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May 20, 2014

Director Office of Environmental Quality Control 235 South Beretania Street, Room 702 Honolulu, Hawaii 96813

#### RE: <u>REPLACEMENT OF GROVE FARM TANKS #1 AND #2</u> <u>LĪHU'E, KAUA'I, HAWAI'I, TMK: (4) 3-3-03:46</u> *DRAFT ENVIRONMENTAL ASSESS*MENT

Dear Director:

The County Department of Water hereby transmits the draft environmental assessment and anticipated finding of no significant impact (DEA-AFONSI) for the Replacement of Grove Farm Tanks #1 and #2 situated at TMK:(4) 3-3-03: 46, in the Līhu'e District on the island of Kaua'i, for publication in the next available edition of the Environmental Notice.

Enclosed are the following: 1) Completed OEQC Publication Form; 2) Two (2) copies of the DEA-AFONSI; 3) An Adobe Acrobat PDF file of the same; 4) 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 Keith Aoki at <u>kaoki@kauaiwater.org</u> or by phone at (808) 245-5411.

Sincerely,

Kirk Saiki, P.E. Acting Manager and Chief Engineer

rs/ce

Enclosures (4)

#### AGENCY ACTIONS SECTION 343-5(B), HRS PUBLICATION FORM (FEBRUARY 2013 REVISION)

Project Name: Island:	Replacemen Kauai	nt of Grove Farm	Tanks #1 and #2				
TMK.	(4) 3-3-03 <sup>.</sup> 4	6					
Permits:	Department Public Works Planning De	of Health – NPD s – Grading Pern partment – Class	ES (Hydrotesting water) hit and Building Permit IV Zoning Permit and Use Permit	t di	AFC. 0	-14	0
Proposing/Dete (Address, Conta	ermination oct Person,	<b>Agency:</b> Telephone)	Department of Water, County of ł 4398 Pua Loke Street, Lihue, Hł Keith Aoki – 808-245-5411	Kauai 96766		IAY 27	N II C
Accepting Auth (for EIS submitte	<b>ority:</b> als only)					P1:29	17
Consultant: (Address, Conta	ct Person,	Telephone)	Esaki Surveying and Mapping, In 1610 Haleukana Street, Lihue, Hi Maren Arismendez-Herrera – 808	c.   96766 3-246-0625			
Status (check	one only):						
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The County of Kauai, Department of Water proposes to replace Grove Farm Tanks #1 and #2 in Līhu`e, Kaua`i. The project's purpose is to increase water storage within the Puhi - Līhu`e - Hanamā`ulu service area and improve service to the Līhu`e community. As part of this project, the two existing 100,000 gallon water tanks will be demolished and a replacement tank will be constructed in their place. The proposed project does not include development of a new distribution line or new source of water. The proposed project also includes plans for proposed water treatment plant.

#### DRAFT ENVIRONMENTAL ASSESSMENT AND ANTICIPATED FINDING OF NO SIGNIFICANT IMPACT (AFONSI)

#### REPLACEMENT OF GROVE FARM TANKS #1 AND #2

#### LĪHU`E, KAUA`I, HAWAI`I

Submitted in Accordance with Requirements for Chapter 343, HRS and Chapter 200 of Title II, Administrative Rules Department of Health, State of Hawai`i

Prepared for the

Department of Water County of Kaua`i

By

Esaki Surveying and Mapping, Inc.

May 2014

#### DRAFT ENVIRONMENTAL ASSESSMENT

Proposed Action:	REPLACEMENT OF GROVE FARM TANKS #1 AND #2		
Applicant:	DEPARTMENT OF WATER COUNTY OF KAUA`I		
Location:	LĪHU`E, KAUA`I, HAWAI`I TMK: (4) 3-3-03: 46		
Determination:	EIS REQUIRED NOT REQUIRED		
<u>Ag</u> <u>Under the</u>	gencies a	and Organizations Consulted or Contacted in Preparing this Assessment onsultation provision under HAR 11-200-9(a)(1)	
County	:	Department of Public Works (no written comments received) Department of Water (no written comments received)	
Others	:	Hirata & associates, Inc. (received written report, see Appendix A)	
		Possible Permits Required	
Federal		N/A	
State		Department of Health– NPDES (Hydrotesting water) Community Noise Permit	
County		Public Works – Grading Permit and Building Permit Planning Department – Class IV Zoning Permit Use Permit	

#### Table of Contents

					Page
SECTION	Ι	DESCRII Figure 1 - Figure 2 - Figure 3 - Figure 4 - Figure 5 -	PTION OF THE PROPOSED PROJECT – Island Map – DOW Service Areas Map – DOW Service Areas Table – Location Map – Water Facility Map		1-7 2 3 4 5 7
SECTION	П	DESCRII AND PO A. U Fi B. C. C. G Fi D. H Fi E. Fi F. Fi G. H H. Li Fi H. Li Fi F. Fi G. H H. Li Fi M. Pu 1. 2. 3. 4.	PTION OF THE AFFECTED ENVIRONMENT TENTIAL ENVIRONMENT IMPACTS se igure 6 – Demolition Plan igure 7 – Grading Plan limate eology, Topography and Soils igure 8 – USGS Map igure 9 – Soils Map ydrology igure 10 – Ground Water Hydrologic Units igure 11 – Wetlands Map lood Hazard and Drainage igure 12 – Flood Hazard Assessment Report igure 13 – Tsunami Evacuation Zone Map lora and Fauna istoric Sites igure 14 – Heritage Resource Map and Use Controls igure 15 – Zoning Map igure 16 – SMA Map igure 17 – Land Use Map ir Quality oise ousing ocio Economic Characteristics igure 18 – Demographic Characteristics ublic Utilities and Services Access Water Wastewater Solid Waste Eire Protection	ТТ 21, 29,	8-35 8-10 9 10 8 11-14 12 13 14-17 15 16 17-20 18 19 20 20-22 23-26 23 25 26 24, 27 28 29-30 30 31-35 29, 31 31 31-32 32 32-33

		6. Police Protection	33
		7. Public Schools	33-34
		8. Utilities	34
		9. Visual Effects	34
		Figure 19 – Public Utilities and Services Map	35
SECTION	III	ALTERNATIVES TO THE PROPOSED ACTION	36-37
SECTION	IV	ASSESSMENT PROCESS AND DETERMINATION OF SIGNIFICANCE	38-41
SECTION	V	NAMES OF GROUPS AND INDIVIDUALS AFFECTED BY THE PROPOSED PROJECT	42
SECTION	VI	REFERENCES	43-45
APPENDIX	А	GEOTECHNICAL REPORT	A1-A39
APPENDIX	В	PHOTOS	B1-B7

#### SECTION I

#### DESCRIPTION OF THE PROPOSED PROJECT

The County of Kaua`i, Department of Water proposes to replace Grove Farm Tanks #1 and #2 in Līhu`e, Kaua`i in the State of Hawai`i (see Figure 1), located along Nuhou Street. The existing tanks have leaks and are in need of replacement.

The project's purpose is to replace the existing tanks and to increase water storage within the Puhi - Līhu'e - Hanamā'ulu service area (see Figures 2 and 3), the increase in water storage capacity for this water system is required to help meet the service area needed storage reserve. The project site is located within Lot 1546, more specifically identified by tax map key as (zone 4) 3-3-03: 46 (see Figure 4). The subject property is bordered by Kaumuali'i Highway, Nuhou Street and private properties in the "Kukui Grove Village -West" subdivision.

The primary access to the project is Nuhou Street, which is a paved privately owned roadway that is for public use and maintained by the County of Kauai. Existing land uses within the immediate area of the project include a mix of uses comprised of residences, commercial uses and a public school.





Service Area	Description
Waimea-Kekaha	The service area is comprised of two relatively compact small towns. Waimea is the civic center of the West Side, home to the high school.
in annou reenand	hospital, and other community facilities as well as a variety of
	restaurants and retail stores. Kekaha includes a residential
	community that supports diversified agricultural and a small
	industrial area that was occupied by the former Kekaha Sugar
	Plantation. The area also supports the nearby Pacific Missile Range
	Facility and west side State parks.
	The service area includes Kauai's second commercial harbor, Port
Hanapepe-Eleele	Allen, the island's major electrical power generating station, and
	other industrial uses. Across the highway are Hanapepe Town and
	the residential community of Hanapepe Heights. Eleele has a small
	business area and residential communities.
IZ -1-1	Kalaheo has small-town commercial uses concentrated along the
Kalaneo	The set of the loss three set in the set of
Lumai Oma	The west side has three small-town/rural service areas: Lawai-Omao,
Lawai-Omao	Kalaneo, and walliea-Kekana. The Kalaneo and Lawal-Ollao
	have been subdivided and developed at various densities of
	residential use
	The service area consists of a concentration of resorts along the
Koloa-Poipu	coast, with residential communities clustered near the coast and
110100 I Olpu	around Koloa Town. Point is Kauai's fastest-growing resort
	destination, and the service area includes several projects yet to be
	constructed.
	The most diverse customer base. The area includes Kauai's major
Puhi-Lihuc-Hanamaulu	airport and commercial harbor, the largest concentration of industrial
	uses, Wilcox Hospital, hotels, a broad range of government and
	business uses, and residential neighborhoods.
	The service area has hotel and business uses clustered along the
Wailua-Kapaa	coastal highway. Schools, hospitals, and urban residential
	neighborhoods are located along the highway, as well as along two
	major roads that extend inland towards the mountains at the north
	and south ends of the Wailua-Kapaa basin – Kuamoo Road and
	Kawaihau Road. The central part of the basin is comprised of old
	agricultural homesteads that are gradually transitioning to residential
	use.
Anahola	In Anahola, the major landowner is the Department of Hawaiian
	Homelands (DHHL), which develops residential lots and agricultural
	nomesteads for lease to native Hawanans. The Anahola service area
	around Anabola Valley. Portions of the water system are ewned by
	aither the DOW or DHHI DOW operates the system in partnership
	with DHHL.
	These east side rural communities include Moloaa and Anahola
Moloaa	Moloaa is the DOW's smallest service area consisting of two small
	clusters of residences. Water is purchased from a state well that is
	currently operated by a private landowner in the area. Water from
	this source also supplies the agricultural activities in the area.
	The service area is comprised of Kilauea Town and a number of non-
Kilauea-Waipake-	contiguous agricultural subdivisions that extend towards the
Kalihiwai	mountains or the coast on either side of the highway. While Kilauea
	Town is a compact node of urban-density residential use and
	neighborhood businesses, the largest part of the service area consists
	primarity of low-density residential use, mixed with small farms.
	The service area consists of a narrow strip of beach residences. The
Anını	water is purchased from Princeville Utilities
TT11	The service area consists of residences and small-town business uses.
Hanalei	Narrow roadways and one-lane bridges limit development in these
Wainiha Haarr	areas.
wainina-Haena	i ne system serves residences along the coast and in waining Valley.

-4-

Source: Water Plan 2020

#### ESAKI SURVEYING AND MAPPING, INC.

Engineers, Land Surveyors & Planners 1610 Haleukana Street Līhu'e, Kaua'i, Hawai'i

#### FIGURE 3 Dow Service Areas Table

REPLACEMENT OF GROVE FARM TANKS #1 AND #2 JOB NO. 11-02, PLH-02 Lihu'e, Kaua'i, Hawai'i



As shown in Figure 5 there are two existing water tanks located on the southeast corner of the subject property, also known as the Grove Farm Tank Facility. As part of this project, these existing 100,000 gallon water tanks will be demolished and a replacement tank will be constructed in their place.

The proposed project calls for the demolition of the existing tanks and the construction of a new 0.5 MG tank. The new storage tank will occupy approximately 4,034 Sq. Ft., it will be constructed of concrete and measure approximately 72 Ft. in diameter and 18 Ft. high (floor elevation to spillway elevation).

The following improvements will be done in conjunction with the proposed tank: tank drainage system, connecting pipeline and appurtenances, a 10 Ft. wide paved driveway to and around the new tank, 6 Ft. high chain link perimeter fence erected for security purposes, landscaping architecture consisting of grass or ground cover provided for visual enhancement and erosion control, SCADA control system designed to monitor and provide the required controls to operate the tank levels, pumps and control valves, and proposed water treatment plant.

No new source of water or distribution line is being proposed with this project.

The total estimated budget is \$2,000,000 funding will be by the Department of Water. Construction is projected to start in the March 2015 and should be completed in March 2016.



#### SECTION II

# <u>AND POTENTIAL ENVIRONMENT IMPACTS</u>

#### A. USES

<u>Existing Conditions</u>: The tank will be located on the southeast corner of Lot 1546 which has an area of 22.818 acres. Lot 1546 is located to the east of the Nuhou Street and Kaumuali`i Highway intersection. The YMCA of Kaua`i facilities, Chiefess Kamakahelei Middle School and Regency at Puakea Retirement and Assisted Living are located across the street from Lot 1546. There are two existing concrete tanks, each with a 100,000 gallon capacity.

<u>Proposed Actions</u>: See Section I, Description of the proposed project.

<u>Potential Impacts and Mitigative Measures</u>: Construction of the new tank requires demolition of two existing 100,000 gallon tanks. See Figure 6 for Demolition Plan and Figure 7 for Grading Plan.

#### B. CLIMATE

<u>Existing Conditions</u>: For Lihue, the annual rainfall amounts to 38 inches per year, with the maximum average precipitation occurring in December. The average temperatures can range from mid 60's to mid 80's (degrees Fahrenheit). On average, the warmest month is August and January is the coolest month.

<u>Potential Impacts and Mitigative Measures</u>: The project will not affect macro or micro weather conditions.



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#### C. GEOLOGY, TOPOGRAPHY AND SOILS

<u>Existing Conditions</u>: Kauai is the fourth largest island in the Hawaiian group and considered to be one of the oldest geologically. The island is volcanic in origin, and in general geological terms, is described as a dissected basaltic dome of a single large shield volcano. Kauai was formed by the passage of the Pacific plate over the Hawai`i hotspot, generating two major lava flows: the Waimea volcanic series and the Kōloa volcanic series. The rocks on Kaua`i are all volcanic, except for minor amounts of sediments derived from volcanic rocks by erosion, and a narrow, discontinuous fringe of calcareous reef and beach deposits.

Ground elevations within the project area ranges from a high of 293 feet to a low of 287 feet above mean sea level for the tank location. Cross slope is minimal. See Figure 8 for USGS Map.

The soils of Kauai have developed primarily from volcanic materials and have concentrated iron and aluminum in the profiles. The quantities of silica and bases are low, particularly in the high rainfall areas, due to leaching of these materials. According to the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service, the soil in the region is primarily Lihue silty clay (LhB) with a small portion being Puhi silty clay loam (PnB). See Figure 9 for Soils Map.

The Lihue series consists of deep, well drained soils that formed in material weathered from basic igneous rock and influenced by tropospheric dust. The Lihue soils have slow to rapid runoff depending on slope, and moderately rapid permeability; the soils are on uplands and have slope gradients ranging from 0 to 40 percent, with the dominant slope ranging from 3 to 15 percent.





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USDA Natural Resources

Source of Map: Natural Resources Conservation Service Web Soll Survey URL: http://websollsurvey.nrcs.usda.gov Coordinate System: UTM Zone 4N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Island of Kauai, Hawaii Survey Area Data: Version 6, Dec 31, 2006

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



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#### FIGURE 9 SOILS MAP

REPLACEMENT OF GROVE FARM TANKS #1 AND #2 JOB NO. 11-02, PLH-02 Lihu'e, Kaua'i, Hawai'i

-13-

The Puhi series consists of deep, well drained soils that formed in material weathered from basic igneous rock. Puhi soils have very slow to rapid runoff, depending upon slope, and moderately rapid permeability; the soils are on uplands and have slopes of 3 to 40 percent, with dominant slopes from 3 to 15 percent. <u>Potential Impacts and Mitigative Measures</u>: Impacts occurring on the physical terrain from development of the project site are expected to be minimal. Since the site is relatively flat, minimum grading will be required. To minimize soil erosion during the construction process, erosion control measures will be designed and implemented in accordance with applicable governmental regulations.

#### D. HYDROLOGY

Existing Conditions: The State Department of Land and Natural Resources (DLNR), Commission on Water Resource Management (CWRM) has established ground-water hydrologic units to provide a consistent basis for managing ground water resources. The units are primarily determined by subsurface conditions. In general, each island is divided into regions; each region is comprised of smaller sub-regions (see Figure 10). The proposed project site is located within the Līhu`e region, in the Hanamā'ulu sub-region. The CWRM lists the Hanamā'ulu sub-region as having a sustainable yield of 36 million gallons per day.

There are no wetlands within the project area (see Figure 11), but there are wetlands in the vicinity of project area which can be identified as:

- Riverine R3UBH: riverine system which covers 5.01 acres, it is an upper perennial subsystem with an unconsolidated bottom and is permanently flooded.



## U.S. Fish and Wildlife Service

U.S. LA WILDLIFE SERVICE

## **National Wetlands Inventory**



This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

#### ESAKI SURVEYING AND MAPPING, INC.

Engineers, Land Surveyors & Planners 1610 Haleukana Street Lihu'e, Kaua'i, Hawai'i

#### Mar 12, 2012

## Wetlands

Freshwater Emergent Freshwater Forested/Shrub Estuarine and Marine Deepwater Estuarine and Marine Freshwater Pond Lake Riverine Other



 Freshwater Pond PUBHx: palustrine systems which encompass 1.26 acres and 1.39 acres respectively, have an unconsolidated bottom, are permanently flooded, and lie within a basin or channel that have been dug, gouged, blasted or suctioned through artificial means by man.

There are no coastal waters in the vicinity of the project area.

<u>Proposed Actions:</u> Demolition of two existing 100,000 gallon tanks, grubbing and grading of tank site and construction of new tank and access road to tank.<u>Potential Impacts and Mitigative Measures:</u> Most of the improvements will occur

within the previously developed tank site area. Best Management Practices (BMP's) shall be provided at all times to the maximum extent practicable to prevent discharge of pollutants, including sediment and contaminants from the construction site to streams, watercourses, natural areas and the property of others. As a result, no direct impacts on ground, surface and coastal waters should occur. All discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, will comply with the State's Water Quality Standards (HAR, Chapter 11-54).

#### E. FLOOD HAZARD AND DRAINAGE

Existing Conditions: Lot 1546 is not in an identified flood area and is designated as "Zone X" on Kaua`i County's Flood Insurance Rate Map dated November 26, 2010. Zone X is defined as "Areas determined to be outside the 0.2% annual chance flood plain." See Figure 12 for Flood Hazard Assessment Report. The subject property is located outside of the tsunami evacuation zone and is not threatened by any potential tsunami inundation (see Figure 13).



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#### FIGURE 12 FLOOD INSURANCE RATE MAP

REPLACEMENT OF GROVE FARM TANKS #1 AND #2 #1 AND #2 JOB NO. 11-02, PLH-02 Lihu'e, Kaua'i, Hawai'i

-18-



### Legend Tsunami Evacuation Zone Yes 100-ft Elevation County Parcels

### ESAKI SURVEYING AND MAPPING, INC.

Engineers, Land Surveyors & Planners 1610 Haleukana Street Lihu'e, Kaua'i, Hawai'i FIGURE 13 TSUNAMI EVACUATION ZONE MAP REPLACEMENT OF GROVE FARM TANKS #1 AND #2 JOB NO. 11-02, PLH-02 Lihu'e, Kaua'i, Hawai'i <u>Proposed Actions:</u>There will be no action that will affect the base flood elevation. <u>Potential Impacts and Mitigative Measures</u>: Flows from the washout and overflow lines of the new tank will be directed to an existing drain structure located along Nuhou Street.

#### F. FLORA AND FAUNA

<u>Existing Conditions</u>: Vegetation on the site consists of heavy ground cover and trees such as coconut trees, kukui nut trees, etc. The property does not contain any rare, threatened or endangered species of flora. Considering the proximity of the property to the residential and commercial neighborhood and public school, there are no rare, threatened, or endangered species of flora known to exist on the project site.

<u>Proposed Actions</u>: The site currently contains groundcover that will require grubbing, clearing and removal. Landscaping will occur in the last stage of construction.

<u>Potential Impacts</u>: Adverse impacts are not anticipated. The proposed project is not expected to have a significant impact on flora or fauna as the site was previously developed for the construction of the two existing concrete tanks.

#### G. HISTORIC SITES

<u>Existing Conditions</u>: The subject site was previously developed as indicated by the existing tank facilities. There is no evidence that any potentially significant cultural resources exist on the project site.

The Kauai General Plan contains a set of Heritage Resources Maps, these maps document important natural, scenic and historic features that are important to the

- 20 -

County of Kaua'i and that are intended to be conserved. See Figure 14 for the Heritage Resource map for the Lihue Planning District.

<u>Proposed Action</u>: Grubbing and grading of tank site, demolition of existing tanks and construction of new tank, access road to tank, connecting pipeline and security fence.

<u>Potential Impacts</u>: Should subsurface features or qualified burials be unearthed during construction activities, work shall cease in the immediate area of the find and the find shall be protected from further damage. The Contractor will notify the County of Kaua`i Planning Department and the State Historic Preservation Division. Disinterment of qualified gravesites shall comply with Chapter 6E H.R.S.

#### H. LAND USE CONTROLS

<u>Existing Conditions</u>: The property is classified as Urban by the State Land Use Commission, and is in the County Zoning District of General Commercial (C-G), see Figure 15. The proposed project will require a Class IV Zoning Permit and Use Permit.

According to the State Land Use Commission, the Urban District generally includes lands characterized by "city-like" concentrations of people, structures and services. This District also includes vacant areas for future development. Jurisdiction of this district lies primarily with the respective counties. Generally, lot sizes and uses permitted in the district area are established by the respective county through ordinances or rules.





The Kauai County Comprehensive zoning states that the General Commercial District shall include uses and services which are less frequently used and which are normally supplemented by and dependent upon the aggregate activities of a central commercial center serving several residential neighborhoods and which are less compatible with the environmental qualities of residential districts.

The project area is located outside of the Special Management Area (SMA) and is not subject to the County's SMA rules and regulations, see Figure 16.

The Kauai General Plan contains a set of Land Use maps that depict the policy for long-range land uses and future growth. See Figure 17 for the Land Use map for the Lihue Planning District.

<u>Proposed Action</u>: The proposed use of the property will be consistent with the conditions of the surrounding region and with the current use of the project site. <u>Potential Impacts</u>: The proposed use should not conflict with the zoning of nearby properties.

I. AIR QUALITY

Existing Conditions: There are no major air pollutant generators in the project area. Occasional dust is generated by local traffic.

<u>Potential Impacts and Mitigative Measures</u>: Construction activities may result in short-term air quality impacts, including the generation of dust from soil excavation and emissions from construction vehicles and equipment.

To mitigate these impacts, all phases of excavation and construction will be required to comply with the Hawai'i Administrative Rules, §11-60.1-33 on Fugitive Dust and all applicable County ordinances.





To comply with the fugitive dust regulations, the Department of Water will require that the Contractor implement adequate dust control measures, such methods include, but are not limited to, the following:

- Planning different phases of construction, focusing on minimizing the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes, and locating potentially dusty equipment to areas of the least impact;
- Providing an adequate water source at the site prior to start-up of construction activities;
- Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;
- Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities;
- Minimizing dust from shoulders and access roads; and
- Controlling dust from debris being hauled away from the project site. Also, controlling dust from daily operations of material being processed, stockpiled, and hauled to and from the facility.

Exhaust emissions from construction equipment and vehicles are not anticipated to significantly alter ambient air quality and can be minimized by proper operation and maintenance of all petroleum-fueled equipment. In addition, the prevailing winds can be expected to dilute and disperse exhaust emissions away from existing homes. At completion of the project, air quality for the existing residential community will revert to pre-construction levels.

#### J. NOISE

<u>Existing Conditions</u>: The property is currently being impacted by noise mainly from local traffic and the nearby middle school.

<u>Proposed Actions</u>: Noise levels are expected to increase once construction starts on the property. Maximum sound level would fall in the 85-96 dB(A) range with the latter generated by earth moving and pneumatic impact equipment.

Noise should be most pronounced during site work followed by reductions in frequency and duration during actual construction and post construction phases.

<u>Potential Impacts and Mitigative Measures</u>: The project abuts an existing residential development and it is possible that residents may be disturbed by construction noises. Although noise cannot be eliminated entirely and may be thought of as a short-term deleterious consequence, the Contractor will provide effective control measures to minimize construction related noise from impacting the residents in the immediate area. The hours of operation will also be regulated. If required, a Department of Health Community Noise Permit will be obtained. In the long run, it is anticipated that noises emanating from the completed project will be similar to the pre-construction levels.

#### K. HOUSING

<u>Potential Impacts and Mitigative Measures</u>: Puhi has a total of 1,042 housing units of which 94.7% are occupied. The median number of rooms is 4.6 and the median home value is \$405,700. When completed, the proposed project will upgrade the water system in the Puhi - Līhu'e - Hanamā'ulu service area and will provide landowners in the Līhu'e area with more storage capacity.

#### L. SOCIO ECONOMIC CHARACTERISTICS

Existing Conditions: The project is located in the Puhi Census-Designated Place (CDP). A CDP can be described as a geographic entity within an unincorporated place identified by the United States Census Bureau for statistical purposes. Demographic and other information was reviewed from the 2010 U.S Census, see Figure 18 for demographic characteristics. Based on the data shown in Figure 18, the Puhi CDP has a slightly younger population than the County, with a median age of 40.1 years compared to 41.3 years.

The Puhi CDP has a similar racial mix to the County and has a comparable percentage of family and nonfamily households when compared to the County. <u>Potential Impacts</u>: There will be no action that will affect the demographic characteristics of the Puhi CDP.

#### M. PUBLIC UTILITIES AND SERVICES

#### 1. <u>Access</u>:

<u>Existing Conditions</u>: Access to the project site will be from Nuhou Street. Kaumuali`i Highway is a State Right of Way with a paved surface. Nuhou Street is a privately owned Right of way that is for public use and maintained by the County of Kauai, it also has a paved surface.

Additionally, the State Department of Transportation - Highways Division has an independent project referred to as "Kaumuali'i Highway Widening, from Līhu'e to west of Maluhia Road, Federal Aid Project No. STP-050-1(26)" which involves widening Kaumuali'i Highway from a two-lane undivided roadway to a four lane divided roadway.

	PUHI	CDP	KAUA'I	COUNTY
SUBJECT	Number	Percent	Number	Percent
Total Population	2.906	100.0	67.091	100.0
AGE	2,000	100.0	07,001	
Under 5 vears	186	6.4	4,281	6.4
5 to 9 years	188	6.5	4.179	6.2
10 to 14 years	198	6.8	4.055	6.0
15 to 19 years	187	6.4	4.146	6.2
20 to 24 years	156	5.4	3,472	5.2
25 to 29 years	166	5.7	4,161	6.2
30 to 34 years	188	6.5	3,980	5.9
35 to 39 years	178	6.1	4,018	6.0
40 to 44 years	202	7.0	4,354	6.5
45 to 49 years	273	9.4	4,849	7.2
50 to 54 years	243	8.4	5,390	8.0
55 to 59 years	180	6.2	5,483	8.2
60 to 64 years	131	4.5	4,738	7.1
65 to 69 years	114	3.9	3,234	4.8
70 to 74 years	89	3.1	2,113	3.1
75 to 79 years	73	2.5	1,632	2.4
80 to 84 years	62	2.1	1,390	2.1
85 years and over	92	3.2	1,616	2.4
Median age (years)	40.1	(X)	41.3	(X)
RACE				
White	531	18.3	22,159	33.0
Black or African American	6	0.2	278	0.4
American Indian and Alaska Native	4	0.1	254	0.4
Asian	1,587	54.6	21,016	31.3
Native Hawaiian and Other Pacific Islander	118	4.1	6,060	9.0
Some Other Race	30	1.0	608	0.9
Two or More Races	630	21.7	16,716	24.9
HOUSEHOLDS BY TYPE				
Total households	932	100.0	23,240	100.0
Family households (families)*	661	70.9	16,147	69.5
Nonfamily households*	271	29.1	7,093	30.5
Average household size	3.10	(X)	2.84	(X)
Average family size*	3.63	(X)	3.31	(X)
HOUSING OCCUPANCY AND TENURE				
lotal housing units	1,024	100.0	29,793	100.0
Owner-occupied housing units	582	56.8	13,968	46.9
Kenter-occupied housing units	350	34.2	9,272	31.1
vacant housing units	92	9.0	6,553	22.0
"Family households" consist of a householder householder by birth, marriage, or adoption. even if the marriage was performed in a sto couples. Same-sex couple households are i there is at least one additional person rela Same-sex couple households with no relative nonfamily households.	and one or They do not ate issuing r ncluded in ted to the rs of the ho	more other include sam marriage cer the family h householder useholder pr	people rela e-sex marri tificates for nouseholds c by birth or resent are to	ted to th ed couple same—se category adoption abulated
"Nonfamily households" consist of people living alone and households which do not have any members related to the householder.				

-30-

ESAKI SURVEYING AND MAPPING, INC.

Engineers, Land Surveyors & Planners 1610 Haleukana Street Lihu'e, Kaua'i, Hawai'i

FIGURE 18			
Demographic characteristics			

REPLACEMENT OF GROVE FARM TANKS #1 AND #2 #1 AND #2 JOB NO. 11-02, PLH-02 Lihu'e, Kaua'i, Hawai'i This project is currently under construction, completion is anticipated in mid-2015, and the first segment (Anonui Road, west of the Kauai Community College campus to the approach to the Lihue Mill Bridge) was completed September, 2012.

2. <u>Water</u>:

<u>Existing Conditions</u>: The County of Kaua`i, Department of Water operates 13 water systems island wide. The project area is within the Puhi - Līhu`e - Hanamā`ulu water system which has the most diverse customer base. The proposed project will upgrade the existing system in this service area by increasing the storage capacity for customers in the area.

<u>Potential Impacts and Mitigative Measures</u>: The tank replacement will allow the Department of Water to help meet system demands and help to provide adequate storage capacity, especially during peak hours and emergencies, and will help to ensure an adequate and continuous supply of water to satisfy the current and future needs of customers served by this system.

#### 3. <u>Wastewater</u>:

<u>Existing Conditions</u>: There is no public wastewater collection and disposal system in the project area; private individual systems are currently in use. Puhi Sewer & Water Co, Inc. currently provides wastewater services to certain areas of Puhi and Līhu'e and has a wastewater facility located at the end of Kani'o Street, Tax Map Key (4) 3-3-03: 35. Puhi Sewer & Water Co, Inc. is governed by the Public Utilities Commission (PUC) and is a subsidiary of Grove Farm Properties.

<u>Proposed Actions</u>: No service improvements are planned at this time.

4. <u>Solid Waste</u>:

Existing Conditions: There is only one County sanitary landfill located in Kekaha, and four refuse transfer stations, the closest transfer station is the Līhu'e Transfer Station. Residential refuse collection services are available for the residential homes neighboring Kaumuali'i Highway and located across Chiefess Kamakahele Middle School. A typical refuse crew consists of one truck driver and two refuse collectors. Collection crews deliver refuse to the Refuse Transfer Station where refuse is loaded into high cube trailers and delivered to the Kekaha landfill.

Non-residential solid waste disposal in this area is provided by a private waste disposal company. Collected refuse is delivered to the Kekaha landfill for disposal.

<u>Potential Impacts and Mitigative Measures</u>: No changes in existing service are planned for the proposed project.

5. <u>Fire Protection</u>:

<u>Existing Conditions</u>: Fire protection service for the project area is provided by the Līhu'e Fire Station which is one of eight County fire stations. Four (4) men are assigned to the station with three (3) on duty at all times with major firefighting equipment.

The Fire Department's Fire/Rescue/HazMat/Medical Response Operations program provides fire protection and suppression, rescue (ocean and land),

hazmat and emergency medical services (basic life support).

<u>Proposed Actions</u>: No changes in existing service are planned for the proposed project.

6. <u>Police Protection</u>:

Existing Conditions: There are three Patrol Service Bureaus: Hanalei District (in the north), Līhu'e District (in the southeast) and Waimea District (in the southwest). The Līhu'e District provides police services from the south (starting at the Maluhia Tree Tunnel) to the east side (Kukui Street in Kapa`a Town) and incorporates the two busiest and most populated areas: the Kapa`a and Līhu'e communities, including Puhi, Nāwiliwili, Hanamā`ulu, and Wailua. When fully staffed, the Līhu`e District is composed of: 1 Lieutenant (a.k.a. District Commander), 3 Sergeants, 21 Police Officers, 1 full-time Clerk and 1 part-time Clerk. The Līhu'e District office is located on the first floor of the Kaua`i Police Department Headquarters in Līhu'e.

Proposed Actions: None.

7. <u>Public Schools</u>:

Existing Conditions: The Department of Education (DOE) has designated the entire Island of Kaua`i as a single district, this district is composed of three complexes: Waimea, Kaua`i and Kapa`a. Lihue is within the DOE's Kaua`i complex. Member schools of the Kaua`i complex are Elsie H. Wilcox Elementary School, King Kaumuali`i Elementary School, Chiefess Kamakahelei Middle School and Kaua`i High School. The area also has a Public Charter School:Kawaikini New Century Public Charter School.Proposed Action:None.

8. <u>Utilities</u>:

<u>Existing Conditions</u>: Electrical power and telephone services are available from overhead distribution lines along Kaumuali`i Highway, while underground electrical and telephone services run along Nuhou Street.

<u>Proposed Actions</u>: Electrical service for the operation of the facilities will be required. A Supervisory Control and Data Acquisition (SCADA) system will be installed at the new tank site to monitor and control tank operations. The SCADA system will be connected to existing Hawaiian Telcom lines.

#### 9. <u>Visual Effects</u>:

Existing Conditions: This project involves demolition of existing tanks and construction of a new tank. The visual impact of the new tank will be comparable to the existing tank, although, the new tank is larger and taller than the existing tanks. For the short term, construction activities will affect aesthetics but in the long term, the installation of the water storage tank will not be detrimental to the aesthetics of the area. All exposed areas will be grassed in accordance with the County's grading ordinance. Therefore, no significant visual effect is expected.



#### SECTION III

#### ALTERNATIVES TO THE PROPOSED ACTION

#### a) <u>Alternative: Larger Tank</u>

A 0.5 MG tank will help to meet the water storage need in Puhi - Līhu'e -Hanamā'ulu. A larger size tank would not be practicable due to the size constraint of the site.

#### b) <u>Alternative: Smaller Tank</u>

Because the Puhi - Līhu'e - Hanamā'ulu water service area has increasing demand, a smaller tank would not help meet the storage capacity needs of existing and future demands of the area. Furthermore, reducing the size of the new tank would not significantly reduce the environmental impacts associated with the project. For these reasons, this is an unacceptable alternative.

#### c) <u>Alternative: Delayed Action</u>

Delaying the project could negatively affect DOW customers in the Puhi - Līhu'e -Hanamā'ulu service area if a problem arose with storage elsewhere in the system, leaving the area without adequate water reserves. The system's deficiency would result in decreased system reliability and potentially inadequate fire protection capabilities. Additionally, conditions would only worsen as the population in the service area grows. Consequently, this is not a viable alternative.

#### d) <u>Alternative: No Action</u>

The existing tanks are temporarily off line until they are replaced. A no action alternative should not be considered because the tanks are leaking and in need of replacement. An inadequate storage facility may result in an interruption of service during maximum day demand through the highest usage season and inadequate supply during severe fire emergencies.

#### e) <u>Alternative: Increasing Existing Tank Size</u>

This alternative is commonly dismissed from serious consideration since concrete tanks are typically designed to the original design capacity, and are not structurally expandable. Also, it would be hard to undertake the tank expansion while maintaining water quality in the reservoir and continuing to serve customers in the Puhi - Līhu`e - Hanamā`ulu area.

#### f) <u>Alternative: Different Location</u>

An alternative tank site would involve the development of a new suitable tank site. Department of Water would have to undertake the removal of the existing tanks once the new tank is completed or abandon in place the existing tanks. Additionally, the development of a new suitable tank site would result in further postponement of this much need system upgrade.

#### SECTION IV

#### ASSESSMENT PROCESS AND DETERMINATION OF SIGNIFICANCE

#### Assessment Process

The scope of the project was discussed with the Applicant and representatives of the Department of Water. Based on information obtained, the Environmental Assessment was prepared. Time was spent evaluating the site and observing conditions in the surrounding area.

#### Determination of Significance and Recommendation

Chapter 200 of Title 11, Administrative Rules of the Department of Health entitled "Environmental Impact Statement Rules" established criteria for evaluating whether and action may have a significant effect on the environment. The relationship of the proposed project to these criteria is discussed below.

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

Since the site was previously a tank site, the project will not result in a significant loss or destruction of natural or cultural resources.

Curtails the range of beneficial uses of the environment.
 Proposed improvements would involve facility upgrades and existing land uses. Considering the existing zoning of the land, the proposed development is considered an appropriate use.

3. Conflicts with the State's long-term environmental policies of goals and guidelines are expressed in Chapter 344, Hawai`i Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders.
The project enriches the well being of the area with no damage to

the environment.

4. Substantially affects the economic or social welfare of the community or State.

The budget for the project \$2,000,000 will not substantially affect the economy adversely while providing a public utility. The jobs created will temporarily boost the economy.

5. Substantially affects public health.

The project will not require the use of hazardous materials or construction methodology that would be detrimental to the public health and safety of the area residents. Therefore, the project will not substantially affect public health. It is an implementing action that improves a public utility.

6. Involves substantial secondary impacts, such as population changes or effects on public facilities.
The number of lots, population and demand for public services and facilities will not be increased due to this project.

- 7. Involves a substantial degradation of environmental quality.Any effect on the environment during construction will be limited in area and short in duration.
- 8. Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions. The proposed project does not involve a commitment for larger actions in the immediate area but is part of a multi-phased project. The proposed action represents the complete facility, with plans for proposed water treatment plant.
- 9. Substantially affects a rare, threatened, or endangered species (plant and animal) or its habitat.

The site is devoid of rare, threatened, or endangered species (plant and animal) as it is in an existing tank site, therefore, the project will not result in substantial negative effects on significant fauna and flora species (rare, threatened, or endangered) in the area.

- Detrimentally affects air or water quality or ambient noise levels.
   Although fugitive dust and noises created during construction cannot be completely eliminated, such conditions can be mitigated and will only be temporary.
- 11. Affects on environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

The proposed project is not in any such zone nor will it affect any such area.

12. Substantially affects scenic vistas and vine plants identified in County or State plans or studies.

The project location is an existing tank site and will not affect scenic vistas or vine plants.

13. *Requires substantial energy consumption.* 

The only energy consumption will be for construction equipment and operation of the tank controls (after construction). The amount of electricity required will be small, and will not make a noticeable contribution to the island's overall energy use.

Based on the above criteria, the proposed project should not result in significant adverse environmental impacts. Potential environmental impacts are sufficiently disclosed in this Environmental Assessment and considered to be insignificant; therefore, it is recommended that Environmental Impact Statement is not required.

#### SECTION V

#### NAMES OF GROUPS AND INDIVIDUALS AFFECTED

#### BY THE PROPOSED PROJECT

<u>Tax Map Key</u>	Names and Addresses
(4) 3-3-03: 45	Regency at Puakea LLC.
	2130 Kaneka Street
	Līhu`e, HI 96766
(4) 3-3-17:01	Grove Farm Prop. Inc.
	P.O. Box 662069
	Līhu`e, HI 96766
(4) 3-3-17: 62	Dawn M. Murata Trust
	4218 Puu Pinao Pl.
	Koloa, HI 96756
(4) 3-3-10: 16	Charles Tom & Bao Maria Pham Raco
	P.O. Box 1983
	Līhu`e, HI 96766
(4) 3-3-10: 17	Grove Farm Land Corp.
	P.O. Box 662069
	Līhu`e, HI 96766
(4) 3-3-10: 18	Air Dog Inc.
× /	2841 Nimitz Hwy
	Honolulu, HI 96815

Names and addresses of affected groups and individuals were obtained from the County of Kaua`i Real Property Assessment and Treasury Divisions website (www.kauaipropertytax.com)

#### SECTION VI

#### REFERENCES

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County of Kaua'i, Department of Water.

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County of Kaua`i, Police Department http://www.kauai.gov/Government/Departments/PoliceDepartment/Departments/PatrolSe rvicesBureau/PSBWaimeaDistrict/tabid/323/Default.aspx Accessed: March 2012.

State of Hawai`i, Department of Education http://165.248.6.166/data/complex.asp?key\_complex=42 Accessed: March 2012.