeology Branch Chief

cc: County of Maui, Department of Planning via email: planning@mauicounty.gov
County of Maui DSA via fax to: (808) 270-7972
Ingrid Friedberg (ingridf@rmtowill.com)

2024 North King Street
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Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



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October 21, 2013

Ms. Jenny Pickett, Maui-Assistant Archaeologist
Maui Office, State Historic Preservation Division
Department of Land and Natural Resources
601 Kamokila Boulevard, Room 555
Kapolei, Hawai'i 96707

Dear Ms. Pickett:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i
Reference: LOG NO: 2013.4842; DOC NO: 1309JP11**

Thank you for your letter dated September 19, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

Contrary to the information submitted in your request for consultation, there have been several historic properties documented within the Kulamalu development and listed on the State Inventory of Historic Places (SIHP), including the Kalialimui Petroglyphs in the southwest portion of Kulamalu (SIHP 50-50-10-1061) and the Kaluapulani Petroglyphs (SIHP 50-50-10-1062). Two additional petroglyph panels were documented in a branch (possibly Ha'akakai Gulch) of the same gulch (SIHP 50-50-10-4179). An agricultural site (SIHP 50-50-10-4181) and a boundary wall were also recorded (SIHP 50-50-10-4180).

We have noted that historic properties have been identified on neighboring sites within the Kulamalu Commercial Subdivision. The County of Maui will engage an archaeologist consultant prior to the permitting stage in order to prepare a monitoring plan.

Mass excavation activities for the originally proposed retention basin at Kulamalu uncovered a significant historic archaeological site (SIHP 50-50-10-5173). The site was identified beneath the pineapple till zone and is comprised of a Historic Cemetery with at least 15 individuals (8 burials in wooden coffins and 7 in pit features), water worn grave markers, 5 associated burning episodes, 4 unexcavated pit features, and 1 disturbed animal burial. A rock mound was also documented with associated fire vestige that yielded a date of A.D. 1450-1660 (SIHP 50-50-10-5469) and a drainage or irrigation ditch (SIHP 50-50-10-5470).

The Kulamalu Affordable Housing property has been subject to previous site disturbance and largely consists of cut areas or fill material. Excavation of native grades for the Kulamalu Affordable Housing will be limited to the uppermost slope of the project site which comprises of a small portion of the entire site. Once grading activities commence for the proposed project, if remains are found, construction will halt immediately and the State Historic Preservation Division (SHPD) will be contacted for further guidance.

Ms. Jenny Pickett, Maui-Assistant Archaeologist
Maui Office, State Historic Preservation Division
Page 2

There are significant historic archaeological sites in the vicinity, including at least 32 petroglyphs located on a panel across the Kula Highway northeast (upslope) of the subject area (SIHP 50-50-10-2920). The Pukalani Petroglyphs (SIHP 50-50-10-1231) and the Hamakua Burial Cave (SIHP 50-50-10-1264) are both located at a lower elevation in the same gulch.

In the event that remains are found during the limited grading activities, construction will be halted, and the State Historic Preservation Division (SHPD) will be contacted for further guidance. An archaeological monitor will also be present to monitor all ground altering activities.

The Cemetery (50-50-10-5173) and petroglyph sites (50-50-10-1061, 1062, and 4179) are designated for permanent preservation. We consistently recommended archaeological monitoring for ground altering activities at Kulamalu. We have accepted an archaeological monitoring plan (Archaeological Services Hawaii, LLC.) indicating that archaeological monitoring shall be conducted in all areas where original soils will be encountered.

The archaeological monitoring plan will be prepared prior to the permitting stage will be adhered to during construction. In the event that historic properties are encountered during any ground altering activities on the proposed project site, construction activities will be halted immediately and SHPD will be contacted for further guidance.

Some areas have been previously monitored and consist of "fill" and much of the area previously consisted of rock/cinder that was blasted. In contrast, some of the areas still consist of original undisturbed soil. At this time, our records do not adequately reflect information to determine the status of the exact location of previously disturbed and original contexts. We also do not have any construction plans for the proposed affordable housing project so we are unable to provide mitigation recommendations at this time.

Because your records do not adequately reflect information to determine the status of the previously disturbed and original context, an archaeological monitor will be present for all ground monitoring activities.

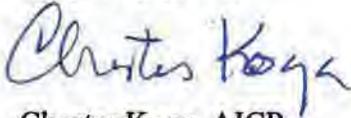
Subsequently, we recommend that additional information be submitted with respect to the proposed project, in order to identify, document, or provide mitigation recommendations for documented or potentially undocumented cultural features that may be encountered during the project. Please contact Jenny Pickett at (808) 243-1285 or Jenny.L.Pickett@Hawaii.gov for any questions or concerns about this letter.

It may be possible to accommodate your request for additional information depending on the type of information that is requested. Please specify the type of information you would like and we will make every reasonable accommodation to address your request.

We appreciate this opportunity to respond. Should you wish to provide further input to the proposed project, please contact the undersigned.

Ms. Jenny Pickett, Maui-Assistant Archaeologist
Maui Office, State Historic Preservation Division
Page 3

Very truly yours,



Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

Nicki Ann Thompson, Interim Administrator
Department of Land and Natural Resources, State of Hawai'i

Theresa Donham, Archaeology Branch Chief
Department of Land and Natural Resources, State of Hawai'i

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



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2014 MAR 13 PM 3:25

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

WILLIAM J. AILA, JR.
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COMMISSION ON WATER RESOURCES MANAGEMENT
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WILLIAM M. TAM
DEPUTY DIRECTOR - WATER
AQUATIC RESOURCES
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BUREAU OF DIVERSIONS
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CONSERVATION AND COASTAL LANDS
REGULATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

DHHC-DIRECTOR'S OFFICE
COUNTY OF MAUI

March 7, 2014

Department of Housing and Human Concerns
County of Maui
Attn: Ms. Jo-Ann Ridao
2200 One Main Street, Suite 546
Wailuku, Hawaii 96793

LOG NO: 2014.00709
DOC NO: 1403MD09
Archaeology

Aloha Ms. Ridao:

SUBJECT: Chapter 6E-8 Historic Preservation Review and National Historic Preservation Act (NHPA) Section 106 Consultation – Draft Environmental Assessment for the Kulamalu Affordable Housing Development A'apueo Ahupua'a, Makawao District, Island of Maui TMK (2) 2-3-066:012, 013 and 014

Thank you for the opportunity to review the joint NEPA-HEPA draft environmental assessment (DEA), which our Maui staff received on February 25, 2014. This project qualifies as a federal undertaking due to the use of federal funds from the U.S. Department of Housing and Urban Development.

The DEA has been prepared in advance of a proposed project to build four two-story buildings with 64 housing units, a community center, 133 parking stalls, one loading zone and two concrete driveways. The 4.170-acre project site, located on vacant land within the 53.67-acre Kulamalu Town Center, is located in Pukalani adjacent to the University of Hawaii Institute for Astronomy and west of Kula Highway. The County of Maui is proposing a finding of no significant impact (FONSI). We cannot at this time concur with your assessment, for reasons detailed below.

During consultation with the County's representatives, R. M. Towill Corporation (RM), SHPD disagreed with their assessment that there are no historic properties on these parcels. RM replied that they would be locating the area of potential affect (APE) to avoid known preservation sites, and also that they would have an archaeological monitor in place for all ground-altering activities. Unfortunately, the DEA does not provide a map indicating where on these parcels the project's APE will be. Additionally, there is no map showing the relationship of the APE to any known archaeological preservation areas. Both of those items are required in order for us to know whether or not we can concur with the determination for a FONSI as presented in the DEA. We look forward to receiving more information on the location of the proposed housing development.

Please contact Morgan Davis at (808) 243-4641 or Morgan.E.Davis@hawaii.gov if you have any concerns about this letter.

Mahalo,

Theresa K. Donham
Deputy State Historic Preservation Officer
Archaeology Branch Chief

cc: Chester Koga, AICP, Project Coordinator
R. M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819-3494

Ingrid Friedberg

From: Ingrid Friedberg
Sent: Thursday, March 27, 2014 9:29 AM
To: 'Morgan.E.Davis@hawaii.gov'
Cc: Chester Koga; Theresa.K.Donham@hawaii.gov
Subject: RE: info. requested March 7, 2014 LOG NO 2014.00709; DOC NO: 1403MD09 - Kulamalu Affordable Housing EA

Aloha Morgan,

Thank you so much for your prompt response. We are available tomorrow at 2PM for a conference call with you.

With many thanks and best regards,

Ingrid Friedberg
Urban Planner
<mailto:IngridF@rmtowill.com>

R. M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819
voice: 808 842 1133 fax: 808 842 1937 web: www.rmtowill.com

From: Morgan.E.Davis@hawaii.gov [<mailto:Morgan.E.Davis@hawaii.gov>]
Sent: Thursday, March 27, 2014 9:16 AM
To: Ingrid Friedberg
Cc: Chester Koga; Theresa.K.Donham@hawaii.gov
Subject: Re: info. requested March 7, 2014 LOG NO 2014.00709; DOC NO: 1403MD09 - Kulamalu Affordable Housing EA

Aloha Ingrid,

Thanks for this information. Are you available for a call at 2pm this Friday, or any time on Monday?

Mahalo,

Morgan

From: "Ingrid Friedberg" <IngridF@rmtowill.com>
To: <Morgan.E.Davis@hawaii.gov>,
Cc: <Theresa.K.Donham@hawaii.gov>, "Chester Koga" <ChesterK@rmtowill.com>
Date: 03/26/2014 03:54 PM
Subject: info. requested March 7, 2014 LOG NO 2014.00709; DOC NO: 1403MD09 - Kulamalu Affordable Housing EA

Dear Morgan,

I am writing you in response to Ms. Theresa Donham's informational request of a letter dated March 7, 2014 (LOG NO: 2014.00709; DOC NO: 1403MD09) regarding the Joint NEPA-HEPA Draft EA for Kulamalu Affordable Housing. She had listed you as the point of

contact.

Ms. Donham's comments state:

1. SHPD disagreed with their (RMTC) assessment that there are no historic properties on these (3) parcels.
2. RM replied that they would be locating the area of potential affect (APE) to avoid known preservation sites, and also that they would have an archaeological monitor in place for all ground-altering activities. Unfortunately, the DEA does not provide a map indicating where on these parcels the project's APE will be. Additionally, there is no map showing the relationship of the APE to any known archaeological preservation areas.

Both of those items are required in order for us to know whether or not we can concur with the determination for a FONSI as presented in the DEA.

In response we would like to offer the following:

1. The Kulamalu development area encompasses approximately 250 acres. The project site for the affordable housing project is 4.170 acres. As part of the development plans, no less than three (3) archaeological studies were conducted that included the subject parcels (Archaeological Inventory Study 44—Acre Pukalani Terrace, Subdivision 3 (PHRI, 1996); Archaeological Reconnaissance Study, 250-Acre Pukalani Project Area, Land of Aapueo (PHRI, 1996) and EA for Proposed Advanced Technology Center and Advanced Technology Research Center (UH IFA, 2004).
2. In addition, we received correspondence from Ms. Jenny Pickett (Feb. 19, 2014) indicating that the subject project may be impacting the following sites: 50-50-10-1061, 1062, 1231, 1264, 2920, 4148, 4149, 4179, 4180, 4181, 5173, 5469, and 5470. To our knowledge, the sites listed are not located on the project site. Please correct us if this is not the case. If these sites were on the subject parcels, site grading in 1997 has since removed all traces of historic properties. The grading work was not done by the County of Maui.
3. We acknowledge that an APE map was not prepared for the project. We will correct this oversight.
4. We have prepared a map showing the project's APE and the known or identified sites near to the project site as identified by the studies identified above. (see attachment)
5. The County of Maui will be retaining the services of an archaeological monitor to observe ground disturbing activities once the construction documents are approved.

We are anxious to resolve our differences as quickly as possible. Your assistance in helping us resolve this matter would be greatly appreciated. Please contact me to arrange a mutually convenient time when we can discuss this matter. I am reachable by e-mail or on my direct office line, 808-842-1133.

With many thanks and best regards,

Ingrid Friedberg
Urban Planner
<mailto:IngridF@rmtowill.com>

R. M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819
voice: 808 842 1133 fax: 808 842 1937 web: www.rmtowill.com
[attachment "Figure 2 Site Locations.pdf" deleted by Morgan E Davis/DLNR/StateHiUS]

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



**HISTORIC PRESERVATION DIVISION
DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

JESSE K. SOUKI
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

April 2, 2014

Department of Housing and Human Concerns
County of Maui
Attn: Ms. Jo-Ann Ridao
2200 One Main Street, Suite 546
Wailuku, Hawaii 96793

LOG NO: 2014.00709
DOC NO: 1404MD02
Archaeology

Aloha Ms. Ridao:

**SUBJECT: Revised: Chapter 6E-8 Historic Preservation Review and
National Historic Preservation Act (NHPA) Section 106 Consultation –
Draft Environmental Assessment for the Kulamalu Affordable Housing Development
A'apueo Ahupua'a, Makawao District, Island of Maui
TMK (2) 2-3-066:012, 013 and 014 (all, por.)**

Thank you for the opportunity to review the joint NEPA-HEPA draft environmental assessment (DEA), which our Maui staff originally received on February 25, 2014. This project qualifies as a federal undertaking due to the use of federal funds from the U.S. Department of Housing and Urban Development. We previously reviewed this undertaking and did not concur with the County's finding of a FONSI based on the contents of the DEA (*Log No. 00709, Doc No. 1403MD09*). This letter is a revision to our first review, following new information provided by R. M. Towill Corporation (RMT) on Friday, March 28, 2014. The DEA was prepared in advance of a proposed project to build four two-story buildings with 64 housing units, a community center, 133 parking stalls, one loading zone and two concrete driveways. The 4.170-acre project site is vacant land within the 53.67-acre Kulamalu Town Center, located in Puklani adjacent to the University of Hawaii Institute for Astronomy and west of Kula Highway. The County of Maui is proposing a finding of no significant impact (FONSI).

During consultation with the County's representatives in the summer of 2013, SHPD disagreed with the assessment that there are no historic properties on these parcels. RMT replied that they would be placing the area of potential affect (APE) to avoid known preservation sites, and also that they would have an archaeological monitor in place for all ground-altering activities. SHPD recently met with representatives of RMT on 3/28/2014, and was provided a map showing the location of the proposed affordable housing development well away from known historic properties in this area. The proposed location is within the Kulamalu Subdivision, specifically within half of the area bounded by Ohia Ku Street and Aapueo Parkway. RMT also confirmed that archaeological monitoring will occur during all ground-altering activities associated with this construction. Therefore, **we concur the no historic properties will be affected** by this project, with the condition that archaeological monitoring occurs pursuant to an approved archaeological monitoring plan. An archaeological monitoring plan needs to be submitted to SHPD for review and approval pursuant to HAR § 13-279 prior to the start of any ground-altering activities.

Please contact Morgan Davis on Maui at (808) 243-4641 or Morgan.E.Davis@hawaii.gov if you have any concerns about this letter.

Mahalo,

Theresa K. Donham
Deputy State Historic Preservation Officer

cc: Chester Koga, R. M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819-3494

Division of State Parks, Department of Land and Natural Resources

Chester Koga

From: Lauren.A.Tanaka@hawaii.gov
Sent: Friday, September 27, 2013 10:05 AM
To: Chester Koga
Subject: Proposed Kulamalu Affordable Housing Draft EA; TMK: (2) 2-3-066: 012, 013, and 014; Makawao, Maui

Hi Chester:

We have no comments to offer on the proposed project.

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Project and Construction Management

October 21, 2013

Mr. Dan Quinn, Administrator
Division of State Parks
Department of Land and Natural Resources
State of Hawai'i
P.O. Box 621
Honolulu, Hawai'i 96793

Dear Mr. Quinn:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your e-mail dated September 27, 2013, concerning the proposed project. We acknowledge that you have no comments to offer.

We appreciate your review of the subject document. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

A handwritten signature in blue ink that reads "Chester Koga". The signature is written in a cursive, flowing style.

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

NEIL ABERCROMBIE
GOVERNOR



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

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
JADE T. BUTAY
FORD N. FUCHIGAMI
RANDY GRUNE
JADINE URASAKI

IN REPLY REFER TO:
STP 8.1307

September 5, 2013

Mr. Chester Koga, AICP
Project Coordinator
R. M. Towill Corporation
2014 North King Street, Suite 200
Honolulu, Hawaii 96819-3494

Dear Mr. Koga:

Subject: Kulamalu Affordable Housing
Early Consultation for Draft Environmental Assessment
TMK: (2) 2-3-066:012, 013, and 014

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project.

DOT understands the applicant proposes to develop Kulamalu Affordable Housing, a 4.179-acre project consisting of 64 housing units, a community center, 133 parking stalls one loading zone and two concrete driveways. Access to the project will be from Ohia Ku Street.

The Draft Environmental Assessment (DEA) should discuss and evaluate the project's contribution to the cumulative traffic impacts on State highways facilities in the area.

DOT appreciates the opportunity to provide comments. If there are any questions, please contact Mr. Gary Ashikawa of the DOT Highways Planning Branch at telephone number (808) 587-6336.

Very truly yours,

A handwritten signature in black ink, appearing to read "Glenn M. Okimoto".

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
SINCE 1938

Planning
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Environmental Services
Photogrammetry
Surveying
Project and Construction Management

October 21, 2013

Mr. Glenn Okimoto, Director
Department of Transportation
Ali'ia'imoku Building
869 Punchbowl Street, Room 513
Honolulu, Hawai'i 96813

Dear Mr. Okimoto:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated September 5, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

The Draft Environmental Assessment in accordance with Hawai'i Revised Statutes, Chapter 343; the National Environmental Policy Act; and, U. S. Department of Housing and Urban Development (DEA) should discuss and evaluate the project's contribution to the cumulative traffic impacts on State highways facilities in the area.

The Draft Environmental Assessment in accordance with Hawai'i Revised Statutes, Chapter 343; the National Environmental Policy Act; and, U. S. Department of Housing and Urban Development, will discuss and evaluate the proposed project's contribution to cumulative traffic in the area. As appropriate, mitigation measures will be recommended in the project's Draft Environmental Assessment.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

NEIL ABERCROMBIE
GOVERNOR



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

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
FORD N. FUCHIGAMI
RANDY GRUNE
AUDREY HIDANO
JADINE URASAKI

IN REPLY REFER TO:
STP 8.1501

March 14, 2014

Ms. Jo-Ann Ridao
County of Maui
Department of Housing and Human Concerns
2200 One Main Street, Suite 546
Wailuku, Hawaii 96793

Dear Ms. Ridao:

Subject: Kulamalu Affordable Housing Project
Draft Environmental Assessment (DEA)
TMK: (2) 2-3-066:012, 013, and 014

Our State Department of Transportation (DOT) previously commented on the subject project during Pre-Consultation in our letter STP 8.1307 dated September 5, 2013 (see Appendix A of the DEA) and now offer the following supplemental comments:

A Traffic Impact Report (TIR) should be submitted to the DOT Highways Division for review and acceptance. The study area for the TIR should include the traffic impacts to Kula Highway. The TIR should include DOT's plan for a bikeway on Kula Highway.

DOT appreciates the opportunity to provide comments. If there are any other questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Glenn M. Okimoto".

GLENN M. OKIMOTO, Ph.D.
Director of Transportation

c: Chester Koga, R. M. Towill Corporation



OFFICE OF PLANNING STATE OF HAWAII

NEIL ABERCROMBIE
GOVERNOR

JESSE K. SOUKI
DIRECTOR
OFFICE OF PLANNING

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

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: <http://hawaii.gov/dbedt/op/>

Ref. No. P-14082

August 19, 2013

Mr. Chester Koga
R. M. Towill Corporation
2024 N. King Street, Suite 200
Honolulu, Hawaii 96819

Dear Mr. Koga:

Subject: Hawaii Coastal Zone Management (CZM) Program Federal Consistency Review for U.S. Department of Housing and Urban Development (HUD) Funding for the Proposed Kulamalu Affordable Housing, Makawao, Maui

This responds to your request for CZM federal consistency review for HUD funding for the proposed Kulamalu Affordable Housing Project in Makawao, Maui. The proposed use of funding from HUD does not require Hawaii CZM Program federal consistency review. The Hawaii CZM Program does not review any HUD assistance programs, grants, or loans for federal consistency in accordance with Section 307(d) of the Coastal Zone Management Act and 15 CFR Part 930. There are no HUD assistance programs identified on the Hawaii CZM Program listing of federal assistance programs subject to consistency review, pursuant to 15 CFR §930.95.

The Office of Planning, as the lead agency for the Hawaii CZM Program, does not review actions relevant to the Coastal Resources Act/Coastal Barrier Improvement Act. Therefore, we do not provide consultation reviews relevant to this act.

This CZM federal consistency statement does not represent an endorsement of the project nor does it convey approval with any regulations administered by any state or county agency. If you have any questions, please call John Nakagawa of our CZM program at 587-2878.

Sincerely,

Jesse K. Souki
Director

c: Ms. Jo-Ann Ridao,
Department of Housing and Human Concerns, County of Maui
Department of Planning, County of Maui

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
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Planning
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Project and Construction Management

October 21, 2013

Mr. Jesse K. Souki, Director
Office of Planning
State of Hawai'i
P.O. Box 2359
Honolulu, Hawai'i 96804-2359

Dear Mr. Souki:

**Consultation and Request for Consistency Determination of Coastal Zone Management Act (Sections (c), (d)), and Coastal Resources Act/Coastal Barrier Improvement Act (Section 58.6(c)) for the Proposed Kulamalu Affordable Housing Draft Environmental Assessment
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated September 19, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

The proposed use of funding from HUD does not require Hawai'i CZM Program federal consistency review. The Hawai'i CZM Program does not review any HUD assistance programs, grants, or loans for federal consistency in accordance with Section 307(d) of the Coastal Zone Management Act and 15 CFR Part 930. There are no HUD assistance programs identified on the Hawai'i CZM Program listing of federal assistance programs subject to consistency review, pursuant to 15 CFR §930.95.

We acknowledge that the Hawai'i CZM Program does not review any HUD assistance programs, grants or loans for federal consistency because there are no HUD assistance programs identified on the Hawai'i CZM Program listing of federal assistance programs subject to consistency review.

We appreciate your review of the subject document. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui
Leo Asuncion, Planning Program Manager
Coastal Zone Management Program, Office of Planning, State of Hawai'i



OFFICE OF PLANNING STATE OF HAWAII

NEIL ABERCROMBIE
GOVERNOR

JESSE K. SOUKI
DIRECTOR
OFFICE OF PLANNING

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

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: <http://planning.hawaii.gov/>

Ref. No. P-14302

March 4, 2014

Mr. Chester Koga
R.M. Towill Corporation
2024 N. King Street, Suite 200
Honolulu, Hawaii 96819

Dear Mr. Koga:

Subject: Joint NEPA-HEPA Draft Environmental Assessment (Draft EA) –
Kulamalu Affordable Housing Project, Pukalani, Makawao, Maui;
TMK: (2) 2-3-066:012, 013, 014

Thank you for the opportunity to provide comments on the Draft Environmental Assessment (Draft EA) for the proposed Kulamalu Housing Project, Pukalani, Makawao District, Maui. We have reviewed the documents submitted by letter dated February 13, 2014, and have the following comments to offer:

1. The Draft EA does not provide a satisfactory discussion of the Coastal Zone Management (CZM) objectives and policies found in Hawaii Revised Statutes (HRS) § 205A-2. The entire state is defined to be within the Coastal Zone Management Area, see HRS § 205A-1 (definition of "coastal zone management area"). The Final Environmental Assessment should include a discussion of the proposed project's ability to meet the objectives and policies set forth in HRS § 205A-2.

There should be discussion on addressing the areas of Recreational Resources, Scenic and Open Space Resources, Coastal Ecosystems, Economic Uses, Coastal Hazards, Managing Development, Public Participation, Beach Protection, and Marine Resources. If the project does not impact these objectives and policy areas, it should be stated as such.

On page 7-2 of the Draft EA, there is a brief discussion of CZM statutory requirements and the Hawaii CZMP federal consistency; however, detailed discussion on how this project meets § 205A-2 requirements is absent.

2. There is no discussion of the project's potential impacts to water resources from stormwater and inundation concerns. Please consider utilizing the Office of Planning's Stormwater Impact Assessment, to identify and evaluate information on

Mr. Chester Koga
Page 2
March 4, 2014

Low Impact Development site design measures; please see page 15 of the Stormwater Impact Assessment. This guidance document will assist in integrating stormwater impact assessment within your review process. The Appendices include a list of Data Resources, Best Management Practice Techniques, and a Reviewer's Checklist. The Stormwater Impact Assessment guidance document can be found at http://files.hawaii.gov/dbedt/op/czm/initiative/stomwater_impact_final_stormwater_impact_assessments_guidance.pdf.

Should you have questions or require clarification on the above comments, please contact Josh Hekeia, of our CZM Program, at 587-2845.

Sincerely,

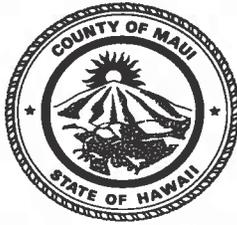
A handwritten signature in blue ink, appearing to read 'Jesse K. Souki', with a large, stylized flourish extending to the right.

Jesse K. Souki
Director

County of Maui Consultations

- Department of Environmental Management
- Department of Parks and Recreation
- Department of Planning
- Department of Public Works
- Department of Water Supply
- Fire and Public Safety
- Police Department

ALAN M. ARAKAWA
Mayor
KYLE K. GINOZA, P.E.
Director
MICHAEL M. MIYAMOTO
Deputy Director



TRACY TAKAMINE, P.E.
Solid Waste Division
ERIC NAKAGAWA, P.E.
Wastewater Reclamation Division

**COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT**
2200 MAIN STREET, SUITE 100
WAILUKU, MAUI, HAWAII 96793

October 10, 2013

Mr. Chester Koga
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819

Dear Mr. Koga:

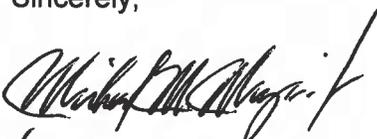
**SUBJECT: KULAMALU AFFORDABLE HOUSING
EARLY CONSULTATION FOR DRAFT EA
TMK (2) 2-3-066:012, 013, AND 014, MAKAWAO, MAUI**

We reviewed the subject application and have the following comments:

1. Solid Waste Division comments:
 - a. Include a plan for construction waste management.
2. Wastewater Reclamation Division (WWRD) comments:
 - a. The County does not have a wastewater system in the area of the subject project.

If you have any questions regarding this memorandum, please contact Michael Miyamoto at 270-8230.

Sincerely,


KYLE K. GINOZA, P.E.
Director of Environmental Management

xc: Jo-Ann Ridao, Director
County of Maui
Department of Housing and Human Concerns
One Main Plaza
2200 Main Street, Suite 546
Wailuku, Hawaii 96793

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
SINCE 1930

Planning
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Project and Construction Management

October 21, 2013

Mr. Kyle K. Ginoza, P.E., Director
Department of Environmental Management
2200 Main Street, Suite 100
Wailuku, Hawai'i 96793

Dear Mr. Ginoza,

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter of October 10, 2013. In response to your comments, we offer the following:

1. Include a plan for construction waste management.
Response: The project contractor will be responsible for the proper disposal of construction waste.
2. The County does not have a wastewater system in the area of the subject projects.
Response: Wastewater from the subject project will be accommodated by a private system in the Pukalani area.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

ALAN M. ARAKAWA
Mayor



GLENN T. CORREA
Director

BRIANNE SAVAGE
Deputy Director

(808) 270-7230
FAX (808) 270-7934

DEPARTMENT OF PARKS & RECREATION

700 Hali'a Nakoa Street, Unit 2, Wailuku, Hawaii 96793

September 16, 2013

Chester Koga, AICP
R. M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, HI 96819

Dear Mr. Koga:

**SUBJECT: Draft Environmental Assessment for Proposed Kulamalu
Affordable Housing, Makawao, Maui, Hawaii
TMK (2) 2-3-066:012, 013, 014**

Thank you for the opportunity to review the subject Early Consultation Request.

The fiscal year 2013-2014 park assessment fee rate for the Makawao-Pukalani-Kula Community Plan Area is \$4,980.00 per unit. Since the 3-unit exemption for this property has been used, all 64 dwelling units will be subject to the park assessment fee. The total fee would be \$318,720.00.

Be advised that the aforementioned rate and fees are valid through June 30, 2014, and are subject to change thereafter. Also, the applicant is required to satisfy the applicable park dedication requirements in effect at the time of final subdivision approval, or in this case, issuance of building permit.

Should you have any questions or concerns, please feel free to contact me, or Steve Grogan, Capital Improvements Project Coordinator, at stephen.grogan@co.maui.hi.us or 808-270-6158.

Sincerely,

A handwritten signature in black ink, appearing to read "GLENN T. CORREA".

GLENN T. CORREA
Director of Parks & Recreation

c: Robert Halvorson, Chief of Planning & Development
GTC:RH:sg

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Project and Construction Management

October 21, 2013

Mr. Glenn Correa, Director
Parks and Recreation
County of Maui
700 Hali'a Nakoa Street, Unit 2
Wailuku, Hawai'i 96793

Dear Mr. Correa:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated September 16, 2013 and October 17, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

The fiscal year 2013-2014 park assessment fee rate for the Makawao-Pukalani-Kula Community Plan Area is \$4,980.00 per unit. Since the 3-unit exemption for this property has been used, all 64 dwelling units will be subject to the park assessment fee. The total fee would be \$318,720.00.

Be advised that the aforementioned rate and fees are valid through June 30, 2014, and are subject to change thereafter. Also, the applicant is required to satisfy the applicable park dedication requirements in effect at the time of final subdivision approval, or in this case, issuance of building permit.

We appreciate your review of the subject project for applicability of park assessment requirements. We acknowledge your letter of October 17, 2013 stated that the subject project is exempt from the park dedication fee.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

ALAN M. ARAKAWA
Mayor

WILLIAM R. SPENCE
Director

MICHELE CHOUTEAU McLEAN
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PLANNING

March 4, 2014

Mr. Chester Koga, AICP
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819

Dear Mr. Koga:

SUBJECT: REQUEST FOR COMMENTS ON PROPOSED KULAMALU AFFORDABLE HOUSING DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR PROPERTY LOCATED AT PUKALANI, ISLAND OF MAUI, HAWAII; TMKS: (2) 2-3-066:012, 013, AND 014 (EAC 2014/0003)

The Department of Planning (Department) is in receipt your request for comments on the above-referenced Draft EA. It is noted that the purpose of the project is to alleviate some of the demand for affordable housing on Maui. The Department supports the purpose of this project.

State Land Use District:	Urban
Community Plan Designation:	Business Commercial
County Zoning:	B-CT Country Town Business District
Maui Island Plan:	Located within an urban growth boundary

As stated in the Draft EA, the proposed project conforms to these designations. In addition, please address in the Final EA the project's conformance with B-CT Country Business Town District design guidelines. The Department also suggests that the project be sensitive to the existing Kulamalu design guidelines.

Thank you for the opportunity to comment. Should you require further clarification, please contact Staff Planner Gina Flammer by email at gina.flammer@mauicounty.gov or by phone at (808) 270-5780.

Sincerely,

Handwritten signature of Clayton I. Yoshida in black ink.

CLAYTON I. YOSHIDA, AICP
Planning Program Administrator

for WILLIAM SPENCE
Planning Director

Mr. Chester Koga, AICP
March 4, 2014
Page 2

xc: Gina M. Flammer, Staff Planner (PDF)
Jo-Ann Ridao, Director, Department of Housing and Human Concerns
Project File
General File

WRS:CIY:GMF:nt

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ALAN M. ARAKAWA
Mayor

DAVID C. GOODE
Director

ROWENA M. DAGDAG-ANDAYA
Deputy Director



GLEN A. UENO, P.E., P.L.S.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS

200 SOUTH HIGH STREET, ROOM NO. 434, WAILUKU, MAUI, HAWAII 96793

Telephone: (808) 270-7845 • Fax: (808) 270-7955

September 6, 2013

Mr. Chester Koga, AICP
Project Coordinator
R. M. TOWILL CORPORATION
2024 North King Street, Suite 200
Honolulu, Hawaii 96819-3494

Dear Mr. Koga:

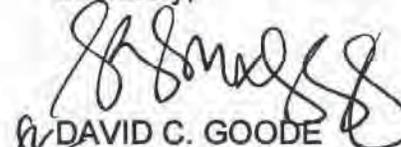
**SUBJECT: CONSULTATION FOR THE PROPOSED KULAMALU
AFFORDABLE HOUSING DRAFT ENVIRONMENTAL
ASSESSMENT; TMK: (2) 2-3-066:012, 013 AND 014**

We reviewed the subject application and have the following comment:

1. Currently all roads abutting the proposed development are privately owned and maintained, and as such, we have no comments. We recommend, however, that all landscaping planted adjacent to roadways and internal parking areas/sidewalks be provided with root barriers to reduce the potential for future problems associated with uplifted pavement and sidewalks.

Please call Rowena M. Dagdag-Andaya at (808) 270-7845 if you have any questions regarding this letter.

Sincerely,


DAVID C. GOODE
Director of Public Works

DCG:RMDA:ls

xc: Highways Division
Engineering Division

S:\LUCACZM\prop_kulamalu_afford_hsg_ec_23066012_013_014_ls.wpd

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Project and Construction Management

October 21, 2013

Mr. David Goode, Director
Department of Public Works
County of Maui
Kalana o Maui Building
200 South High Street, 4th Floor
Wailuku, Hawai'i 96793

Dear Mr. Goode:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated September 6, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

Currently all roads abutting the proposed development are privately owned and maintained, and as such, we have no comments. We recommend, however, that all landscaping planted adjacent to roadways and internal parking areas/sidewalks be provided with root barriers to reduce the potential for future problems associated with uplifted pavement and sidewalks.

Your recommendation for using root barriers on all landscaping planted adjacent to roadways and internal parking areas/sidewalks is noted and will be considered during the project design process.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata, Department of Housing and Human Concerns

ALAN M. ARAKAWA
Mayor



DAVID TAYLOR, P.E.
Director

PAUL J. MEYER
Deputy Director

DEPARTMENT OF WATER SUPPLY

COUNTY OF MAUI

200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
www.mauewater.org

September 20, 2013

Mr. Chester Koga, AICP, Project Coordinator
R. M. Towill Corporation
2024 North King Street, Ste. 200
Honolulu, HI 96819-3494

Dear Mr. Koga:

RE: Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066:012, 013, and 014, Makawao District, Maui, Hawai'i

Thank you for the opportunity to provide the following comments on the referenced project.

Background

The project site is served by the Department of Water Supply's (DWS) Lower Kula water system, 12-inch waterlines on Aapueo Parkway and Ohia Ku Street, fire hydrants numbers 473, 662, 663, 664, and 665, and four ¾-inch meters. Storage is provided by the one million gallon Kealaloa tank.

The consultant's projected water demand for the 64-unit project is estimated between 25,600-26,000 gallons per day or approximately 400 gallons per day per unit.

Conclusion and Recommendations

During the building permit process, the applicant will be required to submit domestic and irrigation calculations, approved, and stamped by a licensed architect or engineer, to determine the adequacy of the water meters for the project.

The DWS' goal is to protect the integrity of surface and groundwater resources. To achieve this, mitigation measures must be implemented to prevent any potential water pollution related impacts. Best management practices for construction should, therefore, be applied during construction.

The DWS encourages the applicant to consider the following measures in the

"By Water All Things Find Life"



Mr. Chester Koga
Page 2
September 20, 2013

project design, as well as during construction:

- Utilize reclaimed or non-potable water for dust control, irrigation, and other non-potable uses.
- Water after 7:00 p.m. at night and before 10:00 a.m. in the morning.
- Prevent over-watering by automated systems – Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect monthly changes in evaporation rates at the site. As an alternative, provide more automated, soil-moisture sensors on controllers.
- Maintain fixtures to prevent leaks – A simple, regular program of repair and maintenance can prevent the loss of hundreds or even thousands of gallons per day.
- Limit irrigated turf – Low-water use shrubs and ground cover can be equally attractive and require substantially less water than turf.
- Select climate adapted native plant species for landscaping – Native plants adapted to the area conserve water and protect the watershed from degradation due to invasive alien species.

Should you have any questions, please contact Arnold Y. Imae, Staff Planner at Arnold.Imae@maui.co.hi.us or at (808) 463-3110.

Sincerely,



David Taylor, P.E., Director
ayi

c: DWS Engineering Division
Jo-Ann Ridao, Director, Department of Housing and Human Concerns
DWS Water Resources & Planning Division files

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Project and Construction Management

October 21, 2013

Mr. David Taylor, Director
Department of Water Supply
County of Maui
Kalana o Maui Building
200 South High Street, 5th Floor
Wailuku, Hawai'i 96793

Dear Mr. Taylor:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated September 20, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

Conclusion and Recommendations

During the building permit process, the applicant will be required to submit domestic and irrigation calculations, approved, and stamped by a licensed architect or engineer, to determine the adequacy of the water meters for the project.

We acknowledge that all necessary documentation should be submitted in support of the building permit application.

Conclusion and Recommendations

The DWS' goal is to protect the integrity of surface and groundwater resources. To achieve this, mitigation measures must be implemented to prevent any potential water pollution related impacts. Best management practices for construction should, therefore, be applied during construction.

Mitigation measures will be implemented to prevent any potential water pollution related impacts. Best management practices (BMPs) for construction will be applied by the contractor during construction.

The DWS encourages the applicant to consider the following measures in the project design, as well as during construction:

- o Utilize reclaimed or non-potable water for dust control, irrigation, and other non-potable uses.*
- o Water after 7:00 p.m. at night and before 10:00 a.m. in the morning.*
- o Prevent over-watering by automated systems - Provide rain-sensors on all automated irrigation controllers. Check and reset controllers at least once a month to reflect monthly changes in evaporation rates at the site. As an alternative, provide more automated, soil-moisture sensors on controllers.*

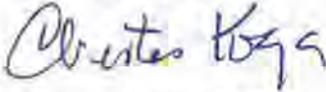
Mr. David Taylor
October 21, 2013
Page 2

- o Maintain fixtures to prevent leaks - A simple, regular program of repair and maintenance can prevent the loss of hundreds or even thousands of gallons per day.*
- o Limit irrigated turf - Low-water use shrubs and ground cover can be equally attractive and require substantially less water than turf.*
- o Select climate adapted native plant species for landscaping - Native plants adapted to the area conserve water and protect the watershed from degradation due to invasive alien species.*

The suggested mitigative measures above are noted. The investigation of alternatives to mitigate the potential for adverse impacts to water use and water quality in the Draft Environmental Assessment will include a description of BMPs to address these concerns.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,



Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

ALAN M. ARAKAWA
Mayor



DAVID TAYLOR, P.E.
Director

PAUL J. MEYER
Deputy Director

DEPARTMENT OF WATER SUPPLY
COUNTY OF MAUI
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2155
www.mauiwater.org

February 21, 2014

Mr. Chester Koga, AICP, Project Coordinator
R. M. Towill Corporation
2024 North King Street, Ste. 200
Honolulu, HI 96819-3494

Dear Mr. Koga:

RE: Draft Environmental Assessment for the Proposed Kulamalu Affordable
Housing Draft EA
TMK (2) 2-3-066:012, 013, and 014, Makawao District, Maui, Hawai'i

Thank you for the opportunity to provide the following comments on the
referenced project.

The Department of Water Supply (DWS) submitted a letter dated September 20,
2013 for the Consultation for the Proposed Kulamalu Affordable Housing Project
Draft EA. The DWS has no additional comments.

Should you have any questions, please contact Arnold Y. Imae, Staff Planner at
Arnold.Imae@maui.co.hi.us or at (808) 463-3110.

Sincerely,

A handwritten signature in cursive script, appearing to read "David Taylor".

David Taylor, P.E., Director

ayi

c: DWS Engineering Division
Jo-Ann Ridao, Director, Department of Housing and Human Concerns
DWS Water Resources & Planning Division files

"By Water All Things Find Life"



Chester Koga

From: Peter Davis <Peter.Davis@co.maui.hi.us>
Sent: Friday, August 30, 2013 8:43 AM
To: Chester Koga
Subject: Emailing: KD- Early Consultation for the proposed Kulamalu Affordable Housing DEA0.wpd
Attachments: WordPerfect 6.1

Sorry, the first letter was dated wrong.

The message is ready to be sent with the following file or link attachments:

KD- Early Consultation for the proposed Kulamalu Affordable Housing DEA0.wpd

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

Lt. P. Kono Davis

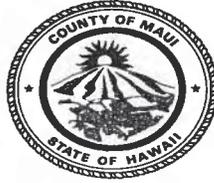
*County of Maui
Department of Fire
and Public Safety*

*Fire Prevention Bureau
313 Manea Pl.
Wailuku, HI 96793*

*808-244-9161 ext.25
808-244-1363 Fax
808-357-5036 Cell*

Peter.Davis@co.maui.hi.us

ALAN M. ARAKAWA
MAYOR



JEFFREY A. MURRAY
FIRE CHIEF

ROBERT M. SHIMADA
DEPUTY FIRE CHIEF

COUNTY OF MAUI
DEPARTMENT OF FIRE AND PUBLIC SAFETY
FIRE PREVENTION BUREAU

313 MANEA PLACE . WAILUKU, HAWAII 96793
(808) 244-9161 . FAX (808) 244-1363

March 6, 2014

To : R.M. Towill Corporation
Chester Koga, AICP
2024 North King Street, Suite 200
Honolulu, HI 97819

Re : Proposed Kulamalu Affordable Housing
Joint NEPA-HEPA Draft EA
Makawao District, Maui, Hawaii
(2) 2-3-066:012, 013 and 014

Dear Chester:

Thank you for the opportunity to comment on this subject. At this time, our office provides the following comments:

- Our office has no specific comments in regards to the Joint NEPA-HEPA Draft Environmental Assessment.
- Our office does reserve the right to comment on the proposed project during the building permit review process when fire department access, water supply for fire protection, and fire and life safety requirements will be addressed.

If there are any questions or comments, please feel free to contact me at 244-9161 ext. 23.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Haake".

Paul Haake
Captain, Fire Prevention Bureau



ALAN M. ARAKAWA
MAYOR

OUR REFERENCE
YOUR REFERENCE

POLICE DEPARTMENT

COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411

March 6, 2014



GARY A. YABUTA
CHIEF OF POLICE

CLAYTON N.Y.W. TOM
DEPUTY CHIEF OF POLICE

Mr. Chester Koga, AICP
Project Coordinator
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, HI 96819-3494

Dear Mr. Koga:

SUBJECT: Public Review of Joint NEPA-HEPA
DEA for the proposed Kulamalu Affordable Housing project

This is in response to your letter dated February 13, 2014, requesting comments and information on the above project.

We have reviewed the information submitted and have enclosed a copy of a report submitted by Officer Jan Pontanilla from the Wailuku District.

Thank you for giving us the opportunity to comment on this project.

Sincerely,

Assistant Chief Victor K. Ramos
for: Gary A. Yabuta
Chief of Police

c: William Spence, Dept. of Planning
Jo-Ann Ridao, Dept. of Housing and Human Concerns

Enclosure

TO : GARY YABUTA, CHIEF OF POLICE, COUNTY OF MAUI

VIA : CHANNELS

FROM : JAN PONTANILLA, POIII, COMMUNITY POLICE OFFICER

SUBJECT : PUBLIC REVIEW OF DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR
PROPOSED KULAMALU AFFORDABLE HOUSING, ISLAND OF MAUI, HAWAII

Concern Ad. 3/6/14

This communication is submitted as a response to a request for review and comment for public review of Draft Environmental Assessment (DEA) for proposed Kulamalu Affordable Housing on the Island of Maui, Hawaii. The request was sent by Chester KOGA of R. M. Towill Corporation, AICP, Project Coordinator. As previously addressed the concerns remain the same.

PROJECT : Proposed Kulamalu Affordable Housing

APPLICANT : Department of Housing and Human Concerns
County of Maui
Attention: Jo-Ann RIDAO, Director of DHHC

CONSULTANT : R. M. Towill Corporation
Attention: Chester Koga

PROJECT INFORMATION:

The proposed Kulamalu Affordable Housing project consists of the building of four two-story buildings with 64 housing units, a community center, 133 parking stalls, one loading zone and two concrete driveways on a 4.179 acre project site located in Pukalani within the Kulamalu Town Center. This project expects each unit to only house about two residents per household increasing the population to about 128 therefore not significantly altering the need for police protection. The project is scheduled to begin in late to mid 2014.

The project is located within the 53.67 acre Kulamalu Town Center, TMK (2) 2-3-006:012, 013, and 014. This project will be located on the corner of 'A'a Pueo Parkway and Ohī'a Ku Street, across from the University of Hawaii Astronomy Center.

RESPONSE:

In review of the submitted documents, concerns from the police perspective are upon the safety of pedestrian and vehicular movement and with the expansion of the population in the area, additional police protection may be required for the area. There will be an increase in pedestrian and vehicular traffic in the Kulamalu area as a result of the project as well as another proposed project of an elderly housing complex. The affordable housing currently estimates each unit housing only 2 (two) occupants however, many homes

house several occupants, including children. The increased population would be estimated at more than 128. Many families also have multiple cars which would increase traffic in this area.

Currently, there are sidewalks, lighting and one exit/entry into Kulamalu area via the intersection of 'A'apueo Parkway and Kula Highway that is used. There is no other alternative routes. Due to the current heavy traffic flow during the before and after school and work hours in this area, I would recommend that an alternative exit/entry into the Kulamalu Area be developed to include another alternative route to the proposed project so traffic may avoid 'A'apueo Parkway which access to Kamehameha Schools is made. This additional housing as well as the additional housing for proposed elderly home, will affect calls for service as well as congest traffic further.

CONCLUSION:

There are no objections to the progression of this project at this time however, from the police standpoint, in regards to pedestrian and vehicular movement, it is recommended that alternative routes be examined for smooth flow and avoidance of any further congestion.

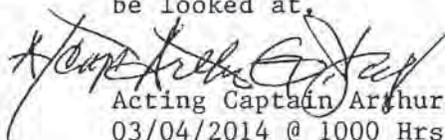
Respectfully Submitted,



Officer J. Pontanilla E-15061
Community Oriented Police
030414 @ 1405 hours

MJP 3/4/14
03/04/2014

This is the second request for comments pertaining to this project and it is recommended that an alternative route as stipulated in this communication be looked at.



Acting Captain Arthur G. DADEZ E-8480
03/04/2014 @ 1000 Hrs

ALAN M. ARAKAWA
Mayor

WILLIAM R. SPENCE
Director

MICHELE CHOUTEAU McLEAN
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PLANNING

November 21, 2013

Mr. Chester Koga, AICP
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, Hawaii 96819

Dear Mr. Koga:

SUBJECT: EARLY CONSULTATION ON PROPOSED KULAMALU AFFORDABLE HOUSING DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR PROPERTY LOCATED AT PUKALANI, ISLAND OF MAUI, HAWAII; TMKS: (2) 2-3-066:012, 013, AND 014 (RFC 2013/0123)

The Department of Planning (Department) is in receipt of the above-referenced request for comments on the preparation of a Draft EA. It is noted that the purpose of the project is to alleviate some of the demand for affordable housing on Maui. The Department supports the purpose of this project.

Please note that the project area has the following land use designations:

State Land Use District:	Urban
Community Plan Designation:	Business Commercial
County Zoning:	B-CT Country Town Business District
Maui Island Plan:	Located with in an urban growth boundary

As stated in your request letter, the proposed project conforms to these designations. In addition to addressing the project's conformance to these designations, please also specifically address the B-CT Country Town Business District zoning intent of retaining the area's small town rustic nature, as well as the specific design guidelines. The Department also suggests that the project be sensitive to the existing Kulamalu design guidelines. Below are additional comments which should be included in the Draft EA:

- Address the Countywide Policy Plan policies, goals and objectives as they relate to the project;
- Address the Maui Island Plan policies, goals, and objectives relevant to this project;
- Address the Makawao-Pukalani-Kula Community Plan objectives, policies and guidelines as they relate to the project;
- Address the availability of water upcountry and the project's water source;

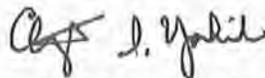
Mr. Chester Koga, AICP
November 21, 2013
Page 2

- Identify the wastewater treatment facility to be used for the project;
- Identify the specific units types, such as the number of bedrooms, square footage, etc.;
- Identify which schools will service the community and a safe pedestrian and/or bicycle route to the near by high schools;
- Please identify any pedestrian pathways or bikeways and how residents will access the neighboring commercial areas of Kulamalu; and
- Please also identify safe pedestrian access to the current bus stop, and if applicable, any discussions with the County Department of Transportation and the Kulamalu development owners to locate a bus stop closer to the project.

It is also noted that the Flood Hazard Area Zone is X for all three (3) parcels and that none of the parcels are located in a floodway and the project will not require a flood development permit. The project area is also not located in the special management area or any historic districts.

Thank you for the opportunity to comment. Should you require further clarification, please contact Staff Planner Gina Flammer by email at gina.flammer@mauicounty.gov or by phone at (808) 270-5780.

Sincerely,



CLAYTON I. YOSHIDA, AICP
Planning Program Administrator

for WILLIAM SPENCE
Planning Director

xc: Gina M. Flammer, Staff Planner (PDF)
Jo-Ann Ridao, Director, Department of Housing and Human Concerns
Project File
General File

WRS:CIY:GMF:nt

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2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
SINCE 1930

Planning
Engineering
Environmental Services
Photogrammetry
Surveying
Project and Construction Management

January 22, 2014

Mr. William Spence, Planning Director
Planning Department
County of Maui
Kalana Pakui Building
200 South High Street, Suite 315
Wailuku, Hawai'i 96793

Dear Mr. Spence:

**EARLY CONSULTATION ON PROPOSED KULAMALU AFFORDABLE
HOUSING DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR
PROPERTY LOCATED AT PUKALANI, ISLAND OF MAUI, HAWAII;
TMKS: (2) 2-3-066:012, 013, AND 014 (RFC 2013/0123)**

Thank you for your letter dated November 21, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

Please note that the project area has the following land use designations:

<i>State Land Use District:</i>	<i>Urban</i>
<i>Community Plan Designation:</i>	<i>Business Commercial</i>
<i>County Zoning:</i>	<i>B-CT Country Town Business District</i>
<i>Maui Island Plan:</i>	<i>Located with in an urban growth boundary</i>

As stated in your request letter, the proposed project conforms to these designations.

We acknowledge that proposed project is conformant with the land use designations.

In addition to addressing the project's conformance to these designations, please also specifically address the B-CT Country Town Business District zoning intent of retaining the area's small town rustic nature, as well as the specific design guidelines. The Department also suggests that the project be sensitive to the existing Kulamalu design guidelines. Below are additional comments which should be included in the Draft EA:

- Address the Countywide Policy Plan policies, goals and objectives as they relate to the project;*
- Address the Maui Island Plan policies, goals, and objectives relevant to this project;*

- *Address the Makawao-Pukalani-Kula Community Plan objectives, policies and guidelines as they relate to the project;*
- *Address the availability of water upcountry and the project's water source;*
- *Identify the wastewater treatment facility to be used for the project;*
- *Identify the specific units types, such as the number of bedrooms, square footage, etc.;*
- *Identify which schools will service the community and a safe pedestrian and/or bicycle route to the near by high schools;*
- *Please identify any pedestrian pathways or bikeways and how residents will access the neighboring commercial areas of Kulamalu; and*
- *Please also identify safe pedestrian access to the current bus stop, and if applicable, any discussions with the County Department of Transportation and the Kulamalu development owners to locate a bus stop closer to the project.*

Chapter seven, Relationship to Land Use Plans, Policies and Controls of the Potentially Affected Area, within the HRS 343, Draft Environmental Assessment addresses the proposed project's conformity to all applicable County, Island and Community planning documents. In addition, the proposed project's potable water source will be derived from the Wailoa Ditch. Projected water usage for the proposed project ranges between 15,000 to 18,000 gallons per day (gpd) on average with peak days at 18,000 to 20,000 gpd. Recent water quantity and quality testing confirms adequate capacity and good quality of drinking water sources in the Makawao-Kula-Pukalani District.

Wastewater generated by the proposed project will go to its sewer collection system that will connect to the privately owned and operated Hawai'i Water Services treatment facility.

Specific unit types that will be featured at the Kulamalu Affordable Housing project includes 1 bedroom/1 bathroom and 2 bedroom/1 bathroom units. The one bedroom units will have living room space of 593 square feet (sf), 595 sf, and 634 sf. The two bedroom units will have living room spaces ranging from 702 sf to 812 sf. A total of 12 1 bedroom/1 bathroom units, and a total of 24 2 bedroom/2 bathroom units will be construction at Kulamalu Affordable Housing.

Public schools that will service the community includes Pukalani Elementary School, Makawao Elementary School, Samuel Enoka Kalama Intermediate School and Kekaulike High School. According to the Department of Education (DOE), there is sufficient space in the DOE schools that serve Pukalani to accommodate student who will live in the Kulamalu Affordable Housing project.

Mr. William Spence, Planning Director
01/22/2014
Page 3

Existing pedestrian pathways include sidewalks around the project site on 'Ōhi'a Ku Street and 'A'apueo Parkway. Nearby crosswalks are located at the juncture of 'Ōhi'a Ku Street and 'A'apueo Parkway, 'A'apueo Parkway and Kupaoa Street, and 'A'apueo Parkway and Kula Highway. The Maui Bus-Commuter Service, Kula Villager Route #40, has a bus stop fronting Longs Kulamalu on Kula Highway. This bus route links up with the transfer station, the Pukalani Terrace Shopping Center, where the Maui Public Bus Transit System, Upcountry Islander, Route #40 also stops at. Officially designated bike paths are absent from the proposed project's surrounding streets, however, according to state law, bicyclists have the right to occupy a full lane of traffic as it is legally considered a vehicle and must abide by the same rules and regulations of driving as motorized vehicles.

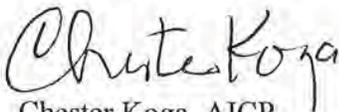
In addition, the County of Maui is currently looking into the possibility of providing one or more school bus pick up/drop off areas on peripheral roadways in order to mutually benefit the community within the Kulamalu Subdivision.

It is also noted that the Flood Hazard Area Zone is X for all three (3) parcels and that none of the parcels are located in a floodway and the project will not require a flood development permit. The project area is also not located in the special management area or any historic districts.

We acknowledge your concurrence that the proposed project is not located within a floodway, a special management area or a historic district.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,



Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

Police Department

Date: August 30, 2013

To: R.M. Towill Corporation
Chester Koga, AICP
2024 North King Street, suite 200
Honolulu, HI 97819

Subject: Early Consultation for the proposed Kulamalu Affordable Housing DEA
Makawao District, Maui, Hawaii
(2) 2-3-066:012, 013 and 014

Dear Chester,

Thank you for allowing the Fire Prevention Bureau the opportunity to comment on the above said project. Our department reserves the right to comment officially during the plan review process.

If there are more than 14 dwelling units in one building, the possibility of fire sprinklers for fire protection may be implemented. Without seeing an actual plan, we can safely say that the fire flow for this project may range between 1500 GPM's to 2000 GPM's, depending on the approach of the fire protection.

Please be aware that by June of 2014, the County of Maui, will be under a new fire code with amendments. The Hawaii State Fire Code, based on the NFPA 1 Uniformed Fire Code 2006, along with the County of Maui's amendments will be in effect.

If there are any questions, please feel free to contact me by mail or at 244-9161 ext. 25.

Sincerely,

Kono Davis
Lieutenant, Fire Prevention Bureau

cc: Jo-Ann Ridao, Director
Department of Housing & Human Concerns
County of Maui
313 Manea Place
Wailuku, HI 96793

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



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Planning
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Project and Construction Management

October 21, 2013

Mr. Jeffrey A. Murray, Fire Chief
Fire and Public Safety
County of Maui
200 Dairy Road
Kahului, Hawai'i 96733

Dear Mr. Murray:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated August 30, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

Our department reserves the right to comment officially during the plan review process.

Your right to comment officially during the plan review process is acknowledged. You will receive a copy of the Draft Environmental Assessment upon its availability.

If there are more than 14 dwelling units in one building, the possibility of fire sprinklers for fire protection may be implemented. Without seeing an actual plan, we can safely say that the fire flow for this project may range between 1500 GPMs to 2000 GPMs, depending on the approach of the fire protection.

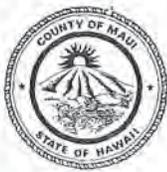
For buildings comprised of more than 14 dwelling units, the use of fire sprinklers will be considered among the possible options for fire protection. Fire protection that is provided for Kulamalu Affordable Housing will comply with the most up to date County of Maui Code.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui



ALAN M. ARAKAWA
MAYOR

OUR REFERENCE
YOUR REFERENCE

POLICE DEPARTMENT

COUNTY OF MAUI

55 MAHALANI STREET
WAILUKU, HAWAII 96793
(808) 244-6400
FAX (808) 244-6411



GARY A. YABUTA
CHIEF OF POLICE

CLAYTON N.Y.W. TOM
DEPUTY CHIEF OF POLICE

September 13, 2013

Mr. Chester Koga, AICP
Project Coordinator
R.M. Towill Corporation
2024 North King Street, Suite 200
Honolulu, HI 96819-3494

Dear Mr. Koga:

SUBJECT: Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013, and 014, Makawao District

This is in response to your letter dated August 13, 2013, requesting comments and information on the above project.

We have reviewed the information submitted and have enclosed a copy of a report submitted by Officer Marjorieann Kahookele-Pea from the Wailuku District.

Thank you for giving us the opportunity to comment on this project.

Sincerely,

Assistant Chief Victor K. Ramos
for: Gary A. Yabuta
Chief of Police

c: William Spence, Dept. of Planning
Jo-Ann Ridao, Dept. of Housing and Human Concerns

Enclosure

TO : GARY YABUTA, CHIEF OF POLICE, COUNTY OF MAUI

VIA : CHANNELS

FROM : MARJORIEANN KAHOOKELE-PEA, POIII, COMMUNITY POLICE OFFICER

**SUBJECT : PUBLIC REVIEW OF DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR
PROPOSED KULAMALU AFFORDABLE HOUSING, ISLAND OF MAUI, HAWAII**

Approved A.C.P. 9/16/13

This communication is submitted as a response to a request for review and comment for public review of Draft Environmental Assessment (DEA) for proposed Kulamalu Affordable Housing on the Island of Maui, Hawaii. The request was sent by Chester KOGA of R. M. Towill Corporation, AICP, Project Coordinator.

PROJECT : Central Maui Regional Park
TMK # : (2) 3-8-007:101
APPLICANT : Department of Housing and Human Concerns
County of Maui
Attention: Jo-Ann RIDAO, Director of DHHC
CONSULTANT : R. M. Towill Corporation
Attention: Chester Koga

PROJECT INFORMATION:

The proposed Kulamalu Affordable Housing project consists of the building of four two-story buildings with 64 housing units, a community center, 133 parking stalls, one loading zone and two concrete driveways on a 4.179 acre project site located in Pukalani within the Kulamalu Town Center. This project expects each unit to only house about two residents per household increasing the population to about 128 therefore not significantly altering the need for police protection. The project is scheduled to begin in late to mid 2014.

The project is located within the 53.67 acre Kulamalu Town Center, TMK (2) 2-3-006:012, 013, and 014. This project will be located on the corner of 'A'a Pueo Parkway and Ohia' Ku Street, across from the University of Hawaii Astronomy Center.

RESPONSE:

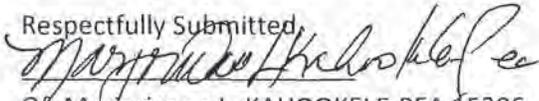
In review of the submitted documents, concerns from the police perspective are upon the safety of pedestrian and vehicular movement and with the expansion of the population in the area, additional police protection may be required for the area. There will be an increase in pedestrian and vehicular traffic in the Kulamalu area as a result of the project as well as another proposed project of an elderly housing complex. The affordable housing currently estimates each unit housing only 2 (two) occupants however, many homes house several occupants, including children. The increased population would be estimated at more than 128. Many families also have multiple cars which would increase traffic in this area.

Currently, there are sidewalks, lighting and one exit/entry into Kulamalu area via the intersection of 'A'apueo Parkway and Kula Highway that is used. There is no other alternative routes. Due to the current heavy traffic flow during the before and after school and work hours in this area, I would recommend that an alternative exit/entry into the Kulamalu Area be developed to include another alternative route to the proposed project so traffic may avoid 'A'apueo Parkway which access to Kamehameha Schools is made. This additional housing as well as the additional housing for proposed elderly home, will affect calls for service as well as congest traffic further.

CONCLUSION:

There are no objections to the progression of this project at this time however, from the police standpoint, in regards to pedestrian and vehicular movement, it is recommended that alternative routes be examined for smooth flow and avoidance of any further congestion.

Respectfully Submitted



Of. Majorieann L. KAHOOKELE-PEA 15206

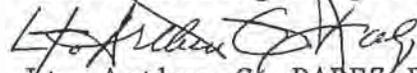
Community Oriented Police

September 3rd, 2013 @ 1142 Hours

SUGGEST THE RECOMMENDATIONS
PROVIDED BY OFF KAHOOKELE-PEA
BE TAKEN INTO CONSIDERATION.

Sgt. Mark John Vidulich
4-5-13 @ 1500

Officer KAHOOKELE-PEA addresses several significant concerns regarding an environmental assessment of the Kulamalu Affordable Housing Project.



Lt. Arthur G. DADEZ E-8480
09/07/2013 @ 0512 Hrs

For review of
Comments submitted
OK
9/13/13

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
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Photogrammetry
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Project and Construction Management

October 21, 2013

Mr. Gary Yabuta, Chief of Police
Police Department
County of Maui
255 Mahalani Street
Wailuku, Hawai'i 96793

Dear Mr. Yabuta:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated September 13, 2013 and for forwarding Community Police Officer Majorieann Kahookele-Pea's letter dated September 10, 2013. We have prepared the following in response to your comments (your comments have been italicized for reference):

In review of the submitted documents, concerns from the police perspective are upon the safety of pedestrian /and vehicular movement and with the expansion of the population in the area, additional police protection may be required for the area. There will be an increase in pedestrian and vehicular traffic in the Kulamalu area as a result of the project as well as another proposed project of an elderly housing complex. The affordable housing currently estimates each unit housing only 2 (two) occupants however, many homes house several occupants, including children. The increased population would be estimated at more than 128. Many families also have multiple cars which would increase traffic in this area.

We acknowledge your concerns about the potential need for expanded police protection to maintain the safety of pedestrians and vehicles. The Draft Environmental Assessment will address all necessary and feasible precautions to ensure that pedestrian and vehicular traffic will not impose an additional burden on police service in the area.

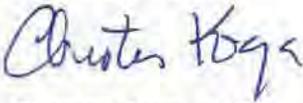
Currently, there are sidewalks, lighting and one exit/entry into Kulamalu area via the intersection of 'A'apueo Parkway and Kula Highway that is used. There is no other alternative routes. Due to the current heavy traffic flow during the before and after school and work hours in this area, I would recommend that an alternative exit/entry into the Kulamalu Area be developed to include another alternative route to the proposed project so traffic may avoid 'A'apueo Parkway which access to Kamehameha Schools is made. This additional housing as well as the additional housing for proposed elderly home, will affect calls for service as well as congest traffic further.

Mr. Gary Yabuta, Chief
Page 2

We acknowledge your concerns regarding the potential for increased vehicular traffic within the intersection of 'A'apueo Parkway and Kula Highway. Due to budgetary constraints of the proposed affordable housing project, it is infeasible to construct an alternative intersection to the 'A'apueo Parkway and Kula Highway.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,



Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

Organizations and Individuals Consultations

- Dowling Co., Inc.
- Hawaiian Telecom
- Kula Community Association

Dowling Co., Inc.



August 19, 2013

Mr. Chester Koga
R.M. Towill Corporation
2024 N. King Street, Suite 200
Honolulu, HI 96819

Subject: Proposed County of Maui Kulamalu Affordable Housing Project

Dear Mr. Koga,

Thank you for the opportunity to comment prior to the preparation of a Draft Environmental Assessment for the proposed County of Maui Project.

We are in support of this 64-unit affordable housing Project in Kulamalu. The Upcountry area has limited opportunities for affordable housing both for sale or rental and the Project is sorely needed for the community. The Project site within Kulamalu is conveniently located. It is within walking distance to schools, parks and retail services such as Long's Drugs.

Sincerely,

A handwritten signature in black ink, appearing to read "Everett R. Dowling".

Everett R. Dowling
President

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
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Project and Construction Management

October 21, 2013

Mr. Everett Dowling, President
Dowling Company, Inc.
2005 Main Street
Wailuku, Hawai'i 96793

Dear Mr. Dowling:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated August 19, 2013, concerning the proposed project. We acknowledge your support for the proposed project.

We appreciate this opportunity to respond to your comments. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

A handwritten signature in blue ink that reads "Chester Koga". The signature is written in a cursive, flowing style with a prominent initial "C".

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

August 22, 2013

R.M. Towill Corporation
2024 N. King St. Suite 200
Honolulu, HI 96819-3494

ATTN: Chester Koga, AICP

SUBJECT: CONSULTATION FOR THE PROPOSED KULAMALU AFFORDABLE
HOUSING DRAFT EA, MAKAWAO DISTRICT, MAUI, HAWAII
TMK: (2) 2-3-006:012, 013, 014

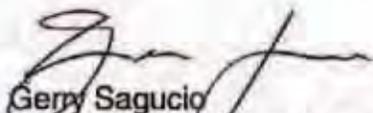
Dear Mr. Koga:

Thank you for providing Hawaiian Telcom Incorporated, the opportunity to comment on the Consultation for the proposed Kulamalu Affordable Housing Draft EA in the district of Makawao on the Island of Maui.

Hawaiian Telcom has no comments on this project at this time.

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

Sincerely,



Gerry Sagucio
Sr. Manager - Network Engineering
C: File (3050 1308-033)
S. Tihada

2024 North King Street
Suite 200
Honolulu, Hawaii 96819-3494
Telephone 808 842 1133
Fax 808 842 1937
eMail rmtowill@hawaii.rr.com



R. M. TOWILL CORPORATION
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Project and Construction Management

October 21, 2013

Mr. Eric K. Yeaman
President and Chief Executive Officer
Hawaiian Telecom
1177 Bishop Street
Honolulu, Hawai'i 96732

Dear Mr. Yeaman:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated August 22, 2013, concerning the proposed project. We acknowledge that you do not have any comments to offer at this time.

We appreciate your review of the proposed project. Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,

Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridao, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

KULA COMMUNITY ASSOCIATION

P.O. Box 417 - Kula, HI 96790

Website: <http://kulamaui.com>

The vision of the Kula Community Association is to preserve open space, support agriculture, maintain a rural residential atmosphere, and to work together as a community.

The specific purpose of this association is to improve the quality of life for the residents of Kula, to promote civic welfare, and generally to benefit the community of Kula.

RE: Proposed Kulamalu Affordable Housing Draft EA

September 12, 2013

Mahalo for allowing the Kula Community Association to comment at an early stage in the planning for this project. We ask that you consider our comments:

- 1. The Kula Community Association is strongly in favor of a project that will provide more affordable homes in the upcountry district.**
- 2. We believe that this location has several advantages: a) near Longs Pharmacy; b) close to the County's Kula bus route; c) near King Kekaulike High School; and d) in proximity to a large recreational ball field.**
- 3. We ask that the Environmental Assessment specifically consider the following:**
 - i. The availability of water and whether it is proper to jump ahead of upcountry residents who have been waiting many years for a water-meter.**
 - ii. The interaction between this project and the large, proposed Hui Mahaolu Senior citizen project that will be built across the street and immediately in front of the main entrance to the affordable housing project. Discuss traffic issues for both projects on that street and where Aapueo Drive intersects with Kula Highway.**
 - iii. The potential for the County's "Maui Bus" (Kula bus route) to enter the Kulamalu project and to come even closer to this affordable housing project and to the adjacent Hui Mahaolu senior housing.**
 - iv. Identification of which elementary school will be impacted and how impacted.**
 - v. The ability of school busses to enter this project and safely pick up students, especially young ones. Will a bus shelter be provided in this windy and often rainy location?**
 - vi. The EA should indicate the use of the three other parcels on this super-block. Will there be any kind of incompatibility or negative interaction (undesirable commercial activities, since these lots are zoned commercial)?**

vii. Provide examples of existing housing projects on Maui that have comparable densities of 64 units on less than 5 acres. What are the issues that have arisen with such a high density (particularly in an affordable housing environment)? And would it be possible to spread the project over a larger area by adding at least some of the adjoining vacant parcels to the immediate east of this proposed small 4.2 acre site?

viii. How will wastewater be handled? With a connection to the private Pukalani Treatment plant? If 'no', where will it go since the 4.2 acre site is fully occupied with housing?

ix. The diagram which was sent to us indicates a packed parking lot. Will fire trucks be able to easily get to the most distant houses if a fire were to occur at night when all the parking stalls would be full?

xii. The cover letter that we received made no mention of the type of units being made available. The EA should make clear the number of one, two and three bedroom units; the ownership vs. rental availability, etc.

xi. It is so difficult to get affordable housing built on Maui and particularly upcountry. What provision is being made for keeping these units affordable in perpetuity?

xii. Describe what happens when an owner or tenant wants to sell or leave. How will that unit be made available to another family meeting the income requirements?

xii. It needs to be made clear how the housing will be managed: at a County office? On-site? Who will be responsible? Will there be any kind of Homeowner's Association? Required? Permitted? or Encouraged?

4. Please do not let our long list of comments give you the impression that the Kula Community Association opposes this worthwhile project. We have been asked to give this early input into the planning process and hope to make this project a wonderful addition to our upcountry housing mix.

If you need to contact us, please email;

our KCA president, Shelley Maddigan shelley@kula.us

our Vice-President Bobbie Patnode bobbiepatnode@fastmail.fm

and Boardmember Dick Mayer dickmayer@earthlink.net cell 283-4376



October 21, 2013

Ms. Shelley Maddigan, Chair
Kula Community Association
P.O. Box 417
Kula, Hawai'i 96790

Dear Ms. Maddigan:

**Consultation for the Proposed Kulamalu Affordable Housing Draft EA
TMK (2) 2-3-066: 012, 013 and 014, Makawao District, Maui, Hawai'i**

Thank you for your letter dated September 12, 2013, concerning the proposed project. We have prepared the following in response to your comments (your comments have been italicized for reference):

1. *The Kula Community Association is strongly in favor of a project that will provide more affordable homes in the upcountry district.*

Your support for affordable housing projects in the upcountry district is acknowledged.

2. *We believe that this location has several advantages: a) near Longs Pharmacy; b) close to the County's Kula bus route; c) near King Kekaulike High School; and d) in proximity to a large recreational ball field.*

We acknowledge your support of the proposed project's location due to its proximity to Longs Pharmacy, the County of Maui's bus route, King Kekaulike High School, and a large recreational ball field.

3. *We ask that the Environmental Assessment specifically consider the following:*
 - i. *The availability of water and whether it is proper to jump ahead of upcountry residents who have been waiting many years for a water-meter.*

The proposed project has three pre-existing water meters that were included in the original purchase of the properties. This eliminates the need to place the proposed project on the Upcountry water meter priority list. The Kulamalu Affordable Housing project is compliant with all the rules and regulations of the Department of Water Supply.

- ii. *The interaction between this project and the large, proposed Hale Mahaolu Senior citizen project that will be built across the street and immediately in front of the main entrance to the affordable housing project. Discuss traffic issues for both projects on that street and where Aapueo Drive intersects with Kula Highway.*

We acknowledge your concerns regarding traffic near the proposed project and the intersection of A'apueo Parkway and Kula Highway. The Draft Environmental Assessment for the proposed Kulamalu Affordable Housing project will include a discussion of traffic impacts. The Kulamalu Subdivision was master planned to include roadways that possess a maximum density to accommodate for future development within the Subdivision. The proposed Kulamalu Affordable Housing project will therefore not increase traffic densities because they are accounted for in the Kulamalu Subdivision master plan.

The planning of the adjacent Hale Mahaolu Senior citizen project has not yet involved the publication of a Draft Environmental Assessment. Until the Hale Mahaolu Senior citizen project has released its design details it is not possible to comment on the project's specifications. However, traffic densities introduced by the Hale Mahaolu Senior citizen project will also be within the maximum density capacity provided by the Subdivision's existing roadways.

- iii. The potential for the County's "Maui Bus" (Kula bus route) to enter the Kulamalu project and to come even closer to this affordable housing project and to the adjacent Hale Mahaolu senior housing.*

The County of Maui, Department of Housing and Human Concerns, and the County of Maui Department of Transportation are currently working on establishing a bus route within the Kulamalu Subdivision. The Draft Environmental Assessment for the Kulamalu Affordable Housing will address bus routes near the project site.

- iv. Identification of which elementary school will be impacted and how impacted.*

According to the Department of Education (DOE), there is sufficient space in DOE schools that serve Pukalani to accommodate students who will live in the project.

- v. The ability of school busses to enter this project and safely pick up students, especially young ones. Will a bus shelter be provided in this windy and often rainy location?*

The proposed Kulamalu Affordable Housing project will not incorporate a bus stop. The County of Maui is currently looking into the possibility of providing one or more school bus pick up/drop off areas on peripheral roadways in order to mutually benefit the community within the Kulamalu Subdivision.

- vi. The EA should indicate the use of the three other parcels on this super-block. Will there be any kind of incompatibility or negative interaction (undesirable commercial activities, since these lots are zoned commercial)?*

The use of the other parcels on the subject property are currently unknown, they however are also located within the State Land Use "Urban" designation and the County of Maui's "County Business Town" district, whereby a mixture of residential, schools, and rural service/commercial centers are permissible uses.

- vii. Provide examples of existing housing projects on Maui that have comparable densities of 64 units on less than 5 acres. What are the issues that have arisen with such a high density (particularly in an affordable housing environment)? And would it be possible to spread the project over a larger area by adding at least some of the adjoining vacant parcels to the immediate east of this proposed small 4.2 acre site?*

We are not familiar with specific housing projects with comparable densities on Maui. However, many multi-family projects can be expected to have similar densities. Please note that earlier development plans proposed 85 market priced units on the same site. Since purchasing the property for affordable housing, the County has reduced the number of units to 64. Typical issues that may arise with higher density housing are demands on infrastructure and management of the completed project. Infrastructure for the Kulamalu Commercial Subdivision was designed to accommodate the cumulative development of all properties within the subdivision; therefore, no infrastructure problems are anticipated. The Department of Housing and Human Concerns will be responsible for property management and intends to contract with a private property manager with extensive experience in affordable housing. Consideration is also being given for a live-in property manager to ensure proper management 24/7.

Spreading the proposed project's boundaries beyond its 4.179 acres is infeasible due to topographical and financial constraints. The adjoining vacant parcels are not owned by the County of Maui.

- viii. How will wastewater be handled? With a connection to the private Pukalani Treatment plant? If 'no', where will it go since the 4.2 acre site is fully occupied with housing?*

Wastewater will be handled appropriately by a privately owned waste management company.

- ix. The diagram which was sent to us indicates a packed parking lot. Will fire trucks be able to easily get to the most distant houses if a fire were to occur at night when all the parking stalls would be full?*

The proposed project, as with all new projects, must comply with the County of Maui Fire Code which mandates specifications for ingress and egress for fire trucks, and that the path of fire trucks cannot be obstructed in any way. The proposed Kulamalu Affordable Housing project will comply with all of the Fire Protection Bureau's rules and regulations related to access and turning radii for fire trucks.

- x. The cover letter that we received made no mention of the type of units being made available. The EA should make clear the number of one, two and three bedroom units; the ownership vs. rental availability, etc.*

The Draft Environmental Assessment will identify the types of units that will be available in the Kulamalu Affordable Housing project.

- xi. It is so difficult to get affordable housing built on Maui and particularly upcountry. What provision is being made for keeping these units affordable in perpetuity?*

Chair Shelley Maddigan
October 21, 2013
Page 4

Under the County of Maui Code 3.35.010, County funded affordable housing projects must be protected and remain affordable.

- xii. Describe what happens when an owner or tenant wants to sell or leave. How will that unit be made available to another family meeting the income requirements?*

Kulamalu Affordable Housing units will consist of rental units only. Units at the proposed Kulamalu Affordable Housing project will be made available for rent to individuals who have successfully completed the housing application process. Tenants who meet the income criteria will be accepted on an as needed basis when there are vacant units available for rent.

- xiii. It needs to be made clear how the housing will be managed: at a County office? On-site? Who will be responsible? Will there be any kind of Homeowner's Association? Required? Permitted? or Encouraged?*

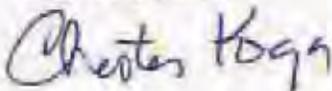
The proposed Kulamalu Affordable Housing project will be managed by a third party property manager with extensive experience in affordable housing management. The County of Maui, Department of Housing and Human Concerns is also considering having an on-site live-in property manager.

- xiv. Please do not let our long list of comments give you the impression that the Kula Community Association opposes this worthwhile project. We have been asked to give this early input into the planning process and hope to make this project a wonderful addition to our upcountry housing mix.*

We acknowledge your comments and appreciate your support for the proposed project.

Should you wish to provide further input to the proposed project, please contact the undersigned.

Very truly yours,



Chester Koga, AICP
Project Coordinator

cc: Jo-Ann Ridaio, Director; Alan Murata
Department of Housing and Human Concerns, County of Maui

Dick Mayer, Chair of Planning
Kula Community Association

March 7, 2014

To: Chester Koga
R.M. Towill Corporation
2024 North King Street, suite 200
Honolulu, HI 96819-3494

From: Naomi Ashman
PO Box 880719
Pukalani, HI 96788

Subject: Objections to Affordable Housing in Kula Malu

Aloha. My name is Naomi Ashman and I am writing about the proposed affordable housing development in Kula Malu.

My concern about this development as I expressed at the hearing that was held prior to the county purchasing the property is about the traffic congestion. With proposed parking of 128-133 stalls, it will increase the congestion not only on 'A'apueo Parkway during school and rush hour traffic commute times but also onto Kula Highway which has King Kekaulike and Carden Academy school traffic added to it.

When trying to turn left from Kula Highway onto 'A'apueo Parkway in the morning it sometimes takes 2-3 green lights to get through. The line of cars from Kamehameha in the morning is backed up past the school gate on most mornings. What will happen when 100+ cars are added into the traffic backup? it will increase the traffic because many of the occupants of these units will be working people.

When the traffic study was done a number of years ago it was done during the spring break. The lines were out and I mentioned to my husband that it was not a good time to get an accurate traffic flow count since it was during spring break and none of the schools were in session! Is that the traffic count that is being used?

During the hearing at the time of the proposed purchase we were told that the planned housing project was a "Workforce" development. What happened to that housing? Has the need for that sector declined?

At the hearing we were told that there is not a second exit planned for Kula Malu. A second exit would help to alleviate the traffic and be safer for the community.

Mahalo for your time in letting me express my concerns in regards to the proposed development in Kula Malu.

Naomi Ashman

APPENDIX A. RECORD OF CONSULTATIONS

APPENDIX B. ENDANGERED SPECIES LIST

APPENDIX B. ENDANGERED SPECIES LIST



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Hawaiian Hoary Bat / *Lasirus cinereus semotus* / 'ope'ape'a



Hawaiian hoary bat - Photo credit © Jack Jeffrey

The 'ope'ape'a usually weighs 14 to 18 g (0.49 to 0.63 ounces), is nocturnal, and eats insects. Females are larger than males. Their wing span is about 10.5 to 13.5 inches.

It has a heavy fur coat that is brown and gray, and ears tinged with white, giving it a frosted or "hoary" look. It is believed to be related to the North American hoary bat and it is the only native land mammal of Hawai'i.

Habitat & Behavior:

Bats are found primarily from sea level to 2,288 m (7,500 ft), although they have been observed near the island's summits above 3,963 m (13,000 ft). Relatively little research has been conducted on this endemic 'ope'ape'a and data regarding its habitat and population status are very limited. Most of the available documentation suggests that this elusive bat roosts among trees in areas near forests.

The 'ope'ape'a feed on a variety of native and nonnative night-flying insects.

It is a solitary bat that typically leaves its roost shortly before or after sunset and returns before sunrise. Breeding has only been documented on Hawai'i and Kaua'i. Like their North American relative, the 'ope'ape'a gives birth to twins during the summer months.

Past & Present:

The 'ope'ape'a has been seen on the islands of Hawai'i, Maui, Moloka'i, O'ahu, and Kaua'i, but may only live on Hawai'i, Maui, and Kaua'i. A large population might have lived on O'ahu before the early 19th century, but it is based on a single observation of an unknown number of bats.

Population estimates for all islands have ranged from hundreds to a few thousand, however, these estimates are based on limited and incomplete data. The magnitude of any population decline is unknown. Observation and specimen records do suggest, however, that these bats are now absent from historically occupied ranges.

'Ope'ape'a populations are believed to be threatened by habitat loss, pesticides, predation, and roost disturbance. Its decline may be primarily due to the reduction of tree cover in historic times, and they may be indirectly impacted by the use of pesticides.

Conservation Efforts:

The 'ope'ape'a was listed as an endangered species on October 13, 1970, under the Federal Endangered Species Act and the State of Hawai'i's Endangered Species List. The Hawaiian Hoary Bat Recovery Plan, completed in 1998, and the State of Hawai'i's Comprehensive Wildlife Conservation Strategy recommend conservation of known occupied habitat, development and implementation of conservation plans that guide the management and use of forests to reduce negative effects to known bat populations and, continued support for the 'ope'ape'a research cooperative.



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Blackburn's Sphinx Moth / *Manduca blackburni*



Blackburn's sphinx moth - Photo credit Ellen VanGelder

Blackburn's sphinx moth is Hawaii's largest native insect, with a wing span of up to 5 inches (12 centimeters).

Like other sphinx moths, it has long, narrow forewings and a thick, spindle shaped body tapered at both ends. It is grayish brown in color with black bands across the top margins of the hindwings and five orange spots along each side of the abdomen.

The large caterpillars occur in two color morphs, gray or bright green with scattered white speckles throughout the back and a horizontal white stripe on the side margin of each segment.



Grey Caterpillar - Photo credit Ellen VanGelder



Green Caterpillar - Photo credit Ellen VanGelder

Habitat & Behavior:

Historical records of this species are mostly from coastal, lowland, and dryland forests in areas receiving less than 50 inches (120 centimeters) of rainfall, though they have been collected from sea level to 5,000 feet (1525 meters). It was most common historically on Maui. Larvae of Blackburn's sphinx moth feed on native 'aiea trees (consuming leaves, stems, flowers, and buds) and other plants in the *Solanacea* family. However, some of the host plants recorded for the species are not native to the Hawaiian Islands, and include tree tobacco, and tomato plants.

Development from egg to adult can take as little as 56 days, but pupae may aestivate (dormancy during a period when conditions are hot and dry) in the soil for as long as several months. Adult moths can be found year round but seem to be most active during two periods, January to April and September to November. Adult moths are known to be strong fliers.

Past & Present:

Once found on six of the Hawaiian islands, the moth now exists only on Maui, Kaho'olawe, and the island of Hawai'i. They were believed extinct until 1984 when a small population was rediscovered in a lowland dry forest on the south coast of east Maui (Kanaio area).

Additional small isolated populations are now known from other parts of Maui including Kanaha Pond and Spreckelsville. Populations were recently discovered on Kaho'olawe (the first record of this species on this island) in 1997 and in 1998 in North Kona on the island of Hawai'i.

Threats to Blackburn's sphinx moth include continued loss of habitat, introduced ants and parasitic wasps that prey on the eggs and caterpillars, and the loss of its native host plant, 'aiea, which is a dryland forest tree.

The native host plant is found in endangered ecosystems, dry and mesic forests, and has been adversely affected by feral animals, alien plant invasions, and habitat conversions associated with development. Ants are not a natural component of Hawaii's arthropod fauna and they are particularly destructive due to their high densities, aggressiveness, and broad range of diet. A high percentage of the eggs of the sphinx moth are destroyed by alien parasitoid wasps and ants. In addition, the moth may also be susceptible to overcollection by individuals for their personal collections or for trade. Because the remaining populations are small and restricted, the potential for extinction from a chance event, such a fire or a hurricane, is greatly increased.

Conservation Efforts:

This native Hawaiian moth was the first Hawaiian insect to be added to the endangered species list by the U.S. Fish and Wildlife Service. The Service is currently funding research examining the life history, captive rearing, and conservation biology of the sphinx moth. Additionally, the Service is currently a partner in a dry forest restoration project on State lands in the same area that the North Kona population of the moth occurs.

The Kanaha Pond Sanctuary dune restoration project is currently being modified to include planting of the native host plant since sphinx moth larvae were recently observed on plants in the sand dune area in the Sanctuary. The military uses part of the general area where the east Maui population occurs for training and has adopted measures to prevent fires, alien seed dispersal, and vegetation damage as a result of training. While no conservation efforts specifically for the moth are currently underway on Kaho'olawe, the State, the Kaho'olawe Island Reserve Commission, and the U.S. Navy are aware of the presence of this species and have sponsored surveys to identify the distribution of the moth on the accessible parts of the island.

Last updated: September 20, 2012



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Hawaiian Petrel / *Pterodroma sandwichensis* / 'Ua'u



Hawaiian petrel - Photo credit C. Hodges/HNP

The 'ua'u has a dark gray head, wings, and tail, and a white forehead and belly. It has a stout grayish-black bill that is hooked at the tip, and pink and black feet. This bird measures 16 inches in length and has a wing span of three feet. It has a distinctive call during breeding season that sounds like "oo ah oo." They also have calls that sound like the yapping of a small dog.

Habitat & Behavior:

The 'ua'u is a bird of the open Pacific seas and has a high and steep flight pattern. Adults feed on squid, fish, and crustaceans and pass food to chicks by regurgitation. Breeding season is from March to October, during which time they nest in some of the main Hawaiian Islands, notably on Maui, Lana'i, and Kaua'i. They nest in burrows, primarily in remote montane locations, along large rock outcrops, under cinder cones, under old lichen-covered lava, or in soil beneath dense vegetation. The burrows are generally three to six feet long (from entrance to nest chamber), although some may be as long as 15 feet. One white egg is laid deep within the burrows.

Past & Present:

The 'ua'u was once abundant on all main Hawaiian islands except Ni'ihau. Today, the largest known breeding colonies are found at Haleakala Crater on Maui and on the summit of Lana'i. Other colonies are on Kaua'i, the island of Hawai'i, and possibly Moloka'i.

Threats to this endangered seabird include predation by introduced mammals, development, light attraction and collision, ocean pollution, and disturbance of their breeding grounds. The petrel does not have any natural defenses against predators such as rats, feral cats, and mongooses, and their burrows are very vulnerable.

Conservation Efforts:

The U.S. Fish and Wildlife Service, the Hawai'i Division of Forestry and Wildlife, and the National Park Service work cooperatively to save the 'ua'u, by protecting their breeding habitats and controlling predators within Haleakala National Park. The 'ua'u was listed as an endangered species on March 11, 1967.

Last updated: November 7, 2008

Last updated: September 20, 2012



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Newell's Shearwater / *Puffinus auricularis newelli* / 'A'o



'A'o - Photo credit Brenda Zaun/USFWS

The Newell's shearwater is a medium-sized shearwater measuring 12 to 14 inches with a wing span of 30-35 inches. It has a glossy black top, a white bottom, and a black bill that is sharply hooked at the tip. Its claws are well adapted for burrow excavation and climbing.

Habitat & Behavior:

The Newell's shearwater or 'a'o is a bird of the open tropical seas and offshore waters near breeding grounds. During their nine-month breeding season from April through November, 'a'o nest in burrows under ferns on forested mountain slopes. These burrows are used year after year and usually by the same pair of birds. Although the 'a'o is capable of climbing shrubs and trees before taking flight, it needs an open downhill flight path through which it can become airborne.

The 'a'o primarily feeds on squid and has loud and nasal calls resembling the braying of a donkey and the call of a crow.

Past & Present:

The Newell's shearwater was once abundant on all main Hawaiian islands. Today, the majority of these birds nest primarily in mountainous terrain between 500 to 2,300 feet on Kaua'i. This seabird was reported to be in danger of extinction by the 1930s. The introduction of the mongoose, cat, black rat, and Norway rat may have played a primary role in the reduction of ground nesting seabirds such as the 'a'o and the 'ua'u (Hawaiian petrel).

A second threat to the 'a'o is its attraction to light. Increasing urbanization and the accompanying manmade lighting have resulted in substantial problems for fledgling shearwaters during their first flight to the ocean from their nesting grounds. When attracted to manmade lights, fledglings become confused and often fly into utility wires, poles, trees, and buildings and fall to the ground. Between 1978 and 2007, more than 30,000 Newell's shearwaters were picked up by island residents from Kaua'i's highways, athletic fields, and hotel grounds.

Conservation Efforts:

Predator control in key habitat areas, the establishment of Bird Salvage-Aid Stations, translocation, and light attraction studies have been initiated to help save the Newell's shearwater. Outreach to Kaua'i's local community has resulted in people picking up and bringing them to aid stations for care and release, giving the seabirds a chance to live.

The Newell's shearwater was listed as an threatened species by the Fish and Wildlife Service in 1975. The Hawaiian petrel and Newell's shearwater recovery plan was published in 1983.

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Hawaiian Goose / *Branta sandvicensis* / Nēnē

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Nēnē - Photo credit Brenda Zauri/USFWS

This regal goose is Hawai'i's state bird. The nēnē measures between 24 to 27 inches in length, has a black head and bill, buff cheeks, a buff neck with dark furrows, and partially webbed black feet. The reduction of webbing between their toes and upright posture enables them to walk more easily on the rugged lava flows. Its vocalizations are similar to those of the Canada goose but also gives a low murmuring "nay" or "nay-nay" call.

Habitat & Behavior:

Nēnē currently frequent scrubland, grassland, golf courses, sparsely vegetated slopes and on Kaua'i, in open lowland country. The nēnē's vegetarian diet consists of seeds of grasses and herbs as well as leaves, buds, flowers and fruits of various plants. Nēnē do not require standing or flowing water for successful breeding but will use it when available. The current distribution of nēnē has been highly influenced by the location of release sites of captive-bred nēnē.

The breeding season is from August to April. Their nests are down-lined and usually well concealed under bushes. Nēnē prefer nesting in the same nest area year after year. Mean clutch size for wild birds is 3 eggs (range 1-6) and the incubation period is 30 days. Nēnē goslings are flightless for about 10 to 14 weeks after hatching. Family groups begin flocking soon after the young are able to fly and remain in their breeding areas for about a month. They wander about searching for food after that and may travel long distances from their breeding area.

Past & Present:

Fossil records show that nēnē used to live on all the main Hawaiian islands. It is believed that they were abundant on the Big Island before the arrival of Captain James Cook in 1778. Scientists believe that the Maui population became extinct before 1890. The decline in numbers was accelerated during the period of 1850 to 1900 due to aggressive hunting of the birds and collecting of their eggs. In 1951, the nēnē population was estimated at only 30 birds.

Their continued decline was attributed to the introduction of alien animals and degradation, and loss of habitat. Nēnē is extremely vulnerable to predation by introduced animals like rats, dogs, cats, mongooses, and pigs. Some studies, show that low productivity, perhaps caused by the poor available nutrition in their habitat and droughts also impact nēnē populations. Approximately 1,950 nēnē exist in the wild today with 416 on Maui, 165 on Moloka'i, 850-900 on Kaua'i, and 457 on the island of Hawai'i.

Conservation Efforts:

Many public and private organizations have been actively operating and supporting propagation programs to reestablish nēnē in the wild. The State of Hawai'i reintroduced them to Kīlauea Point and Hakalau Forest National Wildlife Refuges. Nēnē have also been introduced successfully on Moloka'i under a Safe Harbor Agreement between Pu'u O Hoku Ranch, DOFAW, and the Fish & Wildlife Service. A programmatic SHA for the entire island of Moloka'i was finalized in 2003 to allow landowners to develop individual cooperative agreements to help recover nēnē. The Wildfowl and Wetlands Trust in England has also played a major role in the survival of nēnē.

As of 2009, over 2,700 captive-bred nēnē have been released statewide either on public lands or private lands managed under cooperative agreements with State and Federal resource agencies. Nēnē have been raised in captivity by the Zoological Society of San Diego at the Maui Bird Conservation Center at Olinda and the Keauhou Bird

Conservation Center on the Big Island .

Nēnē was listed as an endangered species in 1967 under the Federal Endangered Species Act. The nēnē recovery plan was published in 1983. A draft recovery plan was approved in 2004. It outlines the essential elements to accomplish a goal of re-establishing nēnē to self-sustaining levels statewide. These elements are to minimize the mortality rate in the wild, continue release of captive-bred birds where needed, continue predator control, and continue research to protect and improve habitat where nēnē can maintain their populations naturally.

[Nēnē & Hawaii's Farmers - Living Together in Harmony](#)

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Hawaiian Hoary Bat / *Lasirus cinereus semotus* / 'ope'ape'a



Hawaiian hoary bat - Photo credit © Jack Jeffrey

The 'ope'ape'a usually weighs 14 to 18 g (0.49 to 0.63 ounces), is nocturnal, and eats insects. Females are larger than males. Their wing span is about 10.5 to 13.5 inches.

It has a heavy fur coat that is brown and gray, and ears tinged with white, giving it a frosted or "hoary" look. It is believed to be related to the North American hoary bat and it is the only native land mammal of Hawai'i.

Habitat & Behavior:

Bats are found primarily from sea level to 2,288 m (7,500 ft), although they have been observed near the island's summits above 3,963 m (13,000 ft). Relatively little research has been conducted on this endemic 'ope'ape'a and data regarding its habitat and population status are very limited. Most of the available documentation suggests that this elusive bat roosts among trees in areas near forests.

The 'ope'ape'a feed on a variety of native and nonnative night-flying insects.

It is a solitary bat that typically leaves its roost shortly before or after sunset and returns before sunrise. Breeding has only been documented on Hawai'i and Kaua'i. Like their North American relative, the 'ope'ape'a gives birth to twins during the summer months.

Past & Present:

The 'ope'ape'a has been seen on the islands of Hawai'i, Maui, Moloka'i, O'ahu, and Kaua'i, but may only live on Hawai'i, Maui, and Kaua'i. A large population might have lived on O'ahu before the early 19th century, but it is based on a single observation of an unknown number of bats.

Population estimates for all islands have ranged from hundreds to a few thousand, however, these estimates are based on limited and incomplete data. The magnitude of any population decline is unknown. Observation and specimen records do suggest, however, that these bats are now absent from historically occupied ranges.

'Ope'ape'a populations are believed to be threatened by habitat loss, pesticides, predation, and roost disturbance. Its decline may be primarily due to the reduction of tree cover in historic times, and they may be indirectly impacted by the use of pesticides.

Conservation Efforts:

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Blackburn's Sphinx Moth / *Manduca blackburni*



Blackburn's sphinx moth - Photo credit Ellen VanGelder

Blackburn's sphinx moth is Hawaii's largest native insect, with a wing span of up to 5 inches (12 centimeters).

Like other sphinx moths, it has long, narrow forewings and a thick, spindle shaped body tapered at both ends. It is grayish brown in color with black bands across the top margins of the hindwings and five orange spots along each side of the abdomen.

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The large caterpillars occur in two color morphs, gray or bright green with scattered white speckles throughout the back and a horizontal white stripe on the side margin of each segment.



Grey Caterpillar - Photo credit Ellen VanGelder



Green Caterpillar - Photo credit Ellen VanGelder

Habitat & Behavior:

Historical records of this species are mostly from coastal, lowland, and dryland forests in areas receiving less than 50 inches (120 centimeters) of rainfall, though they have been collected from sea level to 5,000 feet (1525 meters). It was most common historically on Maui. Larvae of Blackburn's sphinx moth feed on native 'aiea trees (consuming leaves, stems, flowers, and buds) and other plants in the *Solanacea* family. However, some of the host plants recorded for the species are not native to the Hawaiian Islands, and include tree tobacco, and tomato plants.

Development from egg to adult can take as little as 56 days, but pupae may aestivate (dormancy during a period when conditions are hot and dry) in the soil for as long as several months. Adult moths can be found year round but seem to be most active during two periods, January to April and September to November. Adult moths are known to be strong fliers.

Past & Present:

Once found on six of the Hawaiian islands, the moth now exists only on Maui, Kaho'olawe, and the island of Hawai'i. They were believed extinct until 1984 when a small population was rediscovered in a lowland dry forest on the south coast of east Maui (Kanaio area).

Additional small isolated populations are now known from other parts of Maui including Kanaha Pond and Spreckelsville. Populations were recently discovered on Kaho'olawe (the first record of this species on this island) in 1997 and in 1998 in North Kona on the island of Hawai'i.

Threats to Blackburn's sphinx moth include continued loss of habitat, introduced ants and parasitic wasps that prey on the eggs and caterpillars, and the loss of its native host plant, 'aiea, which is a dryland forest tree.

The native host plant is found in endangered ecosystems, dry and mesic forests, and has been adversely affected by feral animals, alien plant invasions, and habitat conversions associated with development. Ants are not a natural component of Hawaii's arthropod fauna and they are particularly destructive due to their high densities, aggressiveness, and broad range of diet. A high percentage of the eggs of the sphinx moth are destroyed by alien parasitoid wasps and ants. In addition, the moth may also be susceptible to overcollection by individuals for their personal collections or for trade. Because the remaining populations are small and restricted, the potential for extinction from a chance event, such a fire or a hurricane, is greatly increased.

Conservation Efforts:

This native Hawaiian moth was the first Hawaiian insect to be added to the endangered species list by the U.S. Fish and Wildlife Service. The Service is currently funding research examining the life history, captive rearing, and conservation biology of the sphinx moth. Additionally, the Service is currently a partner in a dry forest restoration project on State lands in the same area that the North Kona population of the moth occurs.

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Hawaiian Petrel / *Pterodroma sandwichensis* / 'Ua'u



Hawaiian petrel - Photo credit C. Hodges/HNP

The 'ua'u has a dark gray head, wings, and tail, and a white forehead and belly. It has a stout grayish-black bill that is hooked at the tip, and pink and black feet. This bird measures 16 inches in length and has a wing span of three feet. It has a distinctive call during breeding season that sounds like "oo ah oo." They also have calls that sound like the yapping of a small dog.

Habitat & Behavior:

The 'ua'u is a bird of the open Pacific seas and has a high and steep flight pattern. Adults feed on squid, fish, and crustaceans and pass food to chicks by regurgitation. Breeding season is from March to October, during which time they nest in some of the main Hawaiian Islands, notably on Maui, Lana'i, and Kaua'i. They nest in burrows, primarily in remote montane locations, along large rock outcrops, under cinder cones, under old lichen-covered lava, or in soil beneath dense vegetation. The burrows are generally three to six feet long (from entrance to nest chamber), although some may be as long as 15 feet. One white egg is laid deep within the burrows.

Past & Present:

The 'ua'u was once abundant on all main Hawaiian islands except Ni'ihau. Today, the largest known breeding colonies are found at Haleakala Crater on Maui and on the summit of Lana'i. Other colonies are on Kaua'i, the island of Hawai'i, and possibly Moloka'i.

Threats to this endangered seabird include predation by introduced mammals, development, light attraction and collision, ocean pollution, and disturbance of their breeding grounds. The petrel does not have any natural defenses against predators such as rats, feral cats, and mongooses, and their burrows are very vulnerable.

Conservation Efforts:

The U.S. Fish and Wildlife Service, the Hawai'i Division of Forestry and Wildlife, and the National Park Service work cooperatively to save the 'ua'u, by protecting their breeding habitats and controlling predators within Haleakala National Park. The 'ua'u was listed as an endangered species on March 11, 1967.

Last updated: November 7, 2008

Last updated: September 20, 2012



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Newell's Shearwater / *Puffinus auricularis newelli* / 'A'o



'A'o - Photo credit Brenda Zaun/USFWS

The Newell's shearwater is a medium-sized shearwater measuring 12 to 14 inches with a wing span of 30-35 inches. It has a glossy black top, a white bottom, and a black bill that is sharply hooked at the tip. Its claws are well adapted for burrow excavation and climbing.

Habitat & Behavior:

The Newell's shearwater or 'a'o is a bird of the open tropical seas and offshore waters near breeding grounds. During their nine-month breeding season from April through November, 'a'o nest in burrows under ferns on forested mountain slopes. These burrows are used year after year and usually by the same pair of birds. Although the 'a'o is capable of climbing shrubs and trees before taking flight, it needs an open downhill flight path through which it can become airborne.

The 'a'o primarily feeds on squid and has loud and nasal calls resembling the braying of a donkey and the call of a crow.

Past & Present:

The Newell's shearwater was once abundant on all main Hawaiian islands. Today, the majority of these birds nest primarily in mountainous terrain between 500 to 2,300 feet on Kaua'i. This seabird was reported to be in danger of extinction by the 1930s. The introduction of the mongoose, cat, black rat, and Norway rat may have played a primary role in the reduction of ground nesting seabirds such as the 'a'o and the 'ua'u (Hawaiian petrel).

A second threat to the 'a'o is its attraction to light. Increasing urbanization and the accompanying manmade lighting have resulted in substantial problems for fledgling shearwaters during their first flight to the ocean from their nesting grounds. When attracted to manmade lights, fledglings become confused and often fly into utility wires, poles, trees, and buildings and fall to the ground. Between 1978 and 2007, more than 30,000 Newell's shearwaters were picked up by island residents from Kaua'i's highways, athletic fields, and hotel grounds.

Conservation Efforts:

Predator control in key habitat areas, the establishment of Bird Salvage-Aid Stations, translocation, and light attraction studies have been initiated to help save the Newell's shearwater. Outreach to Kaua'i's local community has resulted in people picking up and bringing them to aid stations for care and release, giving the seabirds a chance to live.

The Newell's shearwater was listed as an threatened species by the Fish and Wildlife Service in 1975. The Hawaiian petrel and Newell's shearwater recovery plan was published in 1983.

Last updated: September 20, 2012



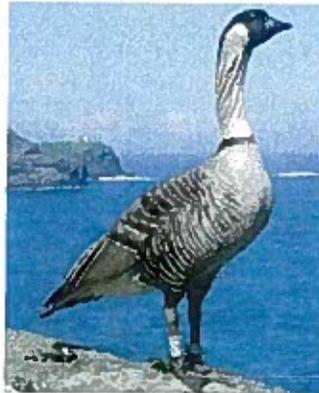
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Hawaiian Goose / *Branta sandvicensis* / Nēnē

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Nēnē - Photo credit Brenda Zaurin/USFWS

This regal goose is Hawai'i's state bird. The nēnē measures between 24 to 27 inches in length, has a black head and bill, buff cheeks, a buff neck with dark furrows, and partially webbed black feet. The reduction of webbing between their toes and upright posture enables them to walk more easily on the rugged lava flows. Its vocalizations are similar to those of the Canada goose but also gives a low murmuring "nay" or "nay-nay" call.

Habitat & Behavior:

Nēnē currently frequent scrubland, grassland, golf courses, sparsely vegetated slopes and on Kaua'i, in open lowland country. The nēnē's vegetarian diet consists of seeds of grasses and herbs as well as leaves, buds, flowers and fruits of various plants. Nēnē do not require standing or flowing water for successful breeding but will use it when available. The current distribution of nēnē has been highly influenced by the location of release sites of captive-bred nēnē.

The breeding season is from August to April. Their nests are down-lined and usually well concealed under bushes. Nēnē prefer nesting in the same nest area year after year. Mean clutch size for wild birds is 3 eggs (range 1-6) and the incubation period is 30 days. Nēnē goslings are flightless for about 10 to 14 weeks after hatching. Family groups begin flocking soon after the young are able to fly and remain in their breeding areas for about a month. They wander about searching for food after that and may travel long distances from their breeding area.

Past & Present:

Fossil records show that nēnē used to live on all the main Hawaiian islands. It is believed that they were abundant on the Big Island before the arrival of Captain James Cook in 1778. Scientists believe that the Maui population became extinct before 1890. The decline in numbers was accelerated during the period of 1850 to 1900 due to aggressive hunting of the birds and collecting of their eggs. In 1951, the nēnē population was estimated at only 30 birds.

Their continued decline was attributed to the introduction of alien animals and degradation, and loss of habitat. Nēnē is extremely vulnerable to predation by introduced animals like rats, dogs, cats, mongooses, and pigs. Some studies, show that low productivity, perhaps caused by the poor available nutrition in their habitat and droughts also impact nēnē populations. Approximately 1,950 nēnē exist in the wild today with 416 on Maui, 165 on Moloka'i, 850-900 on Kaua'i, and 457 on the island of Hawai'i.

Conservation Efforts:

Many public and private organizations have been actively operating and supporting propagation programs to reestablish nēnē in the wild. The State of Hawai'i reintroduced them to Kīlauea Point and Hakalau Forest National Wildlife Refuges. Nēnē have also been introduced successfully on Moloka'i under a Safe Harbor Agreement between Pu'u O Hoku Ranch, DOFAW, and the Fish & Wildlife Service. A programmatic SHA for the entire island of Moloka'i was finalized in 2003 to allow landowners to develop individual cooperative agreements to help recover nēnē. The Wildfowl and Wetlands Trust in England has also played a major role in the survival of nēnē.

As of 2009, over 2,700 captive-bred nēnē have been released statewide either on public lands or private lands managed under cooperative agreements with State and Federal resource agencies. Nēnē have been raised in captivity by the Zoological Society of San Diego at the Maui Bird Conservation Center at Olinda and the Keauhou Bird

Conservation Center on the Big Island .

Nēnē was listed as an endangered species in 1967 under the Federal Endangered Species Act. The nēnē recovery plan was published in 1983. A draft recovery plan was approved in 2004. It outlines the essential elements to accomplish a goal of re-establishing nēnē to self-sustaining levels statewide. These elements are to minimize the mortality rate in the wild, continue release of captive-bred birds where needed, continue predator control, and continue research to protect and improve habitat where nēnē can maintain their populations naturally.

[Nēnē & Hawaii's Farmers - Living Together in Harmony](#)

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