Final Environmental Assessment

Kahuku Wells, Unit No. 3
Kahuku, Oahu, Hawaii

November 2011

Prepared for:

HONOLULU BOARD OF WATER SUPPLY

Prepared by:

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

Final Environmental Assessment
and
Finding of No Significant Impact

KAHUKU WELLS, UNIT NO. 3

Kahuku, Oahu, Hawaii

(This environmental document has been prepared pursuant to
Chapter 343, Hawaii Revised Statutes)

Prepared For:

City and County of Honolulu
Board of Water Supply

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November 2011

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LIST OF ABBREVIATIONS

Abbreviation	Definition
%	Percent
°F	Degrees Fahrenheit
BMPs	Best Management Practices
BWS	City and County of Honolulu, Board of Water Supply
City	City and County of Honolulu
CWRM	State of Hawaii, Commission on Water Resource Management
CZM	Coastal Zone Management
dBA	A-weighted Decibel
DLNR	State of Hawaii, Department of Land and Natural Resources
DOA	State of Hawaii, Department of Agriculture
DOH	State of Hawaii, Department of Health
DOT	State of Hawaii, Department of Transportation
DPP	City and County of Honolulu, Department of Planning and Permitting
DTS	City and County of Honolulu, Department of Transportation Services
EA	Environmental Assessment
FONSI	Finding of No Significant Impact
ft	Foot/Feet
gpm	Gallons per minute
HAR	Hawaii Administrative Rules
HECO	Hawaiian Electric Company, Inc.
HFD	City and County of Honolulu, Honolulu Fire Department
HISWAP	Hawaii Source Water Assessment Program Report
hp	Horsepower
HPD	City and County of Honolulu, Honolulu Police Department
HRS	Hawaii Revised Statutes
in	Inch/Inches
in/hr	Inch/Inches per hour
kSat	Capacity of the most limiting layer to transmit water
LUO	City and County of Honolulu Land Use Ordinance
MG	Million Gallons
mgd	Million gallons per day
MSL	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NPS	U.S. Department of the Interior, National Park Service
OEQC	State of Hawaii, Office of Environmental Quality Control
OWMP	Oahu Water Management Plan
PeC	Paumalu silty clay, 8-15% slope
PeE	Paumalu silty clay, 25-40% slope

LIST OF ABBREVIATIONS (Continued)

Abbreviation	Definition
PIM	Public Infrastructure Map
PZ	Paumalu-Badland complex, 10-70% slope
SAAQS	State Ambient Air Quality Standards
SCADA	Supervisory Control and Data Acquisition
SCD	State of Hawaii, Department of Civil Defense
SHPD	State of Hawaii, Department of Land and Natural Resources, Historic Preservation Division
SMA	Special Management Area
State	State of Hawaii
TIAR	Traffic Impact Assessment Report
TMDL	Total Maximum Daily Load
TMK	Tax Map Key
TOT	Time-of-travel
UBC	Uniform Building Code
USFWS	U.S. Fish and Wildlife Service
WHPA	Wellhead protection areas
WUP	Water Use Permit
WMP	Watershed Management Plan
WRPP	Water Resource Protection Plan

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EXECUTIVE SUMMARY

The City and County of Honolulu, Board of Water Supply (BWS) proposes to install a third well and emergency generator at its existing Kahuku Wells Station site in Kahuku, Oahu, Hawaii. The Kahuku Wells Station is an existing potable groundwater supply facility serving the Kahuku area, and the site encompasses an approximately 1.0-acre parcel (Tax Map Key 5-6-008:005) owned by the BWS.

Established in 1979, the facility hosts a 0.5 million gallon reservoir, two wells each equipped with a pump and aboveground 75-horsepower motor rated at 700 gallons per minute (or approximately 1 million gallons per day), a single-story control building (containing pump control, flow monitoring, and chlorination equipment), and a portion of the subsurface 12-inch (in) transmission main that conveys potable water from the facility to the Kahuku service area. The Kahuku Wells Station provides municipal potable water service to residential, institutional, commercial, and emergency service uses in the Kahuku area.

The Kahuku potable water system has not been significantly upgraded or expanded since its installation while its originally intended service area has enlarged. Additionally, it is currently the only BWS potable water system serving the Kahuku service area. As such, the BWS has two primary interrelated concerns associated with its Kahuku potable water supply system: reliability and capacity.

Reliability of the Kahuku system is of foremost importance because of the isolated nature of the system. Based on BWS water system standards and existing total average daily withdrawals from the Kahuku Wells Station, the Kahuku system is currently operating close to its design capacity. A loss of one of the two existing wells (possibly due to breakdown or maintenance) would leave the Kahuku system with insufficient pumping capacity according to BWS standards. Additionally, a loss in electrical power at the Kahuku Wells Station would leave the Kahuku system without any pumping capacity. For these reasons, the BWS finds it necessary to improve the reliability of the stand-alone Kahuku system.

As mentioned above, the Kahuku system is currently operating close to its design capacity based on existing total average daily withdrawals. However, currently not included within the Kahuku service area are two already-planned developments with assigned BWS water commitments – Kahuku Villages Phases IV and V, which are identified in the City and County of Honolulu's (City's) *Koolau Loa Sustainable Communities Plan* (1999). The BWS is currently committed to supply potable water to these developments once they are constructed. If the water commitments to the Kahuku Villages Phases IV and V developments were added to the current average water withdrawals, the Kahuku Wells Station would not meet the BWS water system standards for design and pumping capacity. As such, the BWS finds it necessary to

increase the pumping capacity of the Kahuku system while staying within the facility's existing water use permit allocation.

The above-stated objectives of improving the reliability and pumping capacity of the Kahuku system can be achieved through multiple methods. Alternative methods include construction of a third well at the Kahuku Wells Station, construction of a new wells station at a different location, or connecting the Kahuku system to an adjacent BWS system. The construction of a new well at the Kahuku Wells Station (Well No. 3) was found to be the most cost-effective alternative and the best use of existing BWS resources, while meeting the project objectives.

Construction of the new Well No. 3 will consist of drilling, casing, testing, and production of the well. Well No. 3 will be drilled to a depth of approximately 365 feet (ft), and a 12-in diameter steel casing will be installed to an elevation of 30 ft below mean sea level. The well will be test pumped to determine its viability as a production well and, upon meeting the standards for drinking water wells, a permanent pump will be installed. Well No. 3 will then be connected with related piping and appurtenances to the existing facility components. Overall, Well No. 3 will be similar in size, capacity, and operation to the existing two wells at the Kahuku Wells Station.

Also as a component of the proposed project, a new emergency generator will be installed and housed at the Kahuku Wells Station site. The generator will provide back-up power to the facility during power outages, such as in the event of natural disasters or emergencies. The generator will include an associated housing unit, and an aboveground fuel storage tank for the generator.

The proposed project is not anticipated to result in significant short-term or long-term impacts. Temporary short-term impacts to air and water quality, ambient noise levels, traffic operations, and groundwater resources may occur during construction activities. However, these temporary impacts will be mitigated with the use of appropriate construction techniques and best management practices. In the long-term, the proposed project will achieve the goal of improving the reliability and capacity of the BWS' Kahuku system.

This Final Environmental Assessment (EA) has been prepared in accordance with the requirements of Chapter 343, Hawaii Revised Statutes (HRS) and associated Title 11, Chapter 200, Hawaii Administrative Rules (HAR) of the State of Hawaii, Department of Health (DOH) Rules. The project would use City funds and lands and, therefore, requires the preparation of an EA pursuant to Chapter 343, HRS and associated Title 11, Chapter 200, HAR.

The BWS has reviewed the comments received during the Draft EA public comment period and determined that this proposed Kahuku Wells Station improvements project will not have a significant impact on any environmental, cultural, social, or economic resources based on the criteria set forth in Section 12 of the DOH Rules, Title 11, Chapter 200, HAR. The BWS has issued a Finding of No Significant Impact determination for this proposed project.

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PROJECT SUMMARY

Proposing Agency:	City and County of Honolulu Board of Water Supply
Approving Agency:	City and County of Honolulu Board of Water Supply
Location:	Kahuku, Oahu, Hawaii
Tax Map Key:	5-6-008:005
Land Area:	1.0 acre
Recorded Fee Owner:	City and County of Honolulu
Existing Use:	Board of Water Supply potable groundwater supply facility and associated infrastructure
State Land Use Classification:	Agricultural District
Development Plan Area:	Koolau Loa
Development Plan Land Use Designation:	Agricultural
County Zoning Designation:	AG-2 Agricultural
Proposed Action:	The City and County of Honolulu, Board of Water Supply (BWS) proposes to install a third well and emergency generator at its existing Kahuku Wells Station, a potable groundwater supply facility in Kahuku, Oahu, Hawaii. This will be the first major upgrade to the facility since its installation over 30 years ago, and the proposed project will address pumping reliability and capacity at the Kahuku Wells Station. Installation of a third well will increase the pumping capacity of the facility to meet a projected increase in water demand and already-planned Kahuku Town developments with assigned BWS water commitments in the Kahuku Town area. Installation of the

third well and emergency generator will also improve the reliability of the Kahuku system in providing potable water in case of any breakdowns, repairs, and/or power outages at the Kahuku Wells Station, which is imperative because of the isolated nature of the BWS Kahuku system.

Impacts: Temporary short-term impacts to air and water quality, ambient noise levels, traffic operations, and groundwater resources may occur during construction of the proposed project. Such potential short-term impacts that may be incurred as a result of construction and well development activities are not expected to be significant. Additionally, there are no significant adverse long-term impacts to any environmental, cultural, social, or economic resources associated with the completion and operation of the proposed improvements project. Conversely, the proposed improvements will result in beneficial long-term impacts. The proposed improvements will increase the pumping capacity of the Kahuku Wells Station in accordance with BWS water system standards to serve current and projected demands for assigned BWS water commitments in the Kahuku Town area. The proposed improvements will also improve the reliability of the Kahuku Wells Station by providing additional standby capacity and emergency power generating capability.

Agency Determination: Finding of No Significant Impact (FONSI)

1. INTRODUCTION

The City and County of Honolulu, Board of Water Supply (BWS) proposes to install a third well and emergency generator at its existing Kahuku Wells Station site in Kahuku, Oahu, Hawaii (**Figure 1**). The Kahuku Wells Station is an existing potable groundwater supply facility serving the Kahuku service area, and the site encompasses an approximately 1.0-acre parcel (Tax Map Key [TMK] 5-6-008:005) owned by the BWS. Established in 1979, the facility provides municipal potable water service to much of the Kahuku Town area. The Kahuku Wells Station hosts two existing wells (State Well No. 4057-15 and 4057-16), each equipped with a pump and 75-horsepower (hp) aboveground motor rated at 700 gallons per minute (gpm) (equivalent to approximately 1 million gallons per day [mgd]) which draw groundwater from the Koolau Loa Aquifer System. Potable water from these wells is stored in an on-site 0.5 million gallon (MG) reservoir before being conveyed to the Kahuku service area through a subsurface 12-inch (in) transmission main.

The Kahuku Wells Station is the only potable groundwater supply facility providing water to the Kahuku area, and it has not been significantly upgraded since its installation. As such, the proposed project was initiated to address pumping reliability and capacity at the Kahuku Wells Station. The proposed project includes the drilling and casing of a third on-site well (referred to herein as Well No. 3), which will be test pumped to determine its feasibility as a production well. If it is determined that Well No. 3 is a viable production well, a permanent 700 gpm rated pump will be installed and the well will be added to the Kahuku system through a connection to the 0.5 MG reservoir. Well No. 3 will increase the capacity of the Kahuku Wells Station, and will improve the reliability of the facility by providing additional standby capacity. The proposed project also includes installation of an emergency generator to be housed at the Kahuku Wells Station. The emergency generator will provide back-up power to the facility during power outages, further improving the reliability of the facility. The proposed project will also include ancillary improvements, such as installation of associated underground piping and appurtenances associated with the new well and its pump, construction of housing and an aboveground fuel storage tank for the generator, electrical and control upgrades, and possible extension of an existing on-site control building.

This Final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) was prepared pursuant to the State of Hawaii (State) environmental review process as required and defined by Chapter 343, Hawaii Revised Statutes (HRS) and Title 11, Chapter 200, Hawaii Administrative Rules (HAR) of the State of Hawaii, Department of Health (DOH) Rules. The project would use City and County of Honolulu (City) funds and lands and, therefore, requires the preparation of an EA pursuant to Chapter 343, HRS and associated Title 11, Chapter 200, HAR.

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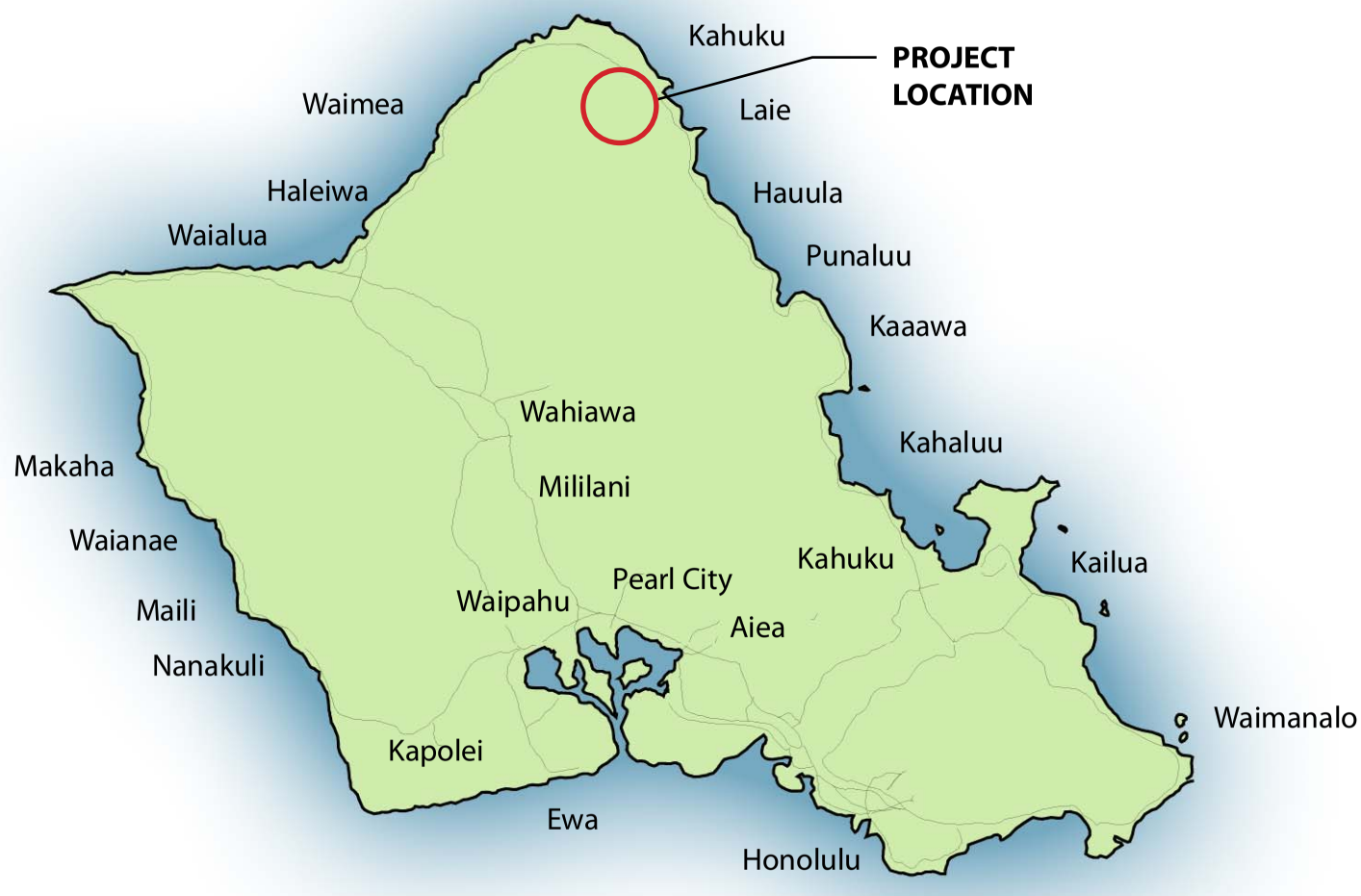

THE LIMTIACO CONSULTING GROUP

KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII

LOCATION MAP

FIGURE 1

NOVEMBER 2011

N

Scale: None

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2. SETTING AND PROJECT DESCRIPTION

2.1. Project Need and Objectives

2.1.1. Project Need

The BWS is a semi-autonomous agency that manages the development, operation, and maintenance of Oahu's municipal water system. The BWS maintains the water resources and distribution system throughout Oahu to meet the current and future water supply needs of customers.

The BWS manages its municipal water system in keeping with the *Oahu Water Management Plan* (*OWMP*), a County water resource use and development plan for Oahu required and established under the State Water Code (Chapter 174C, HRS) and City Ordinance 90-62. The BWS has revised its planning approach to evolve the *OWMP* into a framework of regional Watershed Management Plans (WMPs) in order to plan for the management of all water resources within each watershed. As such, the BWS, in collaboration with the City and County of Honolulu, Department of Planning and Permitting (DPP) and through oversight of the State of Hawaii, Commission on Water Resource Management (CWRM), is preparing WMPs for each of Oahu's eight Development Plan areas that together will comprise the updated *OWMP*. The overall goal of the WMPs is to provide short- to long-range guidance for the sustainable management and use of Oahu's surface and groundwater resources in meeting demands consistent with City land use plans.

Specific to the project discussed herein, the BWS recently developed the district-wide Koolau Loa WMP. The *Koolau Loa Watershed Management Plan: Oahu Water Management Plan*, dated August 2009, was made available for review with a public hearing held by the CWRM in June 2010. The plan was adopted by the City Council on August 18, 2010 as Bill 10 (2010), CD 2, and it was approved and signed by the Mayor as City Ordinance 10-18 on September 2, 2010. The CWRM adopted the 2009 plan at its March 2011 meeting. According to the plan, the Koolau Loa Aquifer System has a sustainable yield of 36 mgd. Sustainable yield is meant to be a guide for planning and is defined as the maximum rate at which water may be withdrawn from a water source without impairing the utility or quality of the water source as determined by the CWRM. Current records indicate that the CWRM has issued Water Use Permits (WUPs) totaling 18.628 mgd (as of 2010) to all sources within the Koolau Loa Aquifer System. Of this 18.628 mgd, the BWS currently has permitted uses of 8.915 mgd distributed among 16 wells within this aquifer system.

The BWS currently serves its customers in the Kahuku service area of Oahu with a stand-alone potable water supply system; this system is not connected to any other parts of the BWS system. Established in 1979 in order to serve future planned affordable housing development projects for the replacement of old plantation dwellings in Kahuku Town, the Kahuku system consists of a single potable groundwater supply facility (known as the Kahuku Wells Station) and associated transmission main. The Kahuku Wells Station mainly hosts a 0.5 MG reservoir, two wells each with pumps rated at 700 gpm (or 1 mgd) pumping capacity, and a control building. The transmission main that conveys the potable water from the facility to the Kahuku service area is 12-in in diameter and approximately 4,000-feet (ft) long. The BWS' existing WUP for the Kahuku Wells Station has a total permitted use of 0.6 mgd.

The Kahuku system has not been significantly upgraded or expanded since its installation while its originally intended service area has enlarged. Additionally, it is currently the only BWS potable water system serving the Kahuku service area. As such, the BWS has two primary interrelated concerns associated with its Kahuku potable water supply system: reliability and capacity.

In fact, in the late 1990s, development and construction of an additional BWS potable water supply system to serve the Kahuku service area was considered in order to address these issues. The project proposed a new groundwater supply facility and associated transmission main located just *mauka* of Malaekahana Bay. Referred to herein as the Malaekahana Wells project, an EA was prepared for the project in 2001 pursuant to Chapter 343, HRS and associated Title 11, Chapter 200, HAR. However, this system has not been constructed because the BWS deemed it too expensive relative to the demand it aimed to serve at the time.

Even now, the Kahuku system continues to remain the only BWS potable water supply system serving the Kahuku area. In its ongoing effort and proactive approach to address concerns associated with its Kahuku potable water supply system, the BWS evaluated the reliability and capacity conditions of the existing system. The BWS reviewed the conditions of the system to determine how best to implement potential future improvements for supplying potable water to Kahuku Town. As a result, the proposed Kahuku Wells Station improvement project was initiated to address pumping reliability and capacity at the Kahuku Wells Station, with the understanding that additional future improvements will likely be required for the Kahuku system. The proposed project is identified in the BWS' *Koolau Loa Watershed Management Plan: Oahu Water Management Plan* (2009) as a potential water supply system improvement project.

The overall purpose of the proposed project is to address the pumping reliability and capacity conditions of the existing Kahuku Wells Station specific to supporting Kahuku Town. Given that the Kahuku area is not connected to any other parts of the BWS' supply system and this is the only potable water supply facility serving the Kahuku area, the BWS recognizes the need to provide improved reliability to Kahuku Town. Additionally, no upgrades to the capacity of the facility have been implemented since its installation over 30 years ago.

The need for improved pumping reliability of the Kahuku Wells Station is further justified since it is currently the only potable water supply facility serving Kahuku's emergency facilities and shelters: Kahuku Medical Center, Kahuku High and Intermediate School, Kahuku Elementary School, Kahuku Fire Station, and Kahuku Police Substation. Any outages at the Kahuku Wells Station as a result of natural disasters, emergencies, breakdowns, and/or repairs may cut-off water service to all of the customers and emergency service facilities of Kahuku Town until the facility is back in working order. For example, replacement parts can be difficult to obtain because all of BWS' pumps are designed specifically for the needs of each well, which can cause repairs to be delayed significantly. Serious risks to public health and safety may result under such circumstances.

As previously mentioned, the Kahuku Wells Station was established in 1979 in order to serve planned housing development projects for the replacement of old plantation dwellings in Kahuku Town. These planned developments have been assigned with BWS water commitments. While several of these planned developments have been built, two of these planned affordable housing development projects have yet to be constructed: Kahuku Villages Phases IV and V. Regardless, these already-planned Kahuku Town developments are identified in the City's *Koolau Loa Sustainable Communities Plan* dated October 1999 and still maintain their assigned BWS water commitments. As such, the BWS is obligated to be capable of supplying water to meet the projected needs of these developments.

Based on BWS water system standards and existing total average daily water withdrawals from the Kahuku Wells Station, the Kahuku system is currently operating close to its design capacity and cannot provide for these already-planned developments in Kahuku Town. In fact, this capacity-constraint situation has led to a partial building moratorium on any new development in the Kahuku area for several years.

The two planned Kahuku developments of Kahuku Villages Phases IV and V are projected to increase the average water demand on the facility such that it exceeds the existing facility's design capacity and pumping capacity with the

largest pump on standby while staying within the facility's existing WUP allocation. It is important to upgrade the water system infrastructure to meet BWS standards thereby providing sufficient pumpage and standby capacity to achieve water reliability.

Additionally, the BWS water system standards call for the Kahuku Wells Station's pumping capacity to attain a specific fire-flow requirement given that the Kahuku potable water system is a single-reservoir system serving a hospital. An increase in the facility's pumping capacity will improve fire protection requirements and the overall reliability of the system.

Although the proposed project is intended to support those planned Kahuku Town developments identified in the *Koolau Loa Sustainable Communities Plan*, dated October 1999, it is important to note that the BWS is not seeking to increase the existing Kahuku Wells Station's WUP allocation under the proposed project. The project will not entail obtaining a new WUP.

2.1.2. Project Objectives

The proposed project seeks to achieve the following objectives:

- Improve reliability of the stand-alone Kahuku potable water system, and
- Increase pumping capacity of the Kahuku Wells Station to supply domestic demand and improve fire protection requirements to Kahuku Town.

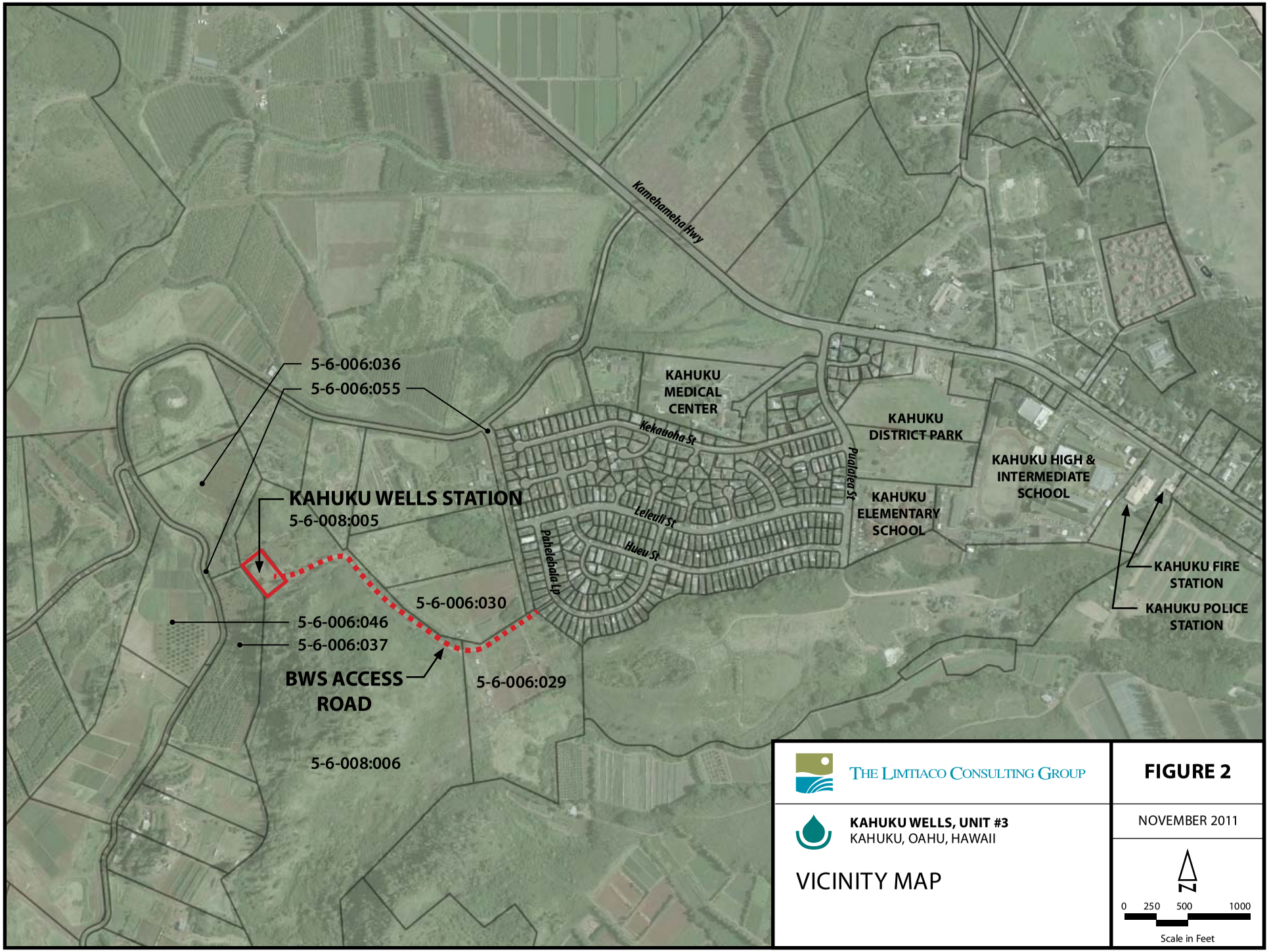
2.2. Project Location, Vicinity, and Conditions

2.2.1. Project Location

The proposed project is located entirely at the BWS' existing Kahuku Wells Station, a potable groundwater supply facility in Kahuku, Oahu, Hawaii (**Figure 1**).The Kahuku Wells Station site encompasses an approximately 1.0-acre parcel (TMK 5-6-008:005) positioned in the hills on the *mauka* side of the Kamehameha Highway (Route 83), and the site is accessed from a BWS-owned access parcel (TMK 5-6-010:027) located on Pahelehala Loop then via BWS access and utility easements over a State-owned road (portion of TMKs 5-6-006:029 and TMK 5-6-008:006) (**Figure 2**).

2.2.2. Land Ownership

The proposed water supply facility improvement project will occur entirely at the site of the BWS' existing Kahuku Wells Station. The Kahuku Wells Station is located on a parcel owned by the BWS; therefore, the portions of the project site that would be affected by the proposed project are under the jurisdiction of the BWS.


Kamehameha Hwy
5-6-006:036
5-6-006:055
KAHUKU MEDICAL CENTER
Kekauoha St
KAHUKU DISTRICT PARK
Puaalaea St
KAHUKU HIGH & INTERMEDIATE SCHOOL
KAHUKU WELLS STATION
5-6-008:005
Leleuli St
KAHUKU ELEMENTARY SCHOOL
Huleu St
Pahelehala Lp
KAHUKU FIRE STATION
KAHUKU POLICE STATION
5-6-006:030
5-6-006:046
5-6-006:037
BWS ACCESS ROAD
5-6-006:029
5-6-008:006
THE LIMTIACO CONSULTING GROUP
KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII
VICINITY MAP
FIGURE 2
NOVEMBER 2011
N
0 250 500 1000
Scale in Feet

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The project site is bounded by three State-owned parcels: two of the parcels are being leased for agricultural use and the third, largest parcel currently remains as open space. All boundaries of the project site are fenced, and, the project site has a private gated entrance with access from Pahelehala Loop via the BWS-owned parcel and State-owned road.

2.2.3. Immediately Surrounding Uses, Tenants, and Structures

The Kahuku Wells Station is located in a rural area characterized by agricultural activities and open, mostly undeveloped space. Hardly any structures exist within this area, except for a few agricultural-related buildings and small residences.

Immediately adjacent to and sharing the site's southwestern boundary are two parcels: TMK 5-6-006:036 and 5-6-006:037 (**Figure 2**). These parcels are within the State's "Agricultural" district land use classification and zoned by the City for agricultural use (Parcel 36: AG-1/Restricted Agriculture; Parcel 37: AG-1/Restricted Agriculture and AG-2/General Agriculture). Both parcels, approximately 8 and 10 acres respectively, are owned by the State of Hawaii, Department of Agriculture (DOA) as a part of the Kahuku Agricultural Park and are leased for the purpose of agricultural activities. A fence runs between the Kahuku Wells Station site and these properties.

A large, approximately 232-acre parcel adjoins the remainder of the Kahuku Wells Station site's boundaries: TMK 5-6-008:006 (**Figure 2**). This parcel is also within the State's "Agricultural" district land use classification and zoned by the City for agricultural use (AG-1/Restricted Agriculture and AG-2/General Agriculture). Although also owned by the State, this parcel was transferred from the DOA to the State of Hawaii, Department of Land and Natural Resources (DLNR). Originally intended as a "buffer" zone for the Kahuku Agricultural Park, the property is now being considered for lease and use as a wind farm. Nonetheless, the parcel currently remains as open space, except for a meteorological tower that was erected for testing wind patterns. The access road to the project site traverses through the northern portion of this parcel. A fence and the project site's entrance gate separate the Kahuku Wells Station site and this property.

2.2.4. Kahuku Area Uses, Tenants, and Structures

Kahuku Town is situated on the northeastern tip of the Island of Oahu, in a predominantly rural setting between Turtle Bay Resort and Laie. A primary highway – Kamehameha Highway (Route 83) – divides the town. Generally, Kahuku Town is located east of the Kahuku Wells Station site and hosts a relatively limited amount of residential, commercial, and institutional uses. **Figure 2** depicts the general area surrounding and relative to the project site,

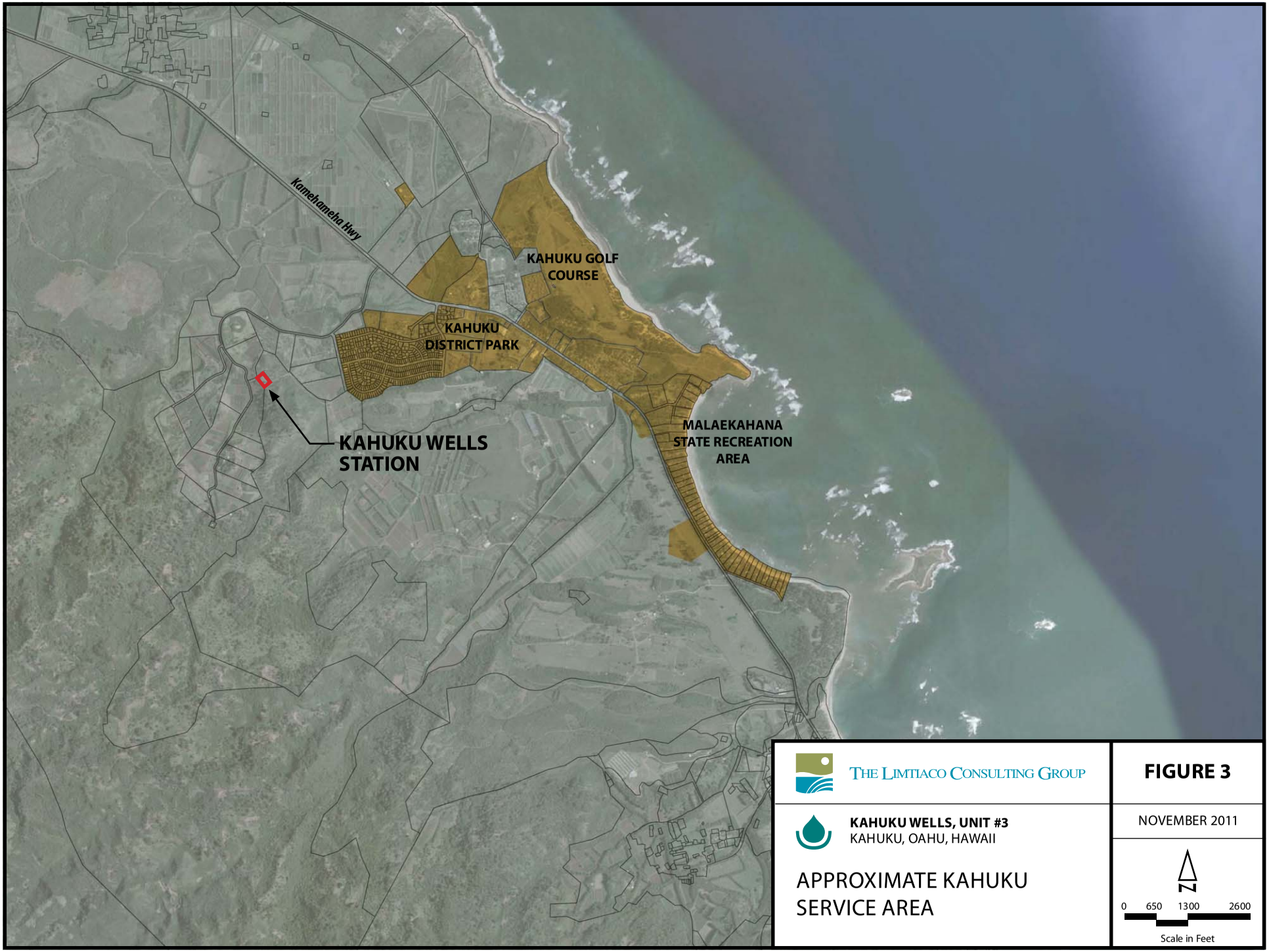
and the approximate service area for the Kahuku Wells Station is illustrated in **Figure 3**. The service area consists primarily of residential areas, although it also includes several institutional uses and several emergency service facilities.

A residential neighborhood is located approximately 0.3 miles east of the project site and *mauka* of the Kamehameha Highway. Running through this neighborhood is Pahelehala Loop: the City street from which the BWS' private access parcel connects to the State-owned road. Comprised of single-family homes, the neighborhood extends east into Kahuku Town. *Makai* of the Kamehameha Highway, there are several historic plantation neighborhoods, various churches, and Hale Hauoli, an elderly housing complex built by the Hawaii Community Development Authority.

A 172.7-acre property containing the Kahuku Village subdivision is located on the *makai* side of the highway, about 1.2 miles east of Kahuku Wells Station. It encompasses existing residential neighborhoods (referred to as Kahuku Villages Phase V), the Kahuku Golf Course, two cemeteries, a Methodist school, a large open space known as Adam's Field, plus vacant agricultural and shoreline lots. Future development is expected to result in the establishment of new residential lots, to include affordable housing (R.M. Towill Corporation, 2008). Future development for Kahuku Villages Phases IV and V are projected to increase the average water demand on the Kahuku Wells Station. As previously described in Section 2.1.1, Project Need, these affordable housing development projects were set forth as part of an overall effort to replace aging plantation dwellings in Kahuku Town. Both developments have been assigned BWS water commitments.

Many institutional uses exist on the *mauka* side of the highway and within approximately 1.0 mile east of the Kahuku Wells Station. These institutional uses include the Kahuku Medical Center, U.S. Postal Service station, Kahuku District Park, Kahuku Elementary School, Kahuku High and Intermediate School, Kahuku Fire Station, and Kahuku Police Substation. The aforementioned schools are designated community/public emergency shelters by the State of Hawaii, Department of Civil Defense (SCD). (SCD, 2010) It should be noted that the Kahuku Wells Station remains the only potable water supply facility serving the Kahuku area's emergency facilities and shelters. These facilities are shown within the approximate service area illustrated in **Figure 3**.

After the closing of the sugar cane plantation and mill in 1971, economic activity in the Kahuku area shifted towards diversified agriculture, aquaculture, and tourism. Crops commonly grown in the area are corn, taro,


Kamehameha Hwy
KAHUKU GOLF COURSE
KAHUKU DISTRICT PARK
KAHUKU WELLS STATION
MALAEKAHANA STATE RECREATION AREA
THE LIMTIACO CONSULTING GROUP
KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII
APPROXIMATE KAHUKU SERVICE AREA
FIGURE 3
NOVEMBER 2011
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0 650 1300 2600
Scale in Feet

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watermelon, banana, guava, papaya, as well as landscaping plants and flowers. Lands not suitable for agriculture have been left undeveloped or are utilized for cattle ranching. As mentioned in Section 2.2.3, Immediately Surrounding Uses, Tenants, and Structures, the Kahuku Wells Station site is adjacent to agricultural parcels that are part of the DOA's Kahuku Agricultural Park. Although located in its immediate vicinity, the Kahuku Agricultural Park does not use this potable water supply facility as a source of water; the Kahuku Agricultural Park is served by a separate water system that is owned and operated by the DOA.

Aside from the agriculture industry, the majority of the commercial activities in the area occur along the Kamehameha Highway or near the site of the old Kahuku Sugar Mill. The mill is located on the *makai* side of the highway, about 0.8 mile east of Kahuku Wells Station site. The mill has been converted to a resort and museum. Other commercial uses include a gasoline station, retail stores, restaurants, recreation, warehousing, and construction.

2.2.5. Existing Conditions at the Kahuku Wells Station Site

Established as a BWS potable groundwater supply facility in 1979, the Kahuku Wells Station is the only water supply facility serving the Kahuku service area. The approximate service area for the Kahuku Wells Station is illustrated in **Figure 3**, and, as shown, the BWS is currently purveyor of potable water to most of Kahuku Town. No upgrades to the capacity of the facility have been implemented since its installation over 30 years ago. The Kahuku Wells Station currently hosts the following components:

- A 0.5 MG reservoir with overflow elevation of 228 ft;
- Two approximately 340-ft-deep wells, each with a pump and aboveground line shaft motor rated at 700 gpm (or 1 mgd) pumping capacity with related piping and appurtenances;
- A single-story control building; and
- A portion of the approximately 4,000-ft long 12-in transmission main that conveys the potable water to the Kahuku area.

The Kahuku Wells Station was renovated and the two pumps replaced of equal size in 2002.

Figure 4 shows the site's general layout and location of the facility's components. Photos of the site's existing conditions and components are also included in **Figure 4**.

As previously mentioned, all boundaries of the project site are fenced, and the project site's one private entrance is gated. The site's fencing and entrance gate are chain-link and topped with barbed wire. Nonetheless, the site is often subject to vandalism.

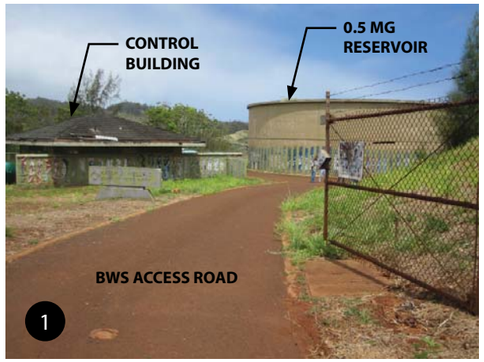
The Kahuku Wells Station is positioned in the hills *mauka* of Kahuku Town, and the site is on the downslope of a large hill. The topography of the Kahuku Wells Station site was altered when it was established as a BWS water supply facility. The majority of the site was graded: a large, level pad at approximately 208 ft above mean sea level (MSL) hosts the facility and its associated appurtenances; and the portion of the access road within the project site ranges from 208 ft above MSL near the reservoir to 213 ft above MSL at the site's entrance gate. The northern, eastern, and southeastern margins of the site remain at higher elevations than the pad and access road. To transition between these higher ground elevations and graded areas, slopes were cut (2 horizontal:1 vertical).

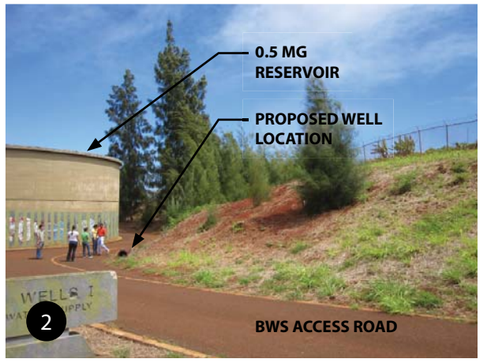
The large pad area of the site on which the reservoir, control building, and wells are situated (i.e., near the southwest boundary) is flat. While no trees are located within these areas of the site, a buffer of "natural" vegetation (trees and shrubs) is located adjacent to the site's fencing along its southwest boundary. There is minimal vegetation along the site's northwest boundary. The northern, eastern, and southeastern sections of the site are at a higher elevation than the facility's existing components. Additionally, these sections of the site contain large ironwood trees and other vegetation.

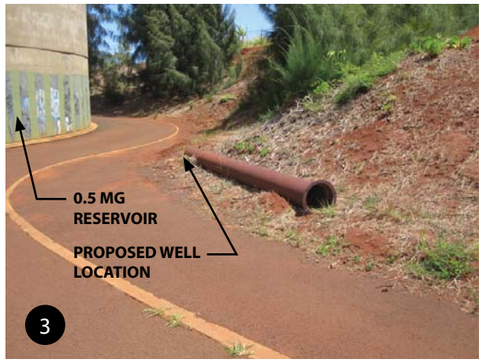
The 0.5 MG reservoir is a cylindrical tank structure with an approximately 70-ft diameter and 21-ft height. The reservoir is made of reinforced concrete, and it has been BWS' policy of "minimized maintenance" to keep the walls unpainted. However, as a result of vandalism, the bottom half of the tank has been covered in graffiti and the BWS has had to paint stripes of a neutral green color over the graffiti in order to deter vandals. The tanks' floor elevation is 210 ft above MSL and overflow elevation is 228 ft above MSL.

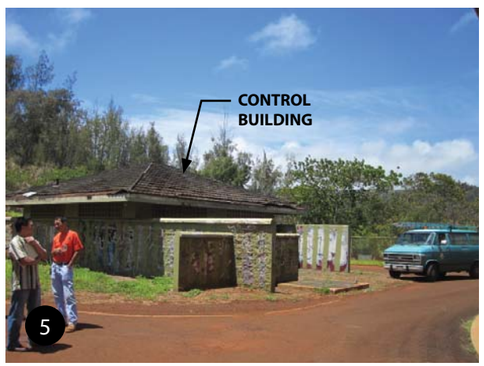
The two existing wells are located near the site's southwestern boundary. With a ground elevation of approximately 210 ft above MSL, the total depth of Well No.1 is approximately 420 ft or to an approximate elevation of 210 ft below MSL. With approximately the same ground elevation, the total depth of Well No.2 is approximately 365 ft or to an approximate elevation of155 ft below MSL. Each well has a 12-in diameter steel casing installed to an elevation of 30 ft below MSL (i.e., the total length of casing is approximately 240 ft). The head level for both wells is at an approximate elevation of 12.1 ft above MSL. Each of the two wells has a pump and aboveground 75-hp motor (with related piping and appurtenances to the reservoir, control building, and transmission main) capable of delivering 700 gpm (or 1 mgd).

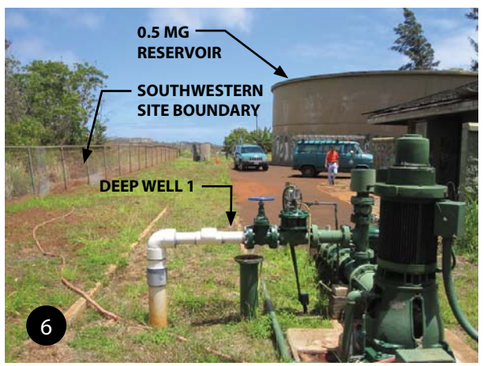
The Kahuku Wells Station's two existing wells, State Well No. 4057-15 and 4057-16, are permitted under an existing CWRM-issued WUP. This existing

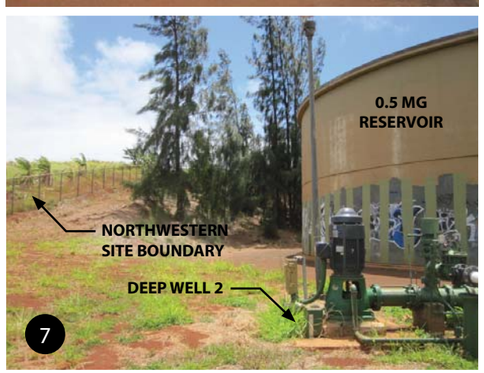


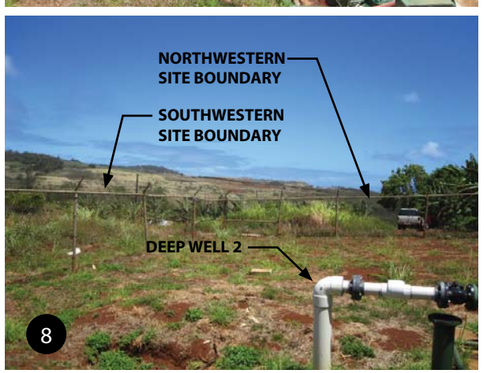


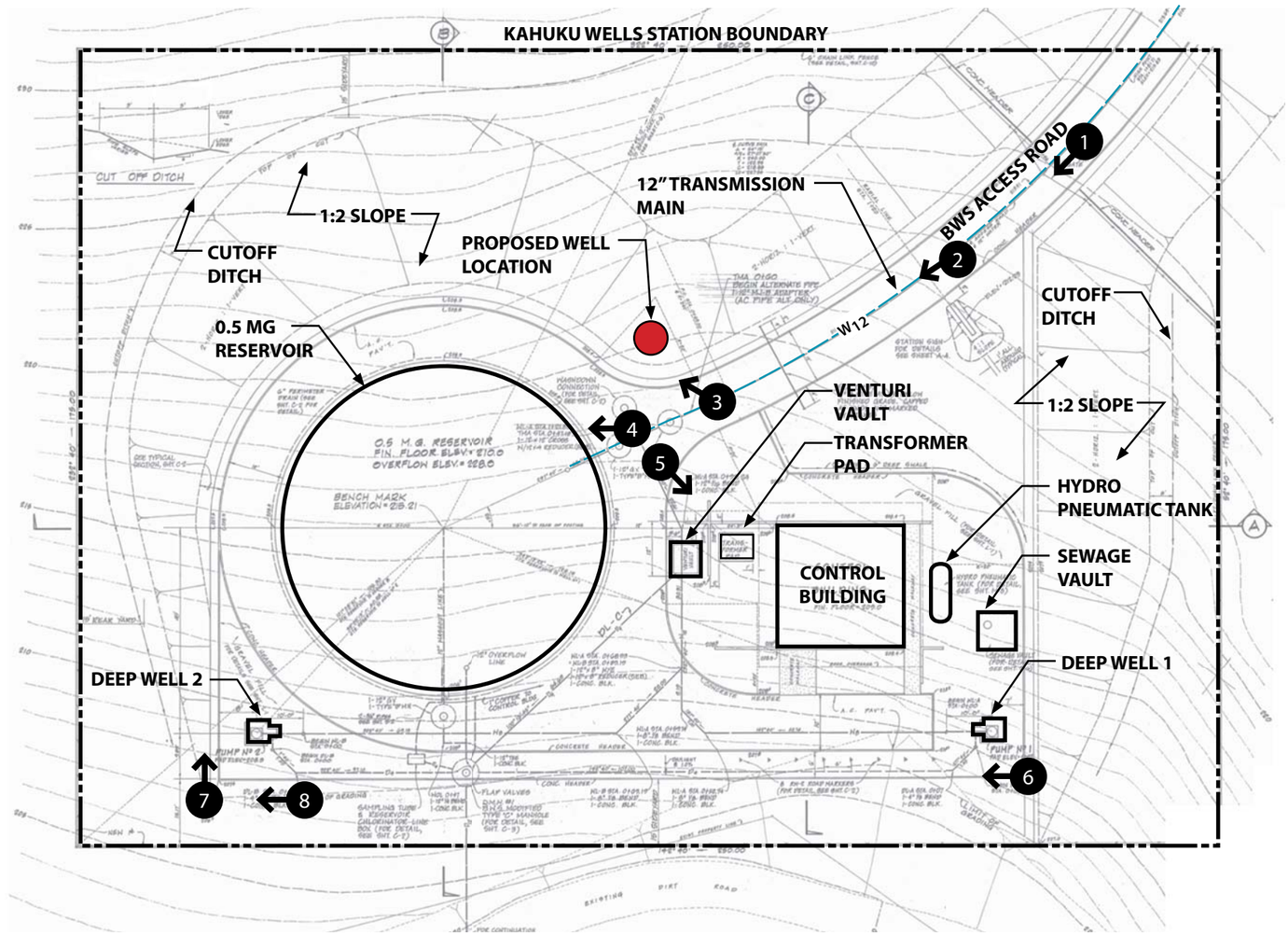












THE LIMTIACO CONSULTING GROUP

KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII

EXISTING SITE LAYOUT & PROPOSED WELL NO. 3 LOCATION

FIGURE 4

NOVEMBER 2011

0 7.5 15 30
Scale in Feet

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WUP No. 322 for the facility was approved in January 1994 with a total permitted use of 0.6 mgd.

The control building houses the motor control center for the two pumps, main electrical control panel, Supervisory Control and Data Acquisition (SCADA) system, chlorination system, and a restroom. It is a one-story, concrete-block structure that is naturally vented. It is approximately 28 ft by 28 ft with a maximum height of 16 ft. There are several concrete walls abutting the control building that flank additional equipment: a venturi vault, a pad-mounted transformer, and a hydro pneumatic tank. As with the reservoir tank, the building's exterior (except for exposed metal surfaces) and abutting walls' also remain unpainted, but the BWS has had to paint stripes of a neutral green color over graffiti caused by vandals.

The site is accessed from BWS-owned access parcel TMK 5-6-010:027, located on Pahelehala Loop in a nearby residential neighborhood, then via BWS access and utility easements over the State-owned road portion of TMKs 5-6-006:029 and TMK 5-6-008:006. It is 12 ft wide and approximately 2,000 ft long. Leading up to the site's entrance gate, the access road includes a steep incline. As previously mentioned, the portion of the access road that is located within the Kahuku Wells Station site slopes downhill from the entrance gate toward the reservoir. The road encircles the reservoir and flanks the control building to provide easy access to the grounds by maintenance vehicles and personnel.

An approximately 4,000-ft long, 12-in transmission main conveys the potable water to the Kahuku area. The portion of the transmission main located within the Kahuku Wells Station site runs under the access road between the reservoir and the entrance gate.

Stormwater runon from adjacent upland parcels is directed overland through the site and discharged at the site's southwestern boundary where it sheetflows onto an adjacent Kahuku Agricultural Park parcel (TMK 5-6-006:037). At the northeastern and southeastern sections of the site where slopes were cut to transition between the higher ground elevations and graded areas, cutoff ditches were established in order to redirect the stormwater around the major cut slopes and toward the boundaries of the project site. The site also contains an underground drainage system for collecting and conveying both stormwater runoff from the site and discharges associated with the facility's operations (i.e., process water discharges). The on-site underground drainage system directs the flows to a single drainage manhole located near the site's southwestern boundary. Currently, water entering this manhole leaves the Kahuku Wells Station through a 12-in drain line and is discharged into an unlined drainage ditch in the aforementioned

adjacent parcel. A construction contract for a proposed drainage system modification has been awarded. The proposed modified drainage system will entail approximately 600 ft of new buried drain line such that instead of allowing the collected flows to discharge into the unlined drainage ditch and onto the adjacent Kahuku Agricultural Park parcel (TMK 5-6-006:037), the Kahuku Wells Station site's existing 12-in drain line will be intercepted within the site and eventually outlet within an existing 40-ft-wide State drainage easement on TMK 5-6-006:046, another agricultural parcel that is part of the DOA's Kahuku Agricultural Park. The project site's drainage system utilities, including the proposed modified drainage system, are discussed in greater detail in Section 3.13.3, Drainage System and an illustration is provided therein.

Generally, the Kahuku Wells Station operates as follows: The wells tap into the underground basal water supply of the Koolau Loa Aquifer System. This potable groundwater is pumped from the well into the reservoir via each pump; then, the water flows from the reservoir via gravity along the 12-in transmission main to the Kahuku service area. The reservoir is always kept as full as possible. An automated system is used to control water levels in the 0.5 MG reservoir: when the reservoir drops below a certain level, one of the pumps is triggered on in order to fill the reservoir. Conversely, the system will shut down the pump once the reservoir is filled to its pre-determined level. For the first five to seven minutes of each startup, pump priming occurs and the pump blow-off valves discharge potable-quality process water via the abovementioned on-site drainage system. The pumps are remote-controlled or by auto-sensor. The Kahuku Wells Station's operations and utilities are discussed in greater detail in Section 3.13.2, Water System and an illustration is provided therein.

With its two existing wells, the Kahuku Wells Station has a current total pumping capacity of 2 mgd. In accordance with BWS water system standards, the largest pump is required to be on standby at the facility in order to fulfill existing pumping capacity requirements (i.e., one of the wells is to be available at all times while the other is on hand as a standby). Even so, current operation of the Kahuku Wells Station's two existing wells depends on potable water use and demand within the Kahuku service area. Based on BWS water system standards and existing total average daily water withdrawals from the facility, the Kahuku system is currently operating close to its design capacity.

The BWS takes instantaneous water level recordings of the aquifer from its deep monitoring well (State Well No. 4057-17) located immediately downstream, along the aquifer, of the Kahuku Wells Station on TMK 5-6-006:030 (an agricultural parcel owned by the DOA). Recently, a measurement

at this well measured the regional head level of the aquifer at approximately 12.1 ft above MSL. The potable water flows from the Kahuku Wells Station are monitored continuously depending on the SCADA system's sampling rate, and it is possible to obtain discharge measurements by the minute. Groundwater use reports containing the average flows for the month are submitted to CWRM for regulatory purposes.

The Kahuku Wells Station currently provides water to the public at a level of quality in accordance with Federal, State, and County standards. As a potable groundwater supply facility, the BWS seeks to ensure that the Kahuku Wells Station provides safe drinking water through compliance with applicable DOH standards and rules for public potable water systems. The water quality of the potable groundwater is monitored regularly at a sampling point on the discharge pipeline of each individual well to ensure drinking water quality and health standards are being complied with as outlined in Chapter 11-20, HAR. Additionally, the Kahuku system and its Kahuku Wells Station serving the Kahuku service area currently comply with Chapter 11-25, HAR, which requires public water systems to be under the responsible charge of certified distribution system and water treatment plant operators.

2.3. Description of Project

2.3.1. Proposed Action

As previously mentioned, in its ongoing effort and proactive approach to address concerns associated with its Kahuku potable water supply system, the BWS evaluated the reliability and capacity conditions of the existing system. The BWS reviewed the conditions of the system to determine how best to implement potential future improvements for supplying potable water to Kahuku Town. As a result, the proposed Kahuku Wells Station improvement project was initiated to address pumping reliability and capacity at the Kahuku Wells Station.

The proposed action includes the upgrade of the BWS' existing potable groundwater supply facility at the Kahuku Wells Station site through installation of a new, third well and on-site emergency generator. The proposed project would achieve the project needs and objectives and includes improvements as presented below.

Overall, the proposed water supply facility improvement project will entail the following activities at the Kahuku Well Station:

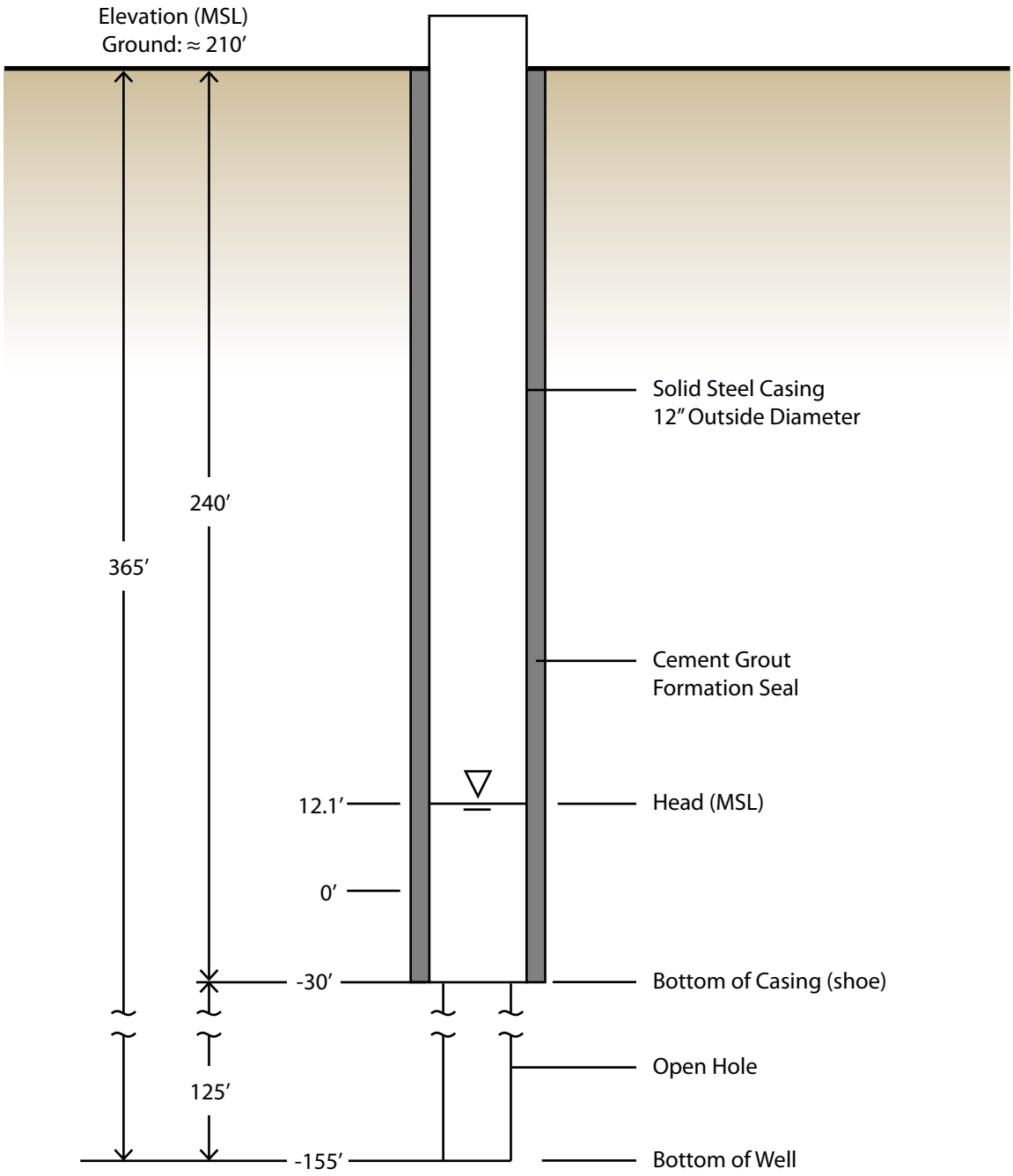
- Drilling, casing, testing, and production of a third well (referred to herein as Well No. 3); and
- Installing and housing an emergency generator.

The new Well No. 3 will be drilled within the site approximately 100 ft from the two existing wells. With ground elevations at the site's large, level pad at close to 210 ft above MSL, the well is expected to be drilled to a total depth of approximately 365 ft or to an approximate elevation of155 ft below MSL. Overall, Well No. 3 is expected to be drilled to a depth and diameter approximate to the existing two wells; however, the specific design requirements of the well will be adjusted as necessary based on the actual conditions at the well location.

Some initial work will be required to prepare the site for drilling of the well. A truck or trailer-mounted drilling rig and other support equipment will then be brought to the site in order to drill the hole. For drilling the hole, either a cable tool or reverse rotary drilling method will be utilized. The cable tool method employs a repeated raising and dropping of a heavy bit within the hole, breaking formation material until the desired depth has been attained. Material from the percussive procedure is then bailed from the hole and will be hauled off-site. The residual material is not expected to contain any contaminants. The reverse rotary method uses a drill bit that bores a hole, while drilling fluid, comprised of air and fluid (water and soap) is pumped down the borehole and returns through the drill stem to the surface, carrying with it formational cuttings. The cuttings are separated from the re-circulating fluid by a screen and will be hauled off-site.

Once drilling is complete, a 12-in diameter steel casing will be installed to an elevation of 30 ft below MSL (i.e., the total length of casing will be approximately 240 ft). The head level is anticipated to be at the same elevation as the two existing wells (approximately 12.1 ft above MSL). Design of the casing will be adjusted as necessary based on the actual conditions at the well location. **Figure 5** shows the anticipated cross-section of the new Well No. 3.

After drilling and casing are completed, a temporary pump will be installed in the well and test pumping will be conducted in order to ascertain the viability of the new well. Test pumping of Well No. 3 will occur in two phases: the step-drawdown test and the constant-rate test. During the step-drawdown test, the well is pumped in increasing fractions of the total anticipated pumping capacity of the well: the step-drawdown test rates for the new well will likely be in the range of 500 to 1,000 gpm. The step-drawdown test will determine the efficiency of the well and will provide preliminary results regarding yield, drawdown, and salinity in the aquifer as a result of pumping from the well. During the constant-rate test, Well No. 3 will be continuously pumped for 24 hours a day at a proposed rate of 1,000 gpm for three days to five days, resulting in approximately 1.44 mgd of groundwater discharged from the well. Overall, test pumping is designed to determine the sustainable capacity of the



Note: MSL = Mean Sea Level

THE LIMTIACO CONSULTING GROUP

KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII

PROPOSED WELL SCHEMATIC

FIGURE 5

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NOT TO SCALE

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well, and it also includes tests on water quality (e.g., chlorides, bacteria). The groundwater effluent from test pumping of the new Well No. 3 will be discharged into the Kahuku Wells Station's proposed modified drainage system for which a construction contract has been awarded and completion is anticipated prior to construction of the project discussed herein. Through the modified drainage system, this discharged groundwater will be conveyed and flow to an existing 40-ft-wide State drainage easement on TMK 5-6-006:046, a DOA-owned Kahuku Agricultural Park parcel. Should construction of Well No. 3 occur prior to the proposed drainage system modification, a disposal plan for discharge of the groundwater effluent from test pumping will be developed and coordinated with the adjacent landowner, the DOA.

The test pumping will also include monitoring of existing wells. During the test pumping, the BWS will take continuous drawdown and water level recordings of the aquifer from the previously-mentioned monitoring well (State Well No. 4057-17) located immediately downstream of the Kahuku Wells Station on TMK 5-6-006:030. Also, the BWS may minimize use of the Kahuku Wells Station's two existing pumps so as to avoid affecting drawdown of the aquifer and distorting measurements taken as part of the test pumping for the new Well No. 3. However, continued potable water service for the Kahuku service area will be maintained during these construction activities.

Upon meeting the standards for drinking water wells during the test pumping, a permanent pump will be installed in Well No. 3 and connected with related piping and appurtenances to the existing facility components. If the standards are not met during the test pumping and/or the well will have detrimental effects on the groundwater aquifer, the new well will be abandoned and capped or turned into a monitoring well. Similar to each of the two existing wells, the new well's pump will have a 75-hp motor and be capable of delivering 700 gpm (or 1 mgd). It is expected that the new pump will be submersible (i.e., both pump and motor assembly will be nested within the submersed portion of the well). Such a submersible pump is not expected to generate noise levels that are audible to adjacent properties. However, if installation of a submersible pump is not feasible, the new well will have a pump and aboveground line shaft motor similar to the two existing wells. Regardless of whether or not a submersible pump is utilized, the new well's pump will need the same approximate footprint as the existing two well's pumps.

The specific layout and design of the underground piping and appurtenances associated with the new well and its pump will be determined during the design phase. Adequacy of the existing control building and control panel in accommodating the new Well No. 3 will be verified during the design phase through thorough investigations. However, pending these evaluations during

the design phase, expansion of the control building in order to fit additional control panel cabinets may be required as part of the proposed project. If the control building is expanded, its specific design will be decided during the design phase so as will not conflict with any existing or proposed facility components. In either case, through use of the existing control panel or additional control panel cabinets, the electrical system will be designed in order to adequately accommodate the facility's operational needs.

Overall, the new Well No. 3 will be similar in size, capacity, and operation to the existing two wells at the Kahuku Wells Station. The well will tap into the aquifer's underground basal water supply, the potable groundwater will be pumped from the well into the reservoir via its pump, and then the water will flow from the reservoir along the transmission main to the Kahuku area. For the first five to seven minutes of each startup, pumping of water within the submerged section of the well casing will occur and the pump blow-off valve will discharge potable-quality water. The pump at Well No. 3 will be connected to the site's underground drainage system. The pump will be remote-controlled or by auto-sensor.

Although the proposed new Well No. 3 will increase the Kahuku Wells Station's total pumping capacity to 3 mgd, the third well will be used as a back-up in supporting Kahuku Town. Specifically, use of the three wells will be rotated regularly such that two of the Kahuku Wells Station's wells will be available for operating at all times with one of the wells on hand as a standby. A third well allows one of the three wells to serve as a standby source and provide for back-up in the event of an emergency (if one of the wells experiences a breakdown and/or must be shut down for repair) or for maintenance purposes (if one of the wells must undergo routine maintenance). Currently, any outages at the Kahuku Wells Station as a result of breakdowns and/or repairs could cut-off water service to all of the customers and emergency facilities and shelters of Kahuku Town until the facility is back in working order. In some cases repairs can be delayed significantly and may take months; for instance, replacement parts can be difficult to obtain because all of BWS' pumps are designed specifically for the needs of each well.

As previously mentioned, the Kahuku Wells Station's two existing wells are permitted and BWS has an existing WUP (WUP No. 322) for the facility with a total permitted use of 0.6 mgd. A well construction permit and pump installation permit will be required to develop and place the new Well No. 3 into production; the BWS will submit these permits to the CWRM for the new, third well. Nonetheless, the proposed project will not entail obtaining a new WUP as the BWS is not seeking to increase the existing Kahuku Wells Station's WUP groundwater allocation under this project. The current

allotment will remain at 0.6 mgd under WUP No. 322, and Well No. 3 will be added as a source to that permit.

Compliance with applicable DOH standards and rules for public potable water systems will be maintained for the Kahuku Wells Station under the proposed improvements to ensure the facility continues to provide safe drinking water. Prior to the use of any new source of raw water to supply public water systems, the BWS must obtain approval from the Director of the DOH. As such and in order to obtain this approval, the BWS will prepare an engineering report pursuant to the guidelines outlined in Section 11-20-29, HAR. The water quality of the potable groundwater will continue to be monitored at the Kahuku Wells Station's wells for continued compliance with the standards outlined in Chapter 11-20, HAR. The Kahuku system and its Kahuku Wells Station serving the Kahuku service area will continue to be operated by certified distribution system and water treatment plant operators as required by Chapter 11-25, HAR. Additionally, the BWS will still be required to submit groundwater use reports to the CWRM, which include such parameters as pumpage, water level, and chlorides. The potable water flows from the Kahuku Wells Station will continue to be monitored continuously depending on the SCADA system's sampling rate, and the average monthly flows will be reported to CWRM in accordance with regulations.

As a component of the proposed project, a new emergency generator will be installed and housed at the Kahuku Wells Station site. The generator will provide back-up power to the facility during power outages, such as in the event of natural disasters or emergencies. Currently, a portable generator would be transported from another site on Oahu if power is lost to the Kahuku Wells Station; the closest of these portable generators is housed in Pearl City (Manana Yard). Because the Kahuku system is a stand-alone potable water system that services numerous emergency service facilities (see Section 3.14.2, Emergency Services for a more thorough description of these facilities), the Kahuku Wells Station has a high priority in the BWS emergency response plan. However, in the event that roads are rendered inoperable or other unforeseen circumstances due to a natural disaster, the BWS is concerned that a portable generator would not be able to access the Kahuku Wells Station. While the Kahuku system is a gravity-fed system and water service would continue as long as water is held in the 0.5 MG reservoir, if a portable emergency generator is not able to reach the site, the reservoir would be drained and potable water service would be lost in the Kahuku service area until power can be restored. Installation of an emergency generator would allow the Kahuku Wells Station to continue to operate in such a situation.

The new on-site emergency generator will need a housing structure and fuel storage and may need more room for housing somewhere on site. The exact size, type, and location of the new emergency generator and its associated housing will be determined during the design phase, and consideration will be given to such qualities as weather-proofing, noise-attenuation, and hurricane-rating for the generator's housing structure. The on-site fuel storage tank for the generator will be constructed aboveground and meet containment and monitoring requirements. The use of biofuels will also be considered during design.

Figure 4 shows the approximate anticipated location of the new Well No. 3 with respect to existing structures within the Kahuku Wells Station site. As shown, Well No. 3 is expected to be located adjacent to the access road just east of the reservoir. The proposed new well location may likely require construction of slope protection (e.g., a small retaining wall) given its proximity to the base of the cut slope. If expanded, the control building will be located in its same location. The emergency generator may be placed near the control building. The exact location of all these improvements will be determined during the design phase. Regardless, all proposed improvements will occur within the Kahuku Wells Station site.

The proposed improvements within the project site will utilize construction methods that involve drilling, excavation, or trenching activities. Aboveground work and activities will also be required for installation and placement of some of the improvement components. The new well, related piping, and appurtenances will be installed belowground. If the new pump is submersible, both pump and motor assembly will be nested within the submerged portion of the well casing. Construction methods associated with these new components will involve drilling, excavation activities, and/or open cut trenching. The proposed new well location will likely require some aboveground earthwork activities (grading for a pad) and slope protection (e.g., small retaining wall). If installation of a submersible pump is not feasible, the new well's motor will be placed aboveground. The new generator and its associated housing unit and fuel storage tank will also be placed aboveground and involve aboveground work. Expansion of the control building (if required) will involve aboveground construction activities and may require some demolition of a portion of the existing building. Otherwise, none of the existing facility's components will be removed and demolished.

Continued potable water service will be maintained during construction of proposed project. There will be flexibility in construction sequencing for the proposed improvements. For the most part, the new Well No. 3 will be constructed off-line and independent of the Kahuku Wells Station's existing components, and installation and housing of the generator will not impact the

Kahuku Wells Station's operation. Installation of the underground piping and appurtenances associated with the new well and its pump may require close coordination to facilitate the new well's connection to the facility's existing components. Nonetheless, the existing two wells and/or reservoir will remain in service during all construction activities.

The completion of the proposed project will result in the improvement of the Kahuku system's reliability in providing potable water and an increase in the Kahuku Wells Station's pumping capacity for supplying domestic demand and fire protection to Kahuku Town. The proposed improvements will entail the first significant upgrade and expansion to the Kahuku Wells Station since its installation over 30 years ago, and they will contribute to the Kahuku Wells Station's continued use in reliably and adequately supplying the Kahuku service area. Development of a new, third production well will minimize long-term outages and improve the Kahuku system's reliability in providing potable water in case of any breakdowns and/or repairs at either of the Kahuku Wells Station's two existing wells. Reliability and potable water service will also be improved by means of the new on-site emergency generator, which should significantly reduce the length and severity of water service cut-offs to the BWS' Kahuku service area customers and enable the Kahuku Wells Station to continue operating as a result of any power outages at the site. In addition, by increasing the Kahuku Wells Station's pumping capacity, the new well is intended to fulfill the facility's pumping capacity requirements in accordance with BWS water system standards for supplying average water demand to current facilities and uses and already-planned Kahuku Town developments with assigned BWS water commitments (Kahuku Villages Phases IV and V). This water system infrastructure upgrade to meet BWS standards thereby provides sufficient pumpage and standby capacity to achieve water reliability. Increasing the facility's pumping capacity will improve fire-flow and fire protection requirements of the system; thus, reliability of the system will also be improved in this way.

2.3.2. Additional Considerations

The proposed project is located entirely at the site of the Kahuku Wells Station potable groundwater supply facility—a parcel owned by the BWS. Therefore, the portions of the project site that would be affected by the proposed water supply facility improvement project are under the jurisdiction of the BWS. All construction activities will occur within the property boundaries of the Kahuku Wells Station site, and access to the project site will be via the BWS access and utility easements over the State-owned road. While entry and construction activity on private property is not expected, temporary off-site construction staging may be required due to space constraints within the project site.

The proposed project would not require the acquisition of new permanent easements as all of the proposed improvements will be accomplished within the existing property boundaries. Further, temporary construction easements would not be required for the proposed project. If for some reason temporary construction easements are necessary, they will be obtained prior to construction activities.

The proposed project includes the following design and construction considerations to minimize disruptions to existing agricultural activities, residences, businesses, institutions, and traffic adjacent to the Kahuku Wells Station project site and within the BWS' Kahuku potable water service area:

- All construction activities will occur within the property boundaries of the Kahuku Wells Station site; however, temporary off-site construction staging may be required due to project site constraints (i.e., limited space on site).
- Potable water service for the Kahuku service area will be maintained during construction of the proposed project.
- In order to minimize disruptions to existing residences, the majority of construction work will be performed during daytime hours (as opposed to night work). Although constant-rate test pumping activities must be continuously performed for 24 hours a day for three to five days and potable water demand/flows may dictate that some construction work occur during nighttime hours, the performing of construction activities at night will be limited to the extent feasible and carried out only as necessary.
- Access to the site will be via the BWS access and utility easements over the State-owned road.
- Any drill holes or open trenches will be covered with steel plates or barricaded during hours when construction operations are not occurring.
- It is expected that the new pump will be submersible (i.e., both pump and motor assembly will be nested within the submersed portion of the well), which is not expected to generate noise levels that are audible to adjacent properties.
- Compliance with applicable DOH standards and rules for public potable water systems will be maintained for the Kahuku Wells Station under the proposed improvements to ensure the facility continues to provide safe drinking water, and the BWS will be required to submit groundwater use reports to the CWRM.
- All necessary permits and approvals will be acquired prior to the construction of the proposed improvements.

Several utilities exist throughout the project site and it is possible that utility relocations may be required. The need for utility relocations will be investigated further and verified during the design phase. If necessary, relocation of utilities may impact the actual construction cost.

2.3.3. Project Schedule and Cost

The drilling, casing, and testing of Well No. 3 is planned for Fiscal Year 2012. It is anticipated that the design of the production well and other facility improvements (including emergency generator) will begin in Fiscal Year 2013, followed by construction activities to begin as early as Fiscal Year 2015.

The project would use City funds as it will be fully funded by the BWS. Funding for this project is currently proposed in the BWS' 6-year Capital Program for Fiscal Years 2010-2015 with an estimated capital cost of $1,560,000 (inclusive of a 10% contingency).

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3. DESCRIPTION OF THE EXISTING ENVIRONMENT, PROJECT IMPACTS, AND MITIGATION MEASURES

3.1. Climate

The climate at the project site is typical of the climate that characterizes most of the State: relatively mild and constant temperatures throughout the year, moderate humidity, persistent northeasterly trade winds, and infrequent severe rainstorms. The northeasterly trade wind is the prevailing wind throughout the year for the island of Oahu, although its average frequency varies from more than 90 percent (%) during the summer to only about 50% in January. The mean annual wind velocity recorded in the vicinity of the project site varies between approximately 8 and 10 miles per hour (WRRC, n.d.(a)).

Daily maximum temperatures in the Kahuku area range from the high 70s in the winter to the low-to-mid 80s in the summer. Records show the annual average maximum temperature is 81 degrees Farenheit (ºF). Daily minimum temperatures vary from the mid-to-high 60s in the winter to the low-to-mid 70s in the summer. The recorded annual average minimum temperature is 70 ºF. (WRRC, n.d.(b))

Hawaii's heaviest rains come from winter storms that generally occur between October and April. The terrain greatly affects trade wind showers, with some affects on storm rainfall. In general, large differences in rainfall occur over small distances because of topography and the location of the rain clouds. (WRRC, n.d.(c)) Rainfall in the vicinity of the project site is relatively moderate, with a median annual rainfall of approximately 36 inches (in). Records show that approximately two-thirds of the rainfall in the Kahuku area occurs between October and April. As with the months, rainfall varies considerably from year-to-year in the Kahuku area: the highest annual rainfall was in 1982 at more than 90 in, while the lowest annual rainfall was in 2000 at approximately 18 in (WRRC, n.d.(b)).

Impacts and Mitigation Measures

No impacts on climatic conditions are anticipated as a result of the construction and operation of the proposed Kahuku Wells Station improvement project. Therefore, no mitigation measures associated with climatic conditions are necessary.

3.2. Geology and Soils

The project site is situated on the northern tip of the Koolau Range, a stretch of mountains which spans 37 miles along the eastern side of Oahu. The range was created by a shield volcano and consists of thin, narrow, layers of basaltic lava flows. It contains numerous dikes and small amounts of volcanic ash. The Koolau

Range is heavily eroded by streams and features high sea cliffs along some sections of its shores. (Stearns, 1985)

The *Soil Survey of the Islands of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii* (USDA, 1972), referred to herein as the Soil Survey, is a comprehensive inventory of soil types within the State. The Soil Survey describes soils at both the regional level and the local level.

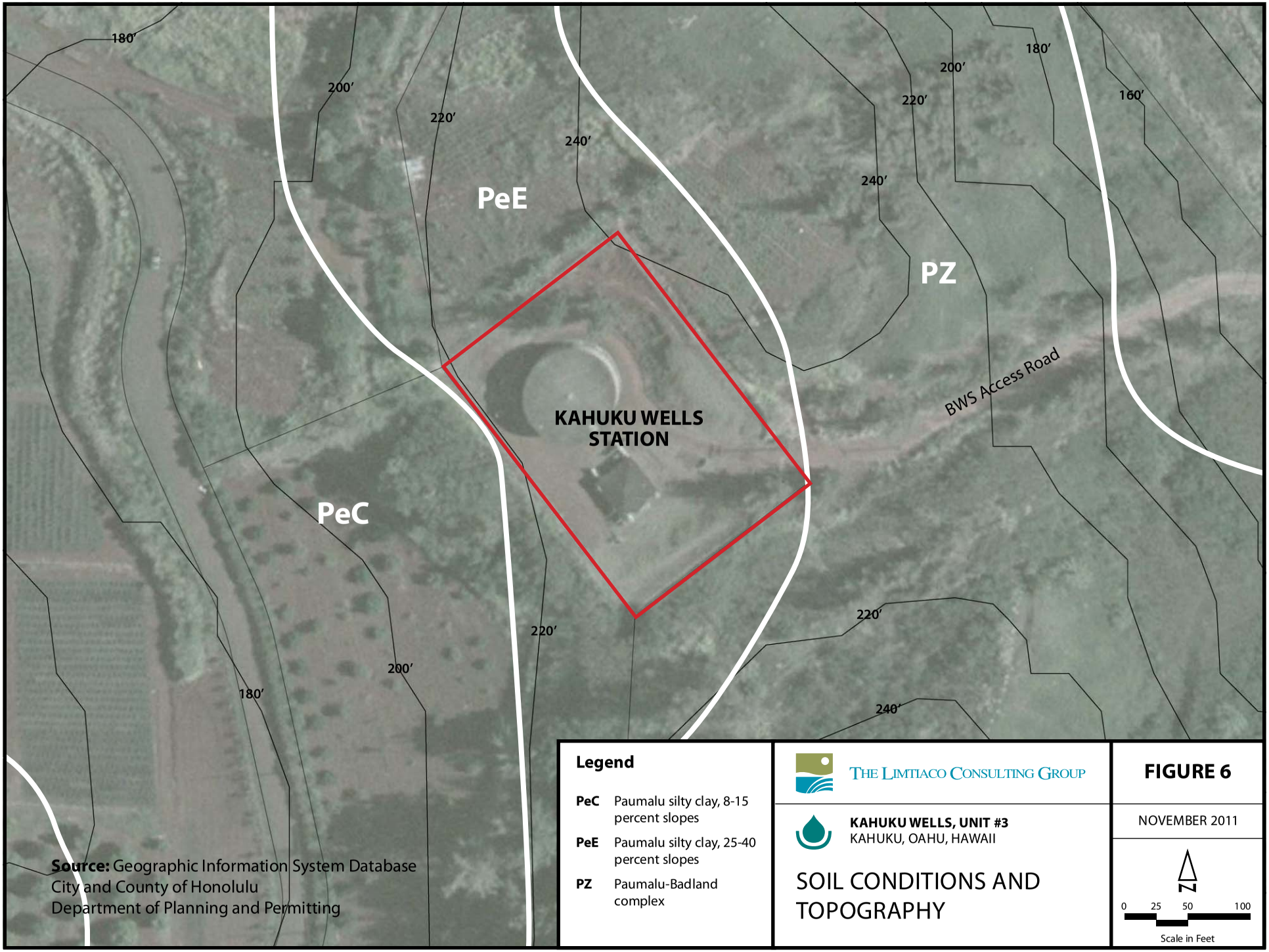
The Soil Survey identifies regions with distinctive proportional patterns of different soil types. These regional patterns, which generally consist of one or more major soils and at least one minor soil, are broken into categories which the Soil Survey refers to as “soil associations”. Soils associations are useful for general purposes over large areas, such as watershed management and land use planning.

The Kahuku Wells Station site is located in a region of soils categorized by the Soil Survey as the Lolekaa-Waikane association. Soils of this association typically occur from near sea level to 1,500 ft above MSL, in areas where precipitation is distributed fairly evenly throughout the year between 40-90 in annually. Soil temperatures average between 70-73ºF. These soils originated from the old alluvium of basic igneous rock and appear on uplands, fans, and terraces. Consequently, they are deep, well-drained soils that have slopes ranging from nearly level to very steep.

Regions regarded as part of the Lolekaa-Waikane association are generally comprised of 20% soils from the Lolekaa series and 20% soils from the Waikane series. Lolekaa series soils have a surface layer of dark-brown silty clay and dominantly silty clay subsoil. Their substratum is a gravelly alluvium. Waikane series soils have a surface layer of dark-brown silty clay and a subsoil of dark reddish-brown silty clay. The remaining soils within the Lolekaa-Waikane association are of the Paumalu, Kemoo, Leilehua, Alaeloa, Kaneohe, Paaloa, Pohakupu, and Manana series.

Soil series are categories of soil based on properties such as drainage considerations, elevation of occurrence, rainfall amounts, soil temperatures, and typical geographical associations. Soil series are further broken into phases based on the local percent slope. Phases are identified because the percent slope can affect such properties as runoff and erosion hazard. Although the Soil Survey contains maps showing soils series and phases at the Kahuku Wells Station, more recently updated maps are available through the National Resources Conservation Service’s *Web Soil Survey* (n.d.).

The entire project site and bordering areas consist of soils of the Paumalu series (**Figure 6**). The Paumalu soil series originated from old alluvium and colluvium of basic igneous rock found on the uplands of northern Oahu. They typically occur at


180′
200′
220′
240′
PeE
PZ
PeC
KAHUKU WELLS STATION
BWS Access Road
160′
Legend
PeC Paumalu silty clay, 8-15 percent slopes
PeE Paumalu silty clay, 25-40 percent slopes
PZ Paumalu-Badland complex
Source: Geographic Information System Database
City and County of Honolulu
Department of Planning and Permitting
THE LIMTIACO CONSULTING GROUP
KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII
SOIL CONDITIONS AND TOPOGRAPHY
FIGURE 6
NOVEMBER 2011
N
0 25 50 100
Scale in Feet

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elevations of 300 to 1,000 ft above MSL, with temperatures averaging 71ºF, and mean annual precipitation of 50-70 in. Grading can vary from gently sloping to very steep. The Paumalu series is geologically associated with Kemoo soils, which occur between Kahuku and Waimea Bay.

According to the *Web Soil Survey*, the Kahuku Wells Station site is situated on soils comprised of Paumalu silty clay, 25-40% slope (PeE). Within this phase, runoff is medium to rapid and the erosion hazard is moderate to severe. To the west, the site is flanked by soils of Paumalu silty clay, 8-15% slope (PeC), which exhibit a slow to medium runoff rate and a slight to moderate erosion hazard.

East of the project site lie soils of the Paumalu-Badland complex, 10-70% slope (PZ). Paumalu soils in the PZ complex are similar to those found within the proposed project site. Like PeE soils, they also have a moderate to rapid runoff rate and a moderate to severe erosion hazard. Badland soils originated from volcanic ejecta and basic igneous rock that became exposed after Paumalu soils were eroded away by the elements. The erosion hazard of these soils is very severe and runoff is rapid.

All of the soil types in the vicinity of the proposed project, with the exclusion of Badland, have a moderately high capacity of the most limiting layer to transmit water (kSat) of 0.20 to 0.60 inches per hour (in/hr) and a moderate available water capacity of about 6.1-6.2 in. Badland soils have a low to moderately low kSat value of 0.00 to 0.06 in/hr and a very low water capacity (0.0 in).

Impacts and Mitigation Measures

No significant adverse impacts to geology or soils within the project site are anticipated.

The BWS will conduct test pumping of the new Well No. 3 in order to ascertain the viability of the well. A temporary pump will be installed to test pump the well. As described in Section 2.3.1, Proposed Action, test pumping will occur in two phases. Intermittent pumping will occur during the step-drawdown test at rates based on increasing fractions of the total anticipated pumping capacity of the new well: for a pumping capacity of 700 gpm, the step-drawdown test rates will likely be in the range of 500 to 1,000 gpm. Continuous pumping will occur during the constant-rate test, where the well will be pumped 24 hours a day at a proposed rate of 1,000 gpm for three days to five days. The groundwater effluent from test pumping will be discharged into the Kahuku Wells Station's proposed modified drainage system for which a construction contract has already been awarded and completion is anticipated prior to construction of the proposed project improvements. Discussed in detail in Section 3.13.3, Drainage System, this discharged groundwater will be conveyed through the modified drainage system and

outlet within an existing 40-ft-wide State drainage easement on TMK 5-6-006:046 (a Kahuku Agricultural Park parcel).

Per the aforementioned *Web Soils Survey*, the Kahuku Agricultural Park parcel with the existing 40-ft-wide drainage easement (TMK 5-6-006:046) contains soils of the PeC phase, which have only a slight to moderate erosion hazard. Additionally, because PeC soil has a moderately high capacity to transmit water and a moderate available water capacity, a fair amount of discharge should percolate into the soil. The Kahuku Wells Station's modified drainage system, moreover, is proposed to include a grouted rubble pavement lining at its outlet point within the existing 40-ft-wide drainage easement in order to mitigate for potential erosion associated with flows collected and conveyed through this system. Nonetheless, the BWS will explore appropriate measures to mitigate any potential erosion and flooding affects that could result from the test pumping discharge. As such, these activities are anticipated to have only a negligible affect on soil and geological considerations in the vicinity of the project site.

The proposed project will involve drilling, grading, excavation, and/or open cut trenching activities within the project site. Soil disturbances during construction will temporarily cause soil at the project site to be more susceptible to erosion from the wind. It is anticipated that the amount of fugitive dust in the air will increase due to these activities. However, best management practices (BMPs) will be employed as described in Section 3.8, Air Quality to mitigate affects that fugitive soil may have on air quality. As such, affects of wind erosion due to construction of the proposed improvements is anticipated to be minimal.

Soil disturbances during construction will temporarily cause soil at the project site to be more susceptible to erosion from stormwater runoff. Erosion of soils due to site preparation and the construction of improvements is anticipated to be minimal; nonetheless, it is expected the amount of soil captured in stormwater runoff will increase due to such activities. Soil runoff from a site could lead to detrimental effects, such as causing nuisances to neighboring parcels or polluting downstream waterbodies. All construction activities will comply with applicable Federal, State, and County regulations and rules for erosion control. Appropriate erosion control measures and BMPs, such as the installation of berming and/or silt fences, will be utilized by the contractor. As such, erosion from stormwater runoff due to construction of the proposed improvements is anticipated to be minimal. See Section 3.9, Surface Water Quality for details regarding any potential impacts to the quality of surface water resources.

Drilling, grading, excavation, and/or open cut trenching activities are not expected to have any significant impacts on the subsurface of the project site. Where feasible, some of these excavated soils may be reused as backfill material; soils unsuitable for reuse will be removed from the site. If necessary, fill may be imported from off-site if there are insufficient quantities of reusable soil from excavation. Any excess excavated material not reused during construction will be removed.

If necessary, geotechnical investigations will be performed at those specific locations targeted for improvements in support of the design phase for the proposed project. The geotechnical information obtained will be utilized to ensure the proper design of the proposed improvements and construction methods.

3.3. Topography

As mentioned earlier, the topography of the Kahuku Wells Station site was previously altered for establishment of the site as a BWS water supply facility in 1979. The site's topographic conditions have not changed since its construction. Overall, the site has a large, flat pad area on which the reservoir, control building, and wells are located (i.e., near the southwest boundary) while the northern, eastern, and southeastern margins of the site are at higher elevations (as the site is on the downslope of a large hill).

According to the topographic surveys conducted in support of the site's establishment as a BWS water supply facility, the overall topography throughout the project site was shown to range in elevation from approximately 205 ft above MSL at the southwestern boundary to approximately 230 ft above MSL at the property's northeastern boundary. The site's topography still ranges between these elevations although the majority of the site was graded for its construction. A large, level pad was formed to host the facility and its associated appurtenances: the pad's elevation is approximately 208 ft above MSL. The portion of the access road within the project site was graded and ranges from 208 ft above MSL to 213 ft above MSL. Slopes were cut along the perimeter of the pad and access road to transition between these graded areas and the site's higher ground elevations (i.e., the northern, eastern, and southeastern margins of site). The slopes have a ratio of 2 horizontal:1 vertical.

Topographic surveys will not be conducted at specific locations within the project site in support of the design phase for the proposed project. Instead, the previously-performed topographic surveys and construction drawings for establishment of the site as a BWS water supply facility will be utilized given that the Kahuku Wells Station site's topographic conditions have not changed since then.

Impacts and Mitigation Measures

The proposed improvements will involve the placement and installation of the new Well No. 3 and its related piping and appurtenances belowground within the project site. If installation of a submersible pump at the new well is determined feasible, both the pump and motor assembly will be nested within the submerged portion of the well casing. Installation of these components will utilize construction methods that require drilling, excavation, or trenching activities.

The proposed project also involves installation and placement of some improvement components aboveground. The proposed new well location will likely require slope protection (e.g., small retaining wall), and the new well's motor will be placed aboveground if installation of a submersible pump is not viable. The new generator and its associated housing unit and fuel storage tank will also be placed aboveground. Expansion of the control building may be required and may involve some demolition of a portion of the existing building. Otherwise, none of the existing facility's components will be removed and demolished.

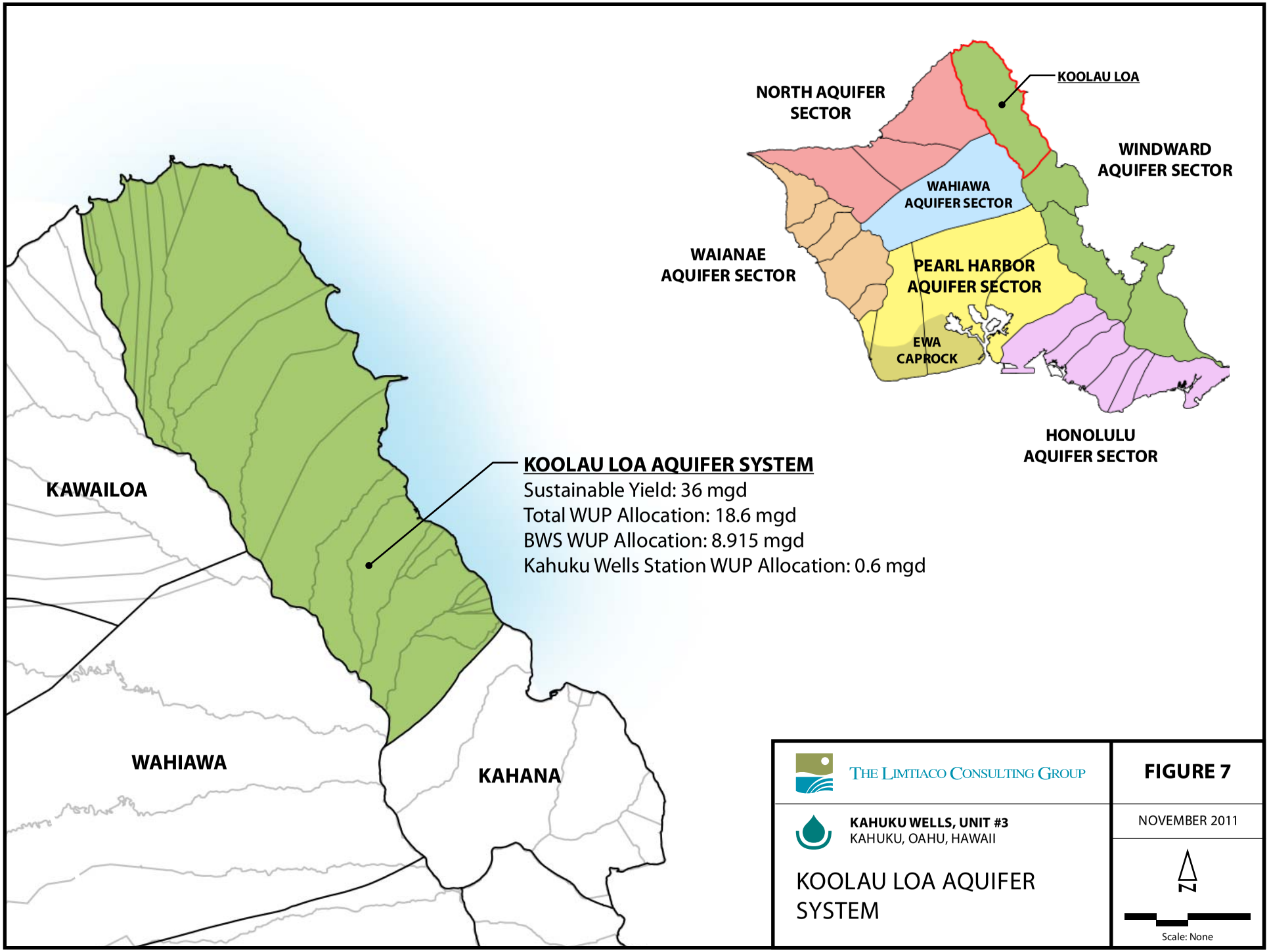
Additionally, although expected to be located within the site's existing large pad area, these aboveground components will likely require some earthwork activities. Even the well location will require grading.

The overall topography of the Kahuku Wells Station site will not be altered by the project. Except for the new well and those locations where a new improvement component is placed aboveground, the areas affected by grading, excavation, and/or open cut trenching activities will be finished and restored to match with existing ground elevations. Overall, the final grade of the project site will be approximately similar to existing grades. The final grading design for the site will be based on soil data and recommendations for grading and maximum slopes. Proper grading will alleviate potential negative environmental consequences, such as soil instability.

No significant adverse impacts to the topography of the project site are anticipated as a result of the completion of the project.

3.4. Groundwater

According to the DLNR aquifer classification system, the aquifer underlying the project site is the Koolau Loa Aquifer System Area of the Windward Aquifer Sector Area (CWRM, 2008) (**Figure 7**).


KOOLAU LOA
NORTH AQUIFER SECTOR
WINDWARD AQUIFER SECTOR
WAHIAWA AQUIFER SECTOR
WAIANAE AQUIFER SECTOR
PEARL HARBOR AQUIFER SECTOR
EWA CAPROCK
HONOLULU AQUIFER SECTOR
KOOLAU LOA AQUIFER SYSTEM
Sustainable Yield: 36 mgd
Total WUP Allocation: 18.6 mgd
BWS WUP Allocation: 8.915 mgd
Kahuku Wells Station WUP Allocation: 0.6 mgd
KAWAILOA
WAHIAWA
KAHANA
THE LIMTIACO CONSULTING GROUP
KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII
KOOLAU LOA AQUIFER SYSTEM
FIGURE 7
NOVEMBER 2011
N
Scale: None

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Existing wells at the Kahuku Wells Station draw water from groundwater sources directly beneath the site. The groundwater aquifer beneath the Kahuku Wells Station is an unconfined basal aquifer in a flank lava geological formation (Mink & Lau, 1990).

Available Water Quantity

Several factors affect the quantity of water that can be safely withdrawn from a well without impairing the groundwater source. Some of these factors are regional (e.g., sustainable yield), while some of these factors are localized (e.g., upconing). Both regional and localized factors will be further explained below.

Regional Factors Affecting Available Groundwater Quantity

The primary regional factor that affects the safe yield of a groundwater well is the region's sustainable yield. The sustainable yield, as defined by the State Water Code (Chapter 174C, HRS), means "the maximum rate at which water may be withdrawn from a water source without impairing the utility or quality of the water source as determined by the Commission [CWRM]." Although determination of the sustainable yield for a region is a complicated process with many factors to be considered, the sustainable yield can generally be thought of as the rate at which a groundwater source is naturally recharged. Then, generally, the groundwater source for that region will not be impaired if the amount of water withdrawn from that region is below the recharge rate.

The CWRM determines sustainable yields for each of the aquifer systems in the State. The CWRM is careful to advise that aquifer system delineations are based on a limited amount of subsurface data and are more largely based on observable surface conditions like topography, stream drainage basins, and surface geology. As such, aquifer system delineations are thought of more as a managerial tool rather than an actual depiction of subsurface groundwater conditions. Nonetheless, sustainable yields are an important tool in establishing a baseline by which to compare the rate of groundwater recharge to the rate of groundwater withdrawal. The most current sustainable yield rates published in the *Water Resource Protection Plan, Hawaii Water Plan* (2008) indicate a sustainable yield of 36 mgd for the Koolau Loa Aquifer System.

As described above, groundwater withdrawals can generally be thought of as being sustainable if the rate of groundwater recharge is greater than the rate of groundwater withdrawal. A tool the CWRM uses to track (and manage) the rate of water withdrawal from an aquifer system is the WUP.

WUPs are permits required for any proposed withdrawal or consumptive use of water in a designated Water Management Area (HRS 174C-48). Thus, in order for

the WUP process to take effect for a particular water sector, that sector must first be designated a Water Management Area. The State Water Code designates authority to the CWRM to establish Water Management Areas when "it can be reasonably determined, after conducting scientific investigations and research, that the water resources in an area may be threatened by existing or proposed withdrawals or diversions of water…"(HRS 174C-41). The criteria and process for designating Water Management Areas is further explained in the *Water Resource Protection Plan, Hawaii Water Plan* (2008). The Windward Sector of Oahu has been designated a Water Management Area by the CWRM. Thus, WUPs are required for any withdrawal or consumptive use of water from aquifers within this sector (such as the Koolau Loa Aquifer System).

To obtain a WUP from the CWRM, a permit applicant needs to demonstrate conformance with criteria as specified in the State Water Code. The State Water Code states that:

> *"…the applicant shall establish that the proposed use of water:*
> *(1) Can be accommodated with the available water source;*
> *(2) Is a reasonable-beneficial use as defined in section 174C-3;*
> *(3) Will not interfere with any existing legal use of water;*
> *(4) Is consistent with the public interest;*
> *(5) Is consistent with state and county general plans and land use designations;*
> *(6) Is consistent with county land use plans and policies; and*
> *(7) Will not interfere with the rights of the department of Hawaiian home lands as provided in section 221 of the Hawaiian Homes Commission Act."* (HRS 174C-49)

The CWRM has approved WUPs in the Koolau Loa Aquifer System totaling 18.628 mgd, as of 2010, in water allocations. This WUP allotment is approximately 17.4 mgd less than the 36 mgd sustainable yield for the aquifer system. As such, the Koolau Loa Aquifer System is not in immediate danger of running short of groundwater supply. It should also be noted that a WUP allocation of 18.628 mgd does not necessarily indicate that 18.628 mgd is withdrawn from the Koolau Loa Aquifer System as not all WUP holders withdraw their total allotted use each day.

The BWS holds seven WUPs in the Koolau Loa Aquifer System, totaling 8.915 mgd. Included within this allocation is the WUP for the Kahuku Wells Station (WUP No. 322). WUP No. 322 includes the two existing wells at the Kahuku Wells Station (Well No. 4057-15 and 4057-16) and allocates 0.6 mgd to the Kahuku Wells Station. The water allocation for the Kahuku Wells Station is a relatively small percentage of the total BWS WUP allocation in the Koolau Loa Aquifer System (6.73%), total WUP allocations within the Koolau Loa Aquifer System (3.22%), and the sustainable yield

of the Koolau Loa Aquifer System (1.67%). The Kahuku Wells Station's average day pumpage from 2005 to 2009 was approximately 0.40 mgd.

For the reasons described above, it can be reasonably concluded that there is sufficient regional ground water supply for existing withdrawals at the Kahuku Wells Station.

Local Factors Affecting Available Groundwater Quantity

As mentioned above, the Kahuku Wells Station draws water from an unconfined basal aquifer. Water is drawn from a freshwater lens that "floats" atop denser salt water. However, the transition between the freshwater lens and salt water is not distinct. A transitional layer of brackish water separates the freshwater lens from the salt water. This transitional zone is in constant movement due to various factors, and it can threaten municipal freshwater supplies if brackish water is drawn too close to municipal freshwater wells.

When freshwater is pumped from basal aquifers, this transitional zone of brackish water is drawn closer to the pumping source (i.e., well). The amount of movement in the transitional layer is dependent on the rate of withdrawal from that well: when water is drawn from the well at low rates there is relatively little movement of the transitional layer toward the well, and when water is drawn from the well at high rates there is relatively large movement of the transitional layer toward the well. This phenomenon is known as upconing, and it is a common concern with wells drawing from basal aquifers. Wells clustered in close proximity can possibly magnify the upconing effect when they pump concurrently.

Upconing effectively limits the rate at which groundwater can be drawn from a freshwater well facility. The effect of upconing is unique to each well, and it is dependent on site-specific and residual draft and long-term storage losses. To date, the BWS has not encountered significant increases of chloride content due to upconing at the Kahuku Wells Station.

Another factor that limits the rate at which water can be drawn from a freshwater well is drawdown. When water is pumped from a well, the groundwater level in the vicinity of the well will drop because of the change in hydraulic head due to pumping. The magnitude of this drop and the radius affected by the drawdown effect is highly dependent on the rate of water that is being pumped from the well. The effects of drawdown could impact other nearby groundwater wells.

Figure 8 gives a depiction of the effects of upconing and drawdown.

Water Quality

High-quality groundwater is critical to the continued viability of the Koolau Loa Aquifer System groundwater supply. As a potable groundwater supply facility, the BWS seeks to ensure that the Kahuku Wells Station provides safe drinking water through compliance with applicable DOH standards and rules for public potable water systems.

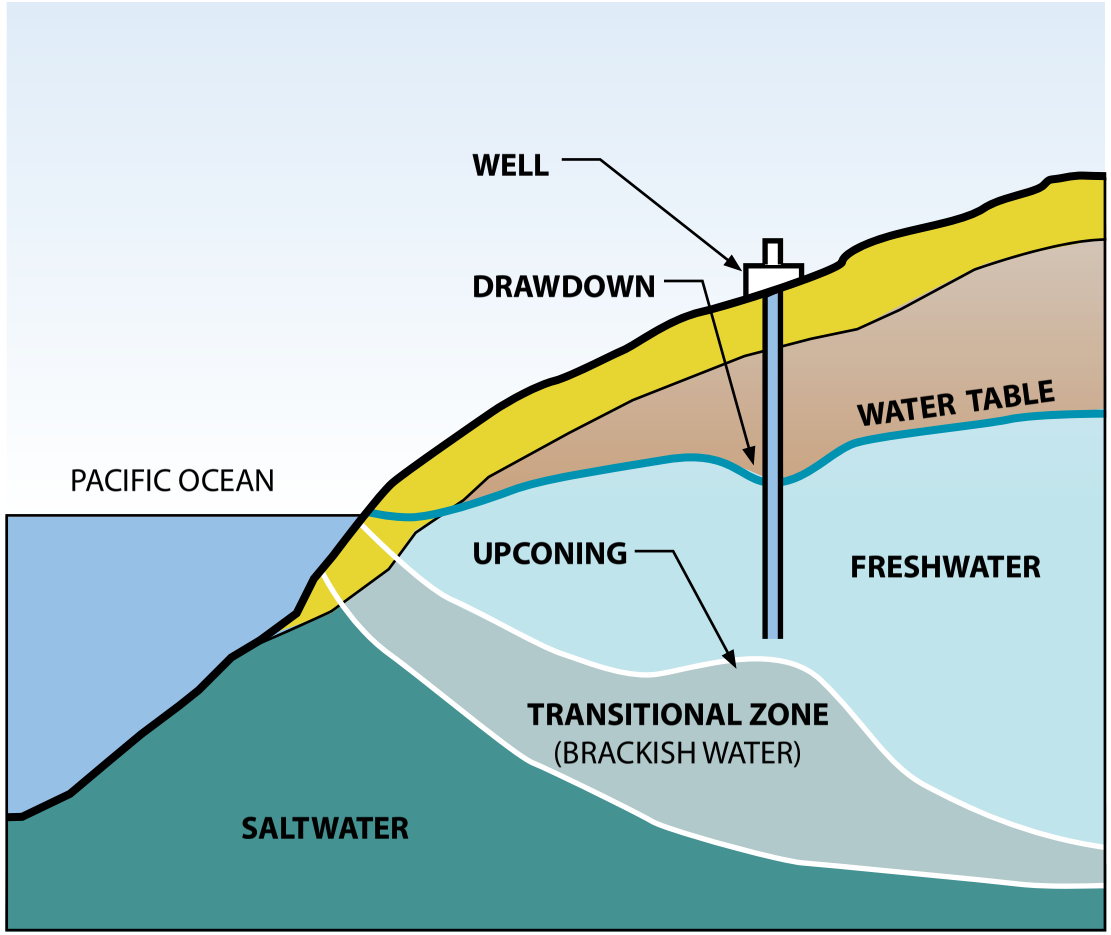
The *Hawaii Source Water Assessment Program Report* (*HISWAP*) (2004), prepared pursuant to the Federal Safe Drinking Water Act, identifies wellhead protection areas (WHPA) surrounding municipal groundwater sources such as the Kahuku Wells Station. WHPAs identify three zones surrounding each groundwater source, which delineate different levels of protection. The zones are defined as follows:

1. **Zone A** has is a fixed radius of 50 ft around each well. It provides protection from the direct introduction of pollutants, either accidentally or by vandalism.
2. **Zone B** encompasses the surface area above a groundwater source that contributes to a well within a 2-year time-of-travel (TOT). TOTs are based on groundwater modeling capture zones and represent the amount of time it will take for groundwater from a given point to travel to the groundwater source. Zone B provides protection to groundwater sources from microbial contamination.
3. **Zone C** encompasses the surface area above a groundwater source that contributes to a well within a 10-year TOT. Zone C provides protection to groundwater sources from chemical contamination.

The *HISWAP* (2004) gives a detailed explanation of the methods used to determine WHPAs.

The *HISWAP* identifies a number of potentially contaminating activities within the WHPA of the existing facility, which include agricultural activities, residential areas, and sanitary sewer systems. While it outlines possible future sources of contamination, numerous sources record existing and past sources of pollution. The following sources were checked for indications of existing or past of groundwater pollution at or in the vicinity of the Kahuku Wells Station:

- National Priorities List (US EPA, 2009)
- Comprehensive Environmental Response, Compensation and Liability Information System (US EPA, 2010)
- 2005 Groundwater Contamination Maps (DOH, 2006)
- Hawaii UST-LUST database in Excel format (SHWB, 2009)



THE LIMTIACO CONSULTING GROUP

KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII

UPCONING AND DRAWDOWN

FIGURE 8

NOVEMBER 2011

Scale: None

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None of these sources indicate groundwater pollution at or in the vicinity of the Kahuku Wells Station. Ten sites were identified in the Kahuku area on the *UST-LUST database in Excel Format* (2009). However, the status for all ten sites was listed as "Site Cleanup Completed".

Impacts and Mitigation Measures

Available Groundwater Quantity

Regional Impacts on Available Groundwater Quantity
The Kahuku Wells Station is a relatively small facility in terms of groundwater withdrawal in the Koolau Loa Aquifer System. As described above, the WUP allocation of 0.6 mgd is only a minor fraction of the 36 mgd sustainable yield in the aquifer system.

Additionally, the proposed improvements will not result in any significant operational changes at the Kahuku Wells Station. The intent for developing the Well No. 3 at the site is not to operate all three wells at one time, but to use a third well as a back-up in supporting Kahuku Town. Specifically, use of the three wells will be rotated regularly such that two of the Kahuku Wells Station's wells will be available for operating and one of the wells will be on hand as a standby source.

The BWS is not seeking to increase the existing Kahuku Wells Station's WUP groundwater allocation in association with the proposed improvements. The BWS proposes to add Well No. 3 as a source to the Kahuku Wells Station's existing WUP No. 322; the allotment for WUP No. 322 will remain at 0.6 mgd.

For these reasons, the proposed improvements are not anticipated to have any impact on regional groundwater quantity considerations in the Koolau Loa Aquifer System.

Local Impacts on Available Groundwater Quantity
Well No. 3 will be constructed approximately 100 ft from the two existing wells at the Kahuku Wells Station. Additionally, the size, capacity, and pumping operations of Well No. 3 will be similar in nature to the Kahuku Wells Station's existing two wells. As previously mentioned, construction of Well No. 3 will not significantly change current operating procedures at the Kahuku Wells Station as its addition is intended to allow two of the wells to be available for operating at all times with a third well on hand as a standby source. Because upconing and drawdown have not been a problem for the two existing wells, it can reasonably be expected that these effects will not be an issue for Well No. 3.

The BWS will perform test pumping in accordance with CWRM's Hawaii Well Construction and Pump Installation Standards to determine what local effects the operation of Well No. 3 can be expected to have on the groundwater aquifer. Test pumping of Well No. 3 will occur in two phases: the step-drawdown test and the constant-rate test.

The first phase of testing is the step-drawdown test. During this test, the well is pumped in increasing fractions of the total anticipated pumping capacity of the well. For a pumping capacity of 700 gpm, the step-drawdown test rates for the New Well No. 3 will likely be in the range of 500 to 1,000 gpm. The step-drawdown test will establish the efficiency of the well and will provide preliminary results regarding yield, drawdown, and salinity in the aquifer as a result of pumping from the new well.

The second phase of testing is the constant-rate test. During this test, the well will be continuously pumped for 24 hours a day at a proposed rate of 1,000 gpm for three days to five days (the exact rate and duration of test pumping will be determined at a later time) resulting in approximately 1.44 mgd of groundwater discharged from the well. The constant-rate test will determine salinity trends in the aquifer due to extended pumping and will determine any effects of drawdown.

Water quality measurements will be taken and groundwater levels will be monitored during both phases of test pumping to determine the viability of Well No. 3 and the effect of its use on the groundwater aquifer. Testing procedures will be modified if it becomes apparent that test pumping has an adverse impact on the existing wells. If there are significant problems during construction, work will be halted and a solution developed before construction is allowed to resume. If test pumping determines that Well No. 3 does not comply with standards for drinking water wells or will have detrimental effects on the groundwater aquifer, then it will be abandoned and capped or converted into a monitoring well. However, the BWS expects that Well No. 3 will be viable because of data already gathered from the two existing wells at the Kahuku Wells Station.

The test pumping will also include monitoring of existing wells. During the test pumping, the BWS will take continuous drawdown and water level recordings of the aquifer from the monitoring well (State Well No. 4057-17) located immediately downstream of the Kahuku Wells Station on TMK 5-6-006:030. Also, the BWS may minimize use of the Kahuku Wells Station's two existing pumps so as to avoid affecting drawdown of the aquifer and distorting measurements taken as part of the test pumping for the new Well No. 3.

Water Quality

Construction of the proposed improvements may temporarily increase the risk of groundwater contamination. Generally, construction activities will take place within WHPA Zones A and B. Of primary concern is the increased concentration of petroleum hydrocarbons at the site during construction activities due to the presence of construction equipment. However, the contractor will be responsible to ensure that proper BMPs are employed to ensure that no spills will endanger the groundwater aquifer; the well construction contract will require BMPs to address the risk of potential groundwater contamination. For example, if necessary, secondary containment will be used for gasoline that is stored at the project site and spill kits will be located at the site during construction so that an accidental gasoline spill can be cleaned immediately. The use of proper BMPs during construction will ensure protection of the groundwater aquifer from accidental contamination.

The new Well No. 3 and on-site emergency generator will not introduce any potential contaminating activity. An on-site fuel storage tank associated with the emergency generator will be constructed aboveground as part of the proposed improvements; its design will be consistent with all Federal, State, and County standards regarding the containment of hazardous materials and it will meet monitoring requirements. As such, no impacts on water quality of the groundwater aquifer underlying the site are anticipated due to operation of the proposed improvements.

To reduce the risk of contamination by vandalism, the site is equipped with a locked gate and the buildings are equipped with door alarms. To improve security, the BWS is installing a security camera as a part of a separate project. The BWS is also evaluating improved fencing systems for all of its facilities.

Regulatory Considerations

The BWS must obtain approval from the Director of the DOH prior to the use of any new source of raw water to supply public water systems. To obtain this approval, the BWS will prepare an engineering report pursuant to the guidelines outlined in Section 11-20-29, HAR. The engineering report will include information regarding groundwater quantity and quality, potential sources of source water contamination, and measures to reduce or eliminate the potential for contamination.

The Kahuku Wells Station currently provides water to the public at a level of quality in accordance with Federal, State, and County standards. The BWS regularly tests water from the Kahuku Wells Station to ensure that water quality falls within the standards for public water systems as outlined in Chapter 11-20, HAR. Additionally, the Kahuku system and its Kahuku Wells Station serving the Kahuku service area currently comply with Chapter 11-25, HAR, which requires public water systems to be under the responsible charge of certified distribution system and water treatment plant operators. While it is not anticipated that the proposed improvements will result in a change in water quality, the BWS will continue to monitor water quality for continued compliance with the standards outlined in HAR 11-20. The Kahuku system and its Kahuku Wells Station will continue to be operated by certified distribution system and water treatment plant operators as required by HAR 11-25.

A well construction/pump installation permit application (which includes submittal of an aquifer pump test report) and a transfer of the Kahuku Wells Station's existing WUP No. 322 allocation from the original two wells to add the new well as a source will be submitted to the CWRM for the construction and subsequent operation of Well No. 3. Additionally, the BWS will be required to submit monthly and annual groundwater use reports to the CWRM. These reports will include such parameters as pumpage, water level, and chlorides. This data is used by the CWRM in an effort to implement policies identified in the State Water Code and Water Resource Protection Plan (WRPP).

3.5. Surface Waters

According to the *Atlas of Hawaiian Watersheds & Their Aquatic Resources* (2008), the Kahuku Wells Station is located within the Koolau Loa region's Kii watershed. Adjacent to the Kii watershed and also within the Koolau Loa region, the Malaekahana watershed is located just south of the project site.

There are no freshwater streams, rivers, ponds, or open waterbodies located within or immediately adjacent to the project site. Located approximately 0.1 mile at its nearest point from the project site, the closest surface waterbody to the Kahuku Wells Station is an unnamed ditch. Generally, it traverses from west, to north, to east, to south in proximity to the site and through both the Kii and Malaekahana watersheds. The head of this ditch is located approximately 0.5 mile upstream from site, and there is a flume along its downstream segment. The ditch neither appears to receive water from a stream diversion nor overflow into any other waterbody, including State waters. (DAR and Bishop Museum, 2008)

The closest streams to the Kahuku Wells Station site are Kii Stream and Keaaulu Gulch. At their reaches in closest proximity to the project site, Kii Stream is located approximately 0.4 mile north and Keaaulu Gulch is located approximately 0.3 mile south. Kii Stream is an intermittent stream within the Kii watershed that receives flows from inland, freshwater tributaries and feeds a large wetland habitat area near the coastline before it outlets to the ocean (just north of Kahuku Golf Course Beach). The stream flows eastward and, approximately 1.0 mile from the project site, delivers water to part of the 260 acres of wetland habitat (which is both natural and artificially maintained) comprising the U.S. Fish and Wildlife Service's (USFWS') James Campbell National Wildlife Refuge (USFWS, 2010(a)). Keaaulu Gulch is identified as both an intermittent and perennial stream located within the Malekahana watershed. Following the same basic *mauka*-to-*makai* flow pattern, this stream flows eastward and is a tributary of Malaekahana Stream: a perennial stream. Keaaulu Gulch joins Malaekahana Stream approximately 1.2 miles from the project site, and approximately 0.3 mile from their confluence, Malaekahana Stream continues eastward and outlets into the ocean (between Kahuku Golf Course Beach and Malaekahana State Recreation Area).

Per the USFWS' *National Wetlands Inventory*, there are no wetlands located within or immediately adjacent to the project site. The unnamed ditches located closest to the project site are neither identified as surface water features nor classified as wetlands. Along those reaches in closest proximity to the project site, Kii Stream is classified as both a freshwater forested/shrub wetland and freshwater emergent wetland resource that lies within a basin or channel excavated by man and Keaaulu Gulch is classified as a freshwater forested/shrub wetland resource. The freshwater forested/shrub wetland resource is described as seasonally flooded depressions and floodplains dominated by forested vegetation, and freshwater emergent wetland resource is described as seasonally flooded wetlands dominated by herbaceous vegetation. (USFWS, 2010(b))

Impacts and Mitigation Measures

No significant adverse impacts to surface water resources are anticipated to result from implementation of the proposed project. Refer to Section 3.9, Surface Water Quality for details regarding any potential impacts to the quality of surface water resources.

All project improvements and construction activities will occur within and be confined to the existing Kahuku Wells Station site. There are no waterbodies located within the project site with the closest surface waterbody (an unnamed ditch) being located approximately 0.1 mile from the site. The closest streams to the site are located approximately 0.4 mile north (Kii Stream) and approximately 0.3 mile south (Keaaulu Gulch). As such, the proposed project will not involve activities or discharges (i.e., the placement of

temporary or permanent structures) within the bed or along the banks of any waterbody. Additionally, the completion and operation of the proposed improvements will not involve alteration of the bed or banks of any waterbody, and the project will not result in any changes to the course or capacity of the abovementioned surface waterbodies.

3.6. Flood, Tsunami, and Earthquake Hazards

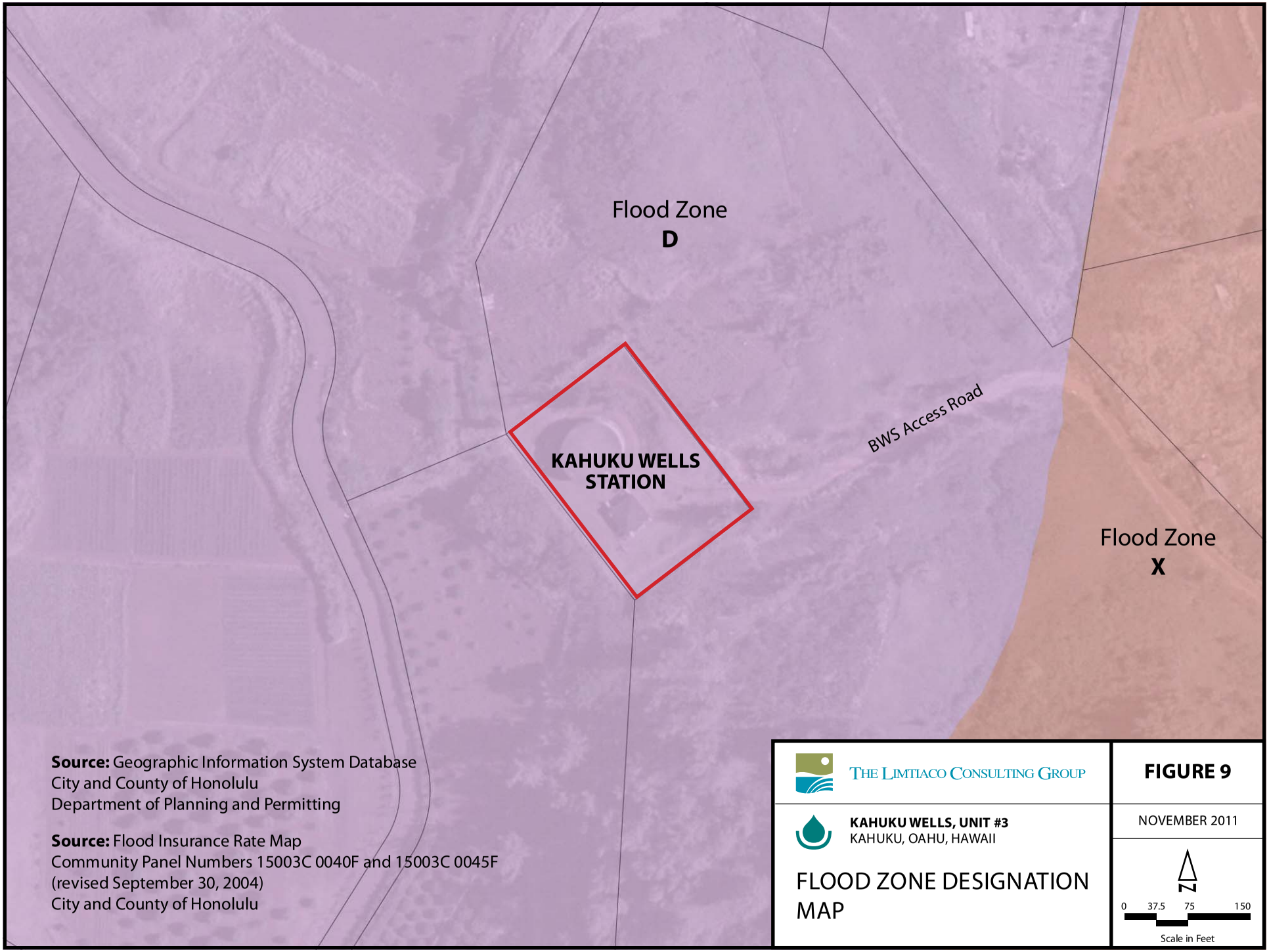
According the Federal Emergency Management Agency Flood Insurance Rate Map, Community Panel Numbers 15003C 0040F and 15003C 0045F for the City (revised September 30, 2004), the project site is identified as within Zone D. Zone D designates unstudied areas where the flood hazard is undetermined but where flooding is possible, and the Flood Insurance Program does not have any regulations for developments within Zone D (**Figure 9**). (Hawaii–NFIP, n.d.)

The project site is located approximately 1.5 miles from the island's coastline. According to current tsunami evacuation maps developed for the SCD, the project site is not within a tsunami evacuation zone (SCD, n.d.).

Engineers, seismologists, architects, and planners have carefully evaluated seismic hazards related to building construction and have devised a system of classifying seismic hazards on the basis of the expected strength of ground shaking and the probability of the shaking actually occurring within a specified time. The results are included in the Uniform Building Code (UBC) seismic provisions. The UBC seismic provisions contain six seismic zones, ranging from 0 (no chance of severe ground shaking) to 4 (10% chance of severe shaking in a 50-year interval). Currently, Oahu lies within the UBC seismic risk zone 2A (Hawaii Statewide Hazard Mitigation Forum, 2007)

Impacts and Mitigation Measures

It is unlikely that the construction and operation of the proposed improvements will result in the flooding of the project site or the surrounding area. All activities will occur within and be confined to the Kahuku Wells Station site. Construction activities will not increase the volume of peak stormwater runoff. While the test pumping activities will result in the discharge of groundwater effluent into the Kahuku Wells Station's proposed modified drainage system, which is to be completed prior to construction of the proposed project improvements, these activities will be temporary in nature. Through the modified drainage system, this discharged groundwater will be conveyed to and outlet within an existing 40-ft-wide State drainage easement on TMK 5-6-006:046 (a DOA-owned Kahuku Agricultural Park parcel). It is expected that a fair amount of this temporary discharge from the new well should percolate into the soil of the existing drainage easement due to the


Flood Zone
D
KAHUKU WELLS
STATION
BWS Access Road
Flood Zone
X
Source: Geographic Information System Database
City and County of Honolulu
Department of Planning and Permitting
Source: Flood Insurance Rate Map
Community Panel Numbers 15003C 0040F and 15003C 0045F
(revised September 30, 2004)
City and County of Honolulu
THE LIMTIACO CONSULTING GROUP
KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII
FLOOD ZONE DESIGNATION MAP
FIGURE 9
NOVEMBER 2011
N
0 37.5 75 150
Scale in Feet

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permeable nature of the soils of this parcel (see Section 3.2, Geology and Soils for a discussion of soil types and characteristics). Nonetheless, the BWS will explore appropriate measures to mitigate any potential flooding affects that could result from the test pumping discharge (e.g., mitigation measures to minimize the intensity and velocity of the test pumping discharge), and any such proper mitigation measures will be determined during the design phase.

Upon completion of the project, stormwater runon, stormwater runoff from the site, and discharges associated with the facility's operations (i.e., process water discharges) will continue to be directed and flow into the Kahuku Wells Station's underground drainage system (see Section 3.13.3, Drainage System for details and an illustration of the project site's drainage system utilities, including the proposed modified drainage system). The volume of peak stormwater runoff is not anticipated to increase as the addition of impervious surface area within the project site will be minimal, and the project will not induce additional stormwater runoff.

No temporary or permanent structures will be placed within or along the banks of any waterbody as a result of the proposed project. No alteration of the bed or banks of any waterbody is proposed, and the project will not result in any changes to the course or capacity of any existing stream system.

Overall, the final grade of the project site will be approximately similar to existing grades. After completion of construction activities, where the proposed improvements would require grading, excavation, or open cut trenching activities and except for the new well and those locations where a new improvement component is placed aboveground, the ground surface will be finished and restored to align with existing surface elevations. The final grading design for the site will be based on soil data and recommendations for grading and maximum slopes. Proper grading will alleviate potential negative environmental consequences such as flooding.

The proposed project is located outside of the island's tsunami evacuation zones and would not result in an increased risk of tsunamis.

Implementation of the proposed project would not result in an increase to the risk of earthquakes. Nonetheless, construction contractors will be required to employ sound engineering practices and adhere to the appropriate UBC requirements, which include structural design standards for earthquake resistance, for necessary structures.

3.7. Floral and Faunal Resources

The project site consists of and solely contains the BWS' existing Kahuku Wells Station, a potable groundwater supply facility. Hence, the proposed project is located on a highly-developed and altered site with numerous aboveground structures and paving. The current site layout and photos of the site's existing conditions and components are presented in **Figure 4**. Overall, the project site is located adjacent to and within an altered rural environment characterized by agricultural activities and open, mostly undeveloped space. Extensive sugarcane cultivation occurred throughout this area, including the project site and immediately adjacent parcels, prior to the Kahuku Wells Station's initial development.

A plant life survey was conducted at the project site when the Kahuku Wells Station was established as a BWS potable groundwater supply facility (Park Engineering, Inc.,1978). The following flora was identified: Guava, Christmas Berry, Swollen Finger Grass, Koa Haole, Scarlet-Fruited Passion flower, Creeping Rose or 'ulei, and Sugarcane. None of these plants are listed or candidate threatened or endangered floral species, and it is highly unlikely that any such species still exist within the project site due to the construction activities that occurred for the Kahuku Wells Station's initial development.

Additionally, a biological resources survey report was recently prepared for the adjacent 232-acre parcel (TMK 5-6-008:006), which is currently open space and adjoins the Kahuku Wells Station site's boundaries, for its proposed use as a wind farm (Hobdy, 2009). According to the survey report, the vegetation on this parcel is dominated by non-native agricultural weeds and tree species that have taken over since the abandonment of the area's use for sugar cane agriculture, although a complement of common native species remain on ridge tops. Some of the common species are Chinese violet, octopus tree, Guinea grass, strawberry guava, with the most abundant species through the parcel being ironwood. Although a total of 100 species were recorded during the survey, 17 were common native species. None of the floral species found within this parcel are rare and Federally- or State-listed or candidate threatened or endangered species.

Lands altered and influenced by a high degree of rural development and human activity, such as the project site, are often characterized by floral communities dominated by introduced species. Consequently, floral species found within and adjacent to the project site are primarily non-native species. Most of the vegetation within and adjacent to the project site consists of cultivated and landscaping plants. In association with its development as a potable groundwater supply facility, the Kahuku Wells Station site has been landscaped with some ornamental trees and grasses. Except for some large ironwood trees located on the northeastern slope of the project site, the Kahuku Wells Station site is sparsely vegetated. Areas within the site that are not paved are thinly covered in grass, and there are no trees located

within the large, flat pad area of the site on which the reservoir, control building, and wells are situated. A buffer of “natural” vegetation (trees and shrubs) is located adjacent to the site’s southwest boundary while minimal vegetation occurs along the site’s northwest boundary. No Federal or State listed or candidate threatened or endangered floral species are known to occur within the project site.

Given the Kahuku Wells Station site is mostly developed with structures and paving, it lacks the necessary habitats to support or attract native faunal communities. Most native faunal species that may have once inhabited the project site and immediately surrounding area have been displaced, and fauna and avifauna species presently found are predominantly introduced species and those that are common to and have adapted to an altered rural environment. Mongoose, rats, mice, and cats are common to the project site. Avifauna species presumed to frequent the site are those common to altered rural environments and may include the common myna, house finch, Northern cardinal, red-vented bulbul, barred dove, spotted dove, and pigeon. No Federal or State listed or candidate threatened or endangered faunal species are known to occur within the project site.

According to abovementioned biological resources survey report prepared for the adjacent 232-acre parcel (TMK 5-6-008:006) that adjoins the Kahuku Wells Station site’s boundaries (Hobdy, 2009), most of the wildlife observed on the property is non-native and introduced species. Such species include the feral pig, domestic dog, zebra dove, common myna, red-vented bulbul, house finch, Japanese white-eye, Northern cardinal, and spotted dove. However, one native species that is a Federally-listed endangered species was detected below and on the lower margins of the TMK 5-6-008:006 parcel: the Hawaiian hoary bat. The biological resources survey report notes: “The Hawaiian hoary bat is a highly mobile creature that is known to move about in response to temperature changes and insect population spikes. They are solitary (rather than colonial) bats whose roosting sites appear to be opportunistic and ever changing. They have been recorded from almost every conceivable habitat including high and low elevations, forests, pastures, lava flows, bogs and even rural communities. They can occupy one area when flying insects are abundant and be absent when feeding opportunities have moved elsewhere. Thus, no critical habitats have been established for them. The more we focus on these cryptic, nocturnal bats, the more of them we find and the more widespread we find them to be.”

On a similar note, it is acknowledged that the 260-acre wetland habitat comprising the USFWS’ James Campbell National Wildlife Refuge is located approximately 1.0 mile from the project site. The wetland refuge is primarily devoted to the recovery of Hawaii's four endangered waterbirds: Hawaiian stilt, Hawaiian moorhen, Hawaiian coot, and Hawaiian duck. (USFWS, 2010(a)) While these birds were not identified to be in the adjacent parcel during the abovementioned biological resources survey,

there is a small possibility that these waterbirds might fly over the project site and surrounding area enroute to other wetland habitats (Hobdy, 2009). However, as noted in Section 3.5., Surface Waters, there is no wetland habitat to attract such waterbirds located within or immediately adjacent to the project site.

Impacts and Mitigation Measures

No significant adverse impacts to flora and fauna within or in the vicinity of the project site are anticipated to result from implementation of the proposed project. All project improvements and construction activities will occur within and be confined to the existing Kahuku Wells Station project site; although, temporary off-site construction staging may be required due to limited availability of space on the project site. The project site and surrounding area are highly altered, influenced by a high degree of rural development, and often characterized by floral and faunal communities dominated by introduced species. Sensitive species or habitats are not known to occur within the project site and generally do not occur within developed areas. No Federal or State listed or candidate threatened or endangered species are known to inhabit or occur within the project site.

Potential impacts on introduced, non-native floral and faunal species may result from construction activities and proposed improvements within the project site. During construction, vegetation within the project site and within and adjacent to the temporary off-site construction staging area (if necessary) may be negatively affected. Although it is not anticipated that any of the on-site ironwood trees or adjacent vegetation along the site's boundaries will be removed as part of the proposed improvements, any existing vegetation or landscaping disturbed within these areas during construction activities will be restored and revegetated, to the extent practicable. However, as previously stated, all construction activities would occur on the already-developed and currently existing Kahuku Wells Station site, and no impacts to sensitive floral or faunal communities are expected.

Overall, the project site and surrounding area are not anticipated to change as a result of the proposed project. While the proposed project involves installation and placement of some improvement components aboveground, these aboveground improvement components will be constructed at heights similar to the site's existing components. Additionally, no changes in the ambient light level and night glow are proposed as part of the project. Installation of the proposed improvements will be consistent with the current use, character, and nature of the already highly-altered project site. As such, completion and operation of the proposed potable water supply facility improvement project is not expected to result in any adverse long-term impacts to any floral or faunal species in the vicinity surrounding the project

site, including the abovementioned endangered waterbirds or bat, and the behaviors, habits, and habitats of such species are not expected to be affected as a result of the proposed improvements.

3.8. Air Quality

Per the requirement of the Clean Air Act (last amended in 1990), the U.S. Environmental Protection Agency has established the National Ambient Air Quality Standards (NAAQS) in order to protect public health and welfare and prevent the significant deterioration of air quality. Additionally, the DOH has established State Ambient Air Quality Standards (SAAQS) to regulate air quality statewide. The State standards for carbon monoxide and nitrogen dioxide are more stringent than their Federal counterparts. Hawaii has also established a state ambient air standard for hydrogen sulfide.

The DOH, Clean Air Branch monitors air quality at selected locations throughout the State, and the State's ambient air monitoring network is reviewed annually and relocations, additions, and/or discontinuations occur as the need arises. The 2010-2011 ambient air monitoring network currently consists of 12 State and Local Air Monitoring Stations and Special Purpose Monitoring stations on three islands. Currently, there are five State-maintained ambient air quality monitoring stations on Oahu that measure various types of pollutants. Most commercial, industrial, and transportation activities and their associated air quality effects occur on Oahu. The Pearl City monitoring station, which is located approximately 20 miles south of Kahuku, is located nearest to the project site. The Pearl City monitoring station was established in 1979 and currently monitors for the volume of PM2.5 and PM10 particulate matter, Lead, and Air Toxics. In October 2009, the PM2.5 speciation monitor previously located at the Pearl City station began operating at the Kapolei monitoring station (the State's National Core Multi-pollutant Monitoring Station); nonetheless, the Pearl City monitoring station is the State's only Lead and Air Toxics monitoring station. The Sand Island monitoring station, which is located at the University of Hawaii's Anuenue Fisheries in the Sand Island Industrial Park, was established in 1980 and is the only ozone monitoring station in the State. None of the five air quality monitoring stations on Oahu measure hydrogen sulfide; however, the Big Island hosts two stations which monitor for this pollutant. (CAB and ASAS, 2010)

In general, State's air quality continues to be one of the best in the nation, and criteria pollutant levels remain well below NAAQS and SAAQS. According to the *State of Hawaii Annual Summary 2008 Air Quality Data* and the *Annual Summary of the 2007 Hawaii Air Quality Data*, air quality monitoring data complied by the DOH indicates that the established air quality standards for all monitored parameters are consistently met at all State and Local Air Monitoring Stations throughout the State and on the island of Oahu. Data from all the State-maintained air quality monitoring

stations indicate that air quality for the monitored parameters is within the NAAQS and SAAQS (with the exception in 2008 of PM2.5 and sulfur dioxide at those Special Purpose Monitoring stations on the island of Hawaii, which were established to monitor ambient air concentrations from volcanic emissions; volcanic eruptions are considered natural events, and such exceedances of the NAAQS may be excluded from attainment determinations.).

Overall, air quality in the vicinity of the project site is considered to be good and meets NAAQS and SAAQS. Air quality at the project site and vicinity is positively influenced by northeast tradewinds that predominate throughout the year and blow pollutants from inland areas out to sea. Problems with poor air quality and elevated pollutant levels generally occur when tradewinds diminish or give way to southerly and southwesterly winds (known as Kona wind conditions). It is under stable conditions that the greatest potential for air pollutant buildup from groundlevel sources exists. Localized problems of poor air quality may occur under adverse Kona wind conditions at and in the vicinity of the Kahuku Wells Station site.

Local air quality at the Kahuku Wells Station site may be affected by activities surrounding the project site. The project site is located in a rural area, so effects of vehicle emissions and industrial activities on local air quality are expected to be minimal. Agricultural activities located immediately adjacent to the project site and in the vicinity may contribute to the concentration of exhaust emissions and fugitive dust in the air.

Impacts and Mitigation Measures

The proposed project is anticipated to have short-term construction-related impacts on air quality, including the generation of dust and emissions from construction vehicles and equipment. The contractor will be responsible for complying with DOH Administrative Rules, Title 11, Chapter 60, "Air Pollution Control”.

During the construction of the proposed improvements, two potential types of air pollution emissions will likely occur: 1) Fugitive dust from soil excavation and the movement of construction vehicles; and 2) Carbon monoxide and nitrogen oxide emissions from on-site construction equipment.

Construction activities must comply with the provisions of HAR, Chapter 11-60.1, “Air Pollution Control,” Section 11-60.1-33, Fugitive Dust. Compliance with State regulations will require adequate measures to control fugitive dust by methods such as, but not limited to:

- Planning the 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 in areas of the least impact;
- Providing an adequate water source at the project site prior to initiation of construction activities;
- Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
- Controlling of dust from shoulders and access roads;
- Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities;
- Controlling dust from debris being hauled away from the project site; and
- Constructing dust barriers/fences.

The DOH recommends that a dust control management plan be developed to identify and address all activities that have a potential to generate fugitive dust. The contractor will be responsible for the implementation of adequate dust control measures during all phases of development and construction activities.

Construction equipment and vehicles shall be properly maintained in order to control vehicular emissions. Exhaust emissions from construction equipment and vehicles are anticipated to have negligible impacts on air quality in the project vicinity as emissions would be relatively small and readily dissipated.

There may potentially be a slight increase in the emission of pollutants in operating the Kahuku Wells Station based on the proposed improvements; nonetheless, any such slight increases in pollutant emissions are not anticipated to significantly impact air quality. Overall, the proposed improvements will not result in significant operational changes at the Kahuku Wells Station: use of the three wells will be rotated regularly such that two of the wells will be available for operating and one of the wells will be on hand as a standby source. The proposed Well No. 3 pump, similar to the Kahuku Wells Station's two existing well pumps, will be operated with an electric-operated motor. Thus, the increase in power generation (and, therefore, fuel consumption and gaseous emissions) by the electric company in order to operate these pumps represents such a small portion of total power use that its effect would be insignificant. While the new on-site generator will require a gasoline-operated or other fuel-burning engine in order to provide power during any outages at the Kahuku Wells Station, its use is expected to be infrequent and temporary in nature.

Overall, air quality impacts during construction will be temporary in nature and will cease upon completion of the construction. No significant adverse air

quality is anticipated upon completion and during operation of the proposed project,

3.9. Surface Water Quality

As mentioned above in Section 3.5 Surface Waters, there are no freshwater streams, rivers, ponds, open waterbodies, or wetlands located within or immediately adjacent the Kahuku Wells Station site. Located approximately 0.1 mile from the project site (at its nearest point), the closest surface waterbody to the project site is an unnamed ditch. The ditch traverses through both the Kii and Malaekahana watersheds, and does not appear to receive water from a stream diversion or overflow into any other waterbody (DAR and Bishop Museum, 2008). Located approximately 0.4 mile north and 0.3 mile south of the project site, the closest streams to the project site are Kii Stream and Keaaulu Gulch, respectively. Kii Stream is an intermittent stream that receives flows from freshwater tributaries, feeds a large wetland habitat area (USFWS' James Campbell National Wildlife Refuge) near the coastline, then outlets to the ocean (just north of Kahuku Golf Course Beach). Keaaulu Gulch is identified as both an intermittent and perennial stream. It is a tributary of Malaekahana Stream, a perennial stream that outlets into the ocean (between Kahuku Golf Course Beach and Malaekahana State Recreation Area). Kii Stream is within the Kii watershed, and Keaaulu Gulch is part of the Malaekahana watershed. Refer to Section 3.5, Surface Waters for more details regarding the hydrology of these surface waters.

State waters are defined in Section 342D-1, HRS as all waters, fresh, brackish, or salt around and within the State (including, but not limited to, coastal water, streams, drainage ditches, canals, ground waters), provided that drainage ditches, ponds, and reservoirs required as part of a water pollution control system are excluded. The DOH has classified State waters as either inland or marine waters for purposes of applying the water quality standards set forth in Chapter 11-54, HAR and for the selection or definition of appropriate water quality parameters and uses to be protected in State waters. The current version of HAR 11-54 designates inland waters as "Class 1" and "Class 2" use categories and marine waters as "Class AA" and "Class A" use categories. It should be noted that HAR 11-54, "Water Quality Standards" applies to all State waters with exceptions: it does not apply to groundwater; ditches, flumes, ponds, and reservoirs required as part of a water pollution control system; and ditches, flumes, ponds, and reservoirs that are used solely for irrigation and do not overflow into any other State waters, unless they are waters of the U.S. (DOH, 2009) Both Kii Stream and Keaaulu Gulch are classified as Class 2 inland waters (EPO, 1987). At the locations where these streams drain into the ocean, the ocean waters are classified as Class AA marine waters by the DOH. (DOH, 2009 and DOH, 2008)

Waters that do not meet the State water quality standards (known as Water Quality-Limited Segments or impaired waterbodies) are designated by the DOH based on the severity of pollution and the uses of the waters. The impaired status of a waterbody requires the DOH to develop and establish total maximum daily loads (TMDLs) limits for each pollutant of these waterbodies suggesting the quantity by which pollutant loads, including load allocations for point and nonpoint source discharges into its tributaries, should be reduced in order to attain Hawaii's water quality standards. According to the *2006 State of Hawaii Water Quality Monitoring and Assessment Report: Integrated Report to the U.S. Environmental Protection Agency and the U.S. Congress Pursuant to Sections §303(d) and §305(b), Clean Water Act (P.L. 97-117)*, neither Kii Stream nor Keaaulu Gulch are currently included on the State's 303(d) List of Impaired Waters. Additionally, the marine waters where these two streams drain into the ocean are not listed as impaired waterbodies on the State's 303(d) List.

Per the above, TMDL limits do not exist for any of the nearby waterbodies. Regardless, the water quality criteria set forth in Chapter 11-54, HAR as basic to all State waters and unique to the specific classification of a State water (e.g., Class 1 inland water, Class AA marine water) are applicable to the regulated waterbodies. For example, stormwater may be discharged into State waters provided that it meets the requirements in HAR 11-54.

It should be noted that stormwater runon from adjacent upland parcels is directed overland through the site. and discharged at the site's southwestern boundary where it sheetflows onto an adjacent Kahuku Agricultural Park parcel (TMK 5-6-006:037). The site also contains an underground drainage system for collecting and conveying both stormwater runoff from the site and discharges associated with the facility's operations (i.e., process water discharges). The on-site underground drainage system directs the flows to a drainage manhole. Currently, water entering this manhole leaves the Kahuku Wells Station through a 12-in drain line and is discharged into an unlined drainage ditch in the aforementioned adjacent parcel (TMK 5-6-006:037). A construction contract for the proposed drainage system modification has been awarded and it is scheduled for construction prior to the proposed project. The modified drainage system will entail approximately 600 ft of new buried drain line such that instead of allowing the collected flows to discharge into the adjacent unlined drainage ditch and onto the adjacent parcel, the existing 12-in drain line will be intercepted within the Kahuku Wells Station site and eventually outlet within an existing 40-ft-wide State drainage easement on TMK 5-6-006:046 (another agricultural parcel that is part of the DOA's Kahuku Agricultural Park). Flows within the existing 40-ft-wide drainage easement appear to be directed toward a gully, which lies within an 80-ft-wide State drainage easement, that eventually empties into Ohia Ai Stream (also known and referred to as Kii Stream) (Kai Hawaii et al., 2002). Refer to Section 3.13.3, Drainage System for details

regarding the project site's drainage system utilities, including the proposed modified drainage system.

Impacts and Mitigation Measures

No significant adverse impacts to the water quality of any surface water resources are anticipated to result from implementation of the proposed project.

The proposed project may have short-term construction-related impacts from erosion and sedimentation on surface water quality. Construction activities will not increase the volume of peak stormwater runoff. Additionally, as stated in Section 3.5, Surface Waters, the proposed project will not involve construction activities or discharges within the bed or along the banks of any existing waterbody. The test pumping activities will result in the discharge of groundwater effluent into the Kahuku Wells Station's proposed modified drainage system. As described in Section 2.3.1, Proposed Action, test pump discharges from the step-drawdown test will occur at rates based on increasing fractions of the total anticipated pumping capacity of the new well: for a pumping capacity of 700 gpm, the step-drawdown test rates will likely be in the range of 500 to 1,000 gpm. Discharges from the constant-rate test will occur at a proposed rate of 1,000 gpm for three to five days through continuous pumping 24 hours a day. This discharged groundwater will be conveyed through the modified drainage system and outlet within the existing 40-ft-wide drainage easement on TMK 5-6-006:046. It is expected that a fair amount of this temporary discharge from the new well should percolate into the soil of the existing drainage easement due to the permeable nature of the soils of this parcel (see Section 3.2, Geology and Soils for a discussion of soil types and characteristics). Additionally, these activities will be temporary in nature and consist of potable untreated groundwater. Moreover, the Kahuku Wells Station's modified drainage system is proposed to include a grouted rubble pavement lining at its outlet point within the existing 40-ft-wide drainage easement in order to mitigate for potential erosion associated with flows collected and conveyed through this system. Nonetheless, the BWS will explore appropriate measures to mitigate any potential erosion that could result from the test pumping discharge (e.g., measures to minimize the intensity and velocity of the test pumping discharge). Any such proper mitigation measures will be determined during the proposed project's design phase. It should be noted that while a construction contract for the modified drainage system has already been awarded, a disposal plan for discharge of the groundwater effluent from test pumping will be developed and coordinated with the adjacent landowner (the DOA) if construction of Well No. 3 occurs prior to the proposed drainage system modification.

Additionally, while the proposed project will involve the use of drilling, grading, excavation, and/or trenching construction methods within the project site for construction of some of the proposed improvement components, erosion of soils due to site preparation and the construction of improvements is anticipated to be minimal. Nonetheless, soil disturbances during construction activities could result in increased soil migration through stormwater runoff. All construction activities will comply with applicable Federal, State, and County regulations and rules for erosion control. Appropriate erosion control measures and BMPs will be implemented during all construction activities, including the abovementioned test pumping activities, to prevent pollutants from entering storm drain inlets and/or any surface waterbodies during construction. Measures, such as installing silt fences at the base of slopes and sediment barriers at storm drain inlets and repaving areas as soon as practicable, will be applied as appropriate during construction of the proposed project.

Construction of the proposed improvements may temporarily increase the risk of contribution of contaminants to stormwater runoff. Of primary concern is the increased concentration of petroleum hydrocarbons at the site during construction activities due to the presence of construction equipment. However, the contractor will be responsible to ensure that proper BMPs are employed to ensure that no spills will endanger any surface waterbody. For example, if necessary, secondary containment will be used for gasoline that is stored at the project site and spill kits will be located at the site during construction so that accidental gasoline spill can be cleaned immediately. The use of proper BMPs during construction will ensure protection of any surface waterbody from accidental contamination.

There are no long-term significant adverse surface water quality impacts associated with the completion and operation of the proposed potable water supply facility project. The project will not induce additional stormwater runoff and is not anticipated to increase the volume of peak stormwater runoff as the addition of impervious surface area within the project site will be minimal. The project will appropriately finish and restore areas to match the existing surface grade that are disturbed during construction, to the extent practicable. Moreover, as stated in Section 3.5, Surface Waters, the completion and operation of the proposed improvements will not involve alteration of the bed or banks of any waterbody.

Additionally, the proposed improvements will not result in significant operational changes at the Kahuku Wells Station. Developing Well No. 3 at the Kahuku Wells Station will enable use of the three wells to be rotated regularly such that two of the wells will be available for operating at all times

with one of the wells on hand as a standby. The typical process water discharges associated with the existing two wells will continue to be collected and conveyed through the site's underground drainage system. In such cases when Well No. 3 is operating, pump startup discharges from it will be captured in a new proposed drain line connecting the new well to the site's underground drainage system. The quantity and intensity of process water discharges during normal operations are not anticipated to increase as a result of the proposed improvements.

The contribution of contaminants to stormwater runoff is not expected increase as a result of the proposed project. The new Well No. 3 and on-site emergency generator will not introduce any potential contaminating activity. An on-site fuel storage tank associated with the emergency generator will be constructed aboveground as part of the proposed improvements, and its design will be consistent with all Federal, State, and County standards regarding the containment of hazardous materials and it will meet monitoring requirements. As such, no impacts on water quality of any surface waterbodies are anticipated due to operation of the proposed improvements.

3.10. Noise

The Kahuku Wells Station is located in a rural area characterized by agricultural activities and open, mostly undeveloped space (see Section 2.2.3, Immediately Surrounding Uses, Tenants, and Structures for greater detail). The site is removed from existing residential areas and other noise-sensitive uses. It is located away from high volume roadways or other major noise-generating sources (e.g., commercial centers, industrial plants), in a relatively quiet area with agricultural lands and open space immediately adjacent to and along the site's boundaries. Therefore, background ambient noise levels in the vicinity of the project site are determined to be relatively low. Noise levels at the project site are primarily the result of current operations at the Kahuku Wells Station. Existing agricultural activities surrounding the site and the sound of wind passing through vegetation within the site and throughout the surrounding area are also sources of ambient noise.

The Kahuku Wells Station emanates noise during its mechanical operations. While most of the facility's operations are inaudible and/or limited to a hum, both of the two existing wells' pumps are run by aboveground 75-hp motors that generate some noise when operating. The potable groundwater is pumped from the two existing wells to the 0.5 MG reservoir via the two pumps; the pumps are activated when the reservoir drops to a certain level and operate intermittently throughout the day and night as needed.

In addition to regulating noise associated with construction activities, the DOH regulates noise from stationary mechanical equipment under HAR, Title 11, Chapter 46, “Community Noise Control” noise regulations. The DOH noise limits are expressed in maximum allowable property line noise limits rather than day-night average sound level, which incorporates a 24-hour average of instantaneous A-weighted decibel (dBA) levels as read on a standard sound level meter. The following maximum permissible noise limits apply to stationary noise sources and equipment related to agricultural, construction, and industrial activities. For agricultural or industrial lands, the allowable limits are 70 dBA for daytime and nighttime periods along the property boundaries. The applicable DOH property line limits are 60 and 65 dBA during day and night hours, respectively, for properties zoned for multi-family dwellings, apartment, commercial, or business uses. For single-family residences, public and open spaces, and preservation lands, the daytime and nighttime DOH property line limits are 55 and 45 dBA, respectively. With regard to each of the maximum permissible noise limits, daytime hours are defined as being from 7:00 am to 10:00 pm and the nighttime period is considered to be the remaining hours per the DOH rules. The DOH noise limits for single- and multi-family residences are more stringent than the Federal Housing Administration/Housing and Urban Development’s noise standard.

Impacts and Mitigation Measures

Audible noise from construction activities will likely be unavoidable during the entire construction period. Mitigation of construction noise to inaudible levels will not be practical in all cases due to the intensity and nature of some construction noise sources and due to the exterior nature of the work. Ambient noise levels in the vicinity of the project site will increase due to construction activities and the use of construction vehicles and equipment. Quieter construction activities, such as building erection and equipment installation, may not be audible. Overall, all noise impacts from construction will be temporary in nature and will cease upon completion of the construction.

Unavoidable short-term construction noise impacts will be mitigated to some degree by the contractor’s compliance with the provisions of the DOH Administrative Rules, Title 11, Chapter 46, “Community Noise Control” noise regulations. These rules require a noise permit if the noise level from construction activity is expected to exceed the allowable levels stated in the Chapter 11-46 rules. It shall be the contractor’s responsibility to minimize noise by properly maintaining noise mufflers and other noise-attenuating equipment and to maintain noise levels within regulatory limits. If construction activities occur outside of the allowable timeframes designated for the noise permit (i.e., nighttime, Sunday, holiday) and exceed allowable noise levels, a

noise variance must be obtained prior to commencement of construction activities, in accordance with the Chapter 11-46 rules.

Potential noise impacts will also be mitigated by performing the majority of construction work during daytime hours (as opposed to night work). Daytime work will ensure minimal impacts to existing users adjacent to and in the vicinity of the project site, including reducing the inconvenience of construction noise impacts during nighttime hours. Constant-rate test pumping activities must be continuously performed for 24 hours a day for three to five days and potable water demand/flows may dictate that some construction work occur during nighttime hours; however, performing construction activities at night will be limited to the extent feasible and carried out only as necessary. If nighttime construction activities exceed allowable noise levels, a noise variance will be obtained prior to commencement of construction activities, in accordance with the Chapter 11-46 rules.

In the long-term, no significant adverse noise impacts are anticipated due to the completion and operation of the proposed water supply facility improvement project. Although improvements will include noise-generating equipment, noise control and mitigation measures will be implemented as part of the proposed project at those potential new noise sources. The primary new noise sources at the Kahuku Wells Station will be the 75-hp motor utilized to run the new Well No. 3 pump and the new on-site emergency generator. It is expected that the new pump will be submersible; in other words, both pump and motor assembly will be nested within the submersed portion of the well casing. Accordingly, aboveground noise associated with such a submersible pump will be limited to a hum and noise levels are not expected to be audible to adjacent properties. However, if installation of a submersible pump is not feasible, the new well will have a pump and aboveground line shaft motor similar to the two existing wells. As previously discussed, such aboveground motors are generally sources of audible noise. While the new on-site emergency generator unit will produce noise during its operation, its installation will include construction of an associated housing unit. As such, specific noise control measures and acoustical treatments associated with the new well's aboveground motor, if installation of a submersible pump is not viable, and the generator's housing structure will be considered during the design phase in order to reduce the risk of possible noise impacts and comply with DOH noise limits per the Chapter 11-46 rules.

Additionally, it is also anticipated that the proposed improvements will result in minimal change in the amount of noise attributed to operations at the Kahuku Wells Station. The proposed improvements will not result in significant operational changes at the Kahuku Wells Station: developing Well No. 3 at

the Kahuku Wells Station will enable use of the three wells to be rotated regularly such that two of the wells will be available for operating at all times with one of the wells on hand as a standby.
As such, the site's existing noise sources and the typical noise levels induced by such components are expected to continue. In addition, use of the potential new noise sources as additional site noise sources is expected to be occasional. Use of the new emergency generator is expected to be infrequent and temporary in nature as it is intended to provide back-up power to the facility during any power outages.

Overall, potential adverse noise impacts as a result of noise-generating machinery will be minimized and the proposed improvements are not anticipated to significantly impact noise levels. Completion and operation of the proposed water supply facility improvement project is not expected to increase noise levels at the site's property boundaries above the allowable maximum noise levels for agricultural lands. Combined with the fact that the Kahuku Wells Station site is removed from existing residential areas and other noise-sensitive uses, it is expected that the proposed improvements will have no long-term adverse noise impacts.

3.11. Archaeological and Cultural Resources

The proposed project is located in a highly altered rural environment within the existing site boundaries of the Kahuku Wells Station. There are no known archaeological sites identified within the project site, and development (agricultural, residential, and commercial in nature) has destroyed most archaeological sites in the Kahuku area (i.e., Kahuku and Kaena *ahupua'a*). No written records were found indicating culturally significant resources or traditional and cultural practices occur within the project site.

Published archaeological and cultural surveys, past EA/Environmental Impact Statements, and databases of known historic and cultural sites were reviewed for pertinent information on archaeological sites or traditional and cultural practices at the project site and in the Kahuku area in general. Additionally, during the preparation of the Draft EA, pre-assessment phase letters were distributed to various government agencies, community organizations, and knowledgeable individuals seeking information regarding known archaeological sites or the traditional and cultural practices and beliefs of any cultural or ethnic group(s) that would potentially be affected by the proposed water supply facility improvement project (see Section 8.1, Pre-Assessment Consultation for more information and **Appendix B** for a copy of the letter). Cultural Assessment Providers in the area, as listed by the State of Hawaii, Office of Environmental Quality Control (OEQC), were contacted by electronic mail. Per the suggestion of and information provided by one of the Cultural Assessment Providers contacted during the pre-assessment phase,

Ms. Dawn Wasson was also contacted via electronic mail. No contributions or comments were received from any of the Cultural Assessment Providers contacted, the Office of Hawaiian Affairs, or the DLNR, Historic Preservation Division (SHPD).

The following describes the findings of this research:

- The proposed project is situated in the Kahuku *ahupua‘a*, which is part of the larger historic land division Ko’olau Loa *moku* (Group 70 International, 2009).
- The *Revised Environmental Impact Statement for Kahuku Water Development* (1978), prepared for establishment of the Kahuku Wells Station as a BWS potable groundwater supply facility, concludes that it is highly unlikely that any historical or archeological artifacts exist within the project site due to the extensive sugarcane cultivation that occurred prior to the Kahuku Wells Station’s initial development.
- *Archaeological Inventory Survey of the Proposed 785-Acre Kahuku Agricultural Park* (2003), prepared for the Kahuku Agricultural Park located in the immediate vicinity of and adjacent to the Kahuku Wells Station, suggests that cattle and sheep ranching in the Kahuku area during the mid-1800s also contributed to the destruction of any archeological sites that may have been present. Deforestation and livestock grazing cleared the natural landscape decades before the settlement of modern-day Kahuku Town. The sugarcane and pineapple industry further altered the environment, making it even less likely that cultural artifacts and resources will be found in the Kahuku area.
- The SHPD keeps formal records of districts, sites, structures, buildings, and objects with significance to Hawaii’s history, architecture, archaeology, engineering, and culture. These significant properties are recorded in the Hawaii Register of Historic Places, which is available on the SHPD website. There are two sites listed on the Hawaii Register of Historic Places in the vicinity of the Kahuku Wells Station: Kahuku Habitation Area and Kahuku Plantation Supervisor's House. The Kahuku Plantation Supervisor's House is located closest to the project site and approximately 0.5 mile east.
- The U.S. Department of the Interior, National Park Service (NPS) keeps formal records of districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. These significant properties are recorded in the National Register of Historic Places, which is available on the NPS website. There is one site listed on the National Register of Historic Places in the vicinity of the Kahuku Wells Station: Kahuku Habitation Area. This site is located more than one mile from the Kahuku Wells Station site.
- Some lands containing historic and natural resources are protected by the Hawaii state park system. A list of state parks on the island of Oahu can be found on the website of the DLNR, State Parks Division. There are two state parks within the general vicinity of the Kahuku Wells Station: Malaekahana State Recreation Area

(approximately 1.5 miles east of the project site) and La'ie Point State Wayside (approximately 3.5 miles southeast of the project site).

- Some lands containing historic and natural resources are protected by the NPS under the national parks system. There are no national parks within the vicinity of the Kahuku Wells Station. The NPS lists the U.S.S. Arizona as the only national park on the island of Oahu (approximately 20 miles south of the project site).

Impacts and Mitigation Measures

No significant adverse impacts to archaeological or cultural resources are anticipated to result from implementation of the proposed project.

Due to the highly altered rural environment of the area and given that excavation activities will occur within a project site that has been previously developed and disturbed, it is unlikely that any subsurface archaeological resources will be encountered within the project site. Based on the aforementioned research it was determined that no archaeological sites are present at the project site. It appears extremely unlikely that any potentially significant archaeological resources will be encountered as a result of the proposed project activities.

The proposed construction activities will utilize drilling, grading, excavation, and/or open cut trench construction methods, and all construction activities will occur entirely within the Kahuku Wells Station site. With any construction project involving land disturbance and alterations, there is always the possibility that human burials or other potentially significant subsurface archaeological resources could be encountered. Therefore, the following measures will be implemented: For all construction activities conducted in association with the proposed project, work will cease immediately if any historic remains or other potentially significant subsurface archaeological resources are encountered during construction activities and the find will be protected from further damage. The contractor shall immediately contact the SHPD of DLNR to assess the significance of the find and recommend an appropriate mitigation measure, if necessary.

No impacts to cultural resources or practices are anticipated. Based on the aforementioned research, it was determined that no culturally significant resources are present within the project site and no traditional and cultural practices or beliefs occur within the project site. Additionally, the proposed water supply facility improvement project is not expected to restrict access to any significant cultural resources or interfere with any traditional and cultural practices or beliefs which may occur within the vicinity of the project site.

3.12. Visual Resources

The current nature and use of the project site is a potable groundwater supply facility owned and operated by the BWS, known as the Kahuku Wells Station. Overall, the site is highly-developed with numerous aboveground structures and paving. The predominant structure at the site is the 0.5 MG reservoir, which is approximately 70 ft in diameter and rises approximately 21-ft above grade. Also of visual significance is the single-story control building, which has a maximum height of 16 ft. There are several concrete walls abutting the control building. Other components within the Kahuku Wells Station found aboveground include the motors at both of the two existing wells, the hydro pneumatic tank, and the pad-mounted electrical transformer. The current site layout and photos of the site's existing conditions and components are presented in **Figure 4**.

The Kahuku Wells Station is positioned in the hills *mauka* of Kahuku Town. The site is on the downslope of a large hill, and the crest of this hill obstructs any view of the site's aboveground structures from areas *makai* of the site, including from the Kahuku Town area. Additionally, large ironwood trees located on the northeastern slope of the Kahuku Wells Station site further obstruct views of the site from areas *makai* of site. As such, the site and its components cannot be seen from the neighborhoods and community of Kahuku Town or from adjacent agricultural lands to the *makai* of the site.

Except for the abovementioned ironwood trees, the Kahuku Wells Station site is sparsely vegetated. Areas within the site that are not paved are thinly covered in grass, and there are no trees located within the large, flat pad area of the site on which the reservoir, control building, and wells are situated. A buffer of "natural" vegetation (trees and shrubs) is located adjacent to the site's southwest boundary while minimal vegetation occurs along the site's northwest boundary. Portions of the Kahuku Wells Station, primarily the existing reservoir, are currently visible from some of the adjacent Kahuku Agricultural Park parcels located southwest and northwest of the site.

Impacts and Mitigation Measures

Construction activities may have short-term aesthetics affects in the area immediately surrounding the Kahuku Wells Station. Given that the proposed construction activities will be performed entirely within the Kahuku Wells Station site, potential visual impacts will be associated with vehicles and equipment accessing the project site. All construction activities will occur within the property boundaries of the potable water supply facility site; although, temporary off-site construction staging may be required due to limited availability of space on the project site.

The potential visual resource impacts associated with these activities will be restricted to the immediate vicinity of the Kahuku Wells Station site and are not anticipated to impact visual resources in or views from the Kahuku Town area. While these potential visual impacts will primarily affect parcels directly adjacent to the site, agricultural activities take place at these parcels and are minimally affected by these visual impacts that may occur due to construction of the proposed improvements. Additionally, any potential visual resource impacts from construction will be temporary in nature.

The proposed project involves installation and placement of some improvement components aboveground: the proposed new well location will likely require slope protection (e.g., small retaining wall), the new well's motor will be placed aboveground if installation of a submersible pump is not viable, the new emergency generator and its associated housing unit and fuel storage tank will also be placed aboveground, and expansion of the control building may be required. These aboveground improvement components will be constructed at heights similar to the site's existing components and such that the site will remain obscured from view. Installation of these improvements is not likely to cause adverse visual impacts at the project site given they will be consistent with the current use, character, and nature of the already highly-altered project site. Additionally, it is not anticipated that any of the on-site ironwood trees or adjacent vegetation along the site's boundaries will be removed as part of the proposed improvements. Overall, the final grade of the project site will be approximately similar to existing grades. Except for the new well and those locations where a new improvement component is placed aboveground, the areas affected by grading, excavation, and/or open cut trenching activities will be finished and restored to match with existing ground elevations.

Overall, the general aesthetics of the project site and surrounding area are not anticipated to change as a result of the proposed project. The current use, nature, and character of the project site will not change as a result of implementing the proposed project. Views to, from, and of the project site will not be altered or negatively affected. No changes in the ambient light level and night glow are proposed as part of the project. As such, completion and operation of the proposed potable water supply facility improvement project is not expected to result in any significant adverse long-term impacts on visual resources in the immediate vicinity surrounding the project site, and, because the Kahuku Wells Station will continue to be concealed from areas *makai* of the site, there will be no long-term impacts on visual resources in the Kahuku Town area as a result of the proposed improvements.

3.13. Infrastructure and Utilities

The following section includes discussions regarding roadways and utility lines, including water, drainage, wastewater, electrical, telephone, cable, and gas lines.

3.13.1. Roadways and Traffic Considerations

The Kahuku Wells Station is a remote site that can only be reached from BWS-owned access parcel TMK 5-6-010:027 then via BWS access and utility easements over the State-owned road portion of TMKs 5-6-006:029 and TMK 5-6-008:006 (**Figure 2**). The BWS-owned access parcel is located on Pahelehala Loop in a residential neighborhood of Kahuku Town. Pahelehala Loop is a two-way street owned and operated by the City and is bordered by private, single-family homes. Vehicles are regularly parked on the shoulders of this road.

The access parcel on Pahelehala Loop is reached by traveling to Kahuku Town via Kamehameha Highway (Route 83). Kamehameha Highway is the primary arterial road serving the Kahuku area, and it is owned and operated by the State. Pualalea Street, Leleuli Street, and Huehu Street are used to reach Pahelehala Loop from Kamehameha Highway. These streets are two-way roads owned and operated by the City .They serve the same residential neighborhood in Kahuku Town, and Pualalea Street also provides access to the Kahuku Medical Center and Kahuku Elementary School.

Municipal bus routes 55 and 88A serve the Kahuku area by way of Kamehameha Highway. Bus stops are located in both the north- and south-bound lanes of Kamehameha Highway near its intersection with Pualalea Street.

As a part of current operations, the BWS infrequently accesses the Kahuku Wells Station using BWS vehicles for monitoring and maintenance purposes.

<u>Impacts and Mitigation Measures</u>

The proposed project is anticipated to have minimal short-term construction impacts on traffic. Given that the proposed construction activities will be performed entirely at the Kahuku Wells Station site, potential traffic impacts will be limited to a temporary increase in vehicular traffic during construction activities due to vehicles and equipment accessing the Kahuku Wells Station site. All construction activities will take place within the boundaries of the Kahuku Well Station site; although, temporary off-site construction staging may be required due to the limited availability of space on the project site. Overall, any disruptions to vehicular and pedestrian traffic will be

minimal and any traffic impacts from construction will be temporary in nature.

Construction-related traffic will access the Kahuku Wells Station site through the BWS' access parcel on Pahelehala Loop. As such, the slight increase in vehicular traffic during construction activities is anticipated to occur primarily on Pualalea, Leleuli, and Huehu Streets and Pahelehala Loop. No vehicular or pedestrian traffic patterns will be affected by construction-related vehicles accessing the Kahuku Wells Station site. Overall, currently existing traffic patterns and roadway layouts will remain the same during construction activities. No traffic lane closures or traffic detours are expected in conjunction with construction of the proposed project. In addition, no sidewalks or bus stop areas are expected to be affected by the proposed project and/or subject to construction impacts.

Appropriate traffic control devices and warning signs will be installed and construction workers will direct traffic flow, when necessary. Although no traffic lane closures or traffic detours are expected in conjunction with construction activities, if they are necessary, a City-approved traffic control plan shall be prepared prior to the construction of the proposed project. Additionally, a traffic control plan will be prepared if an off-site construction staging area is required. A street usage permit may be required and will be obtained prior to construction activities if such a temporary off-site staging area is within the City right-of-way.

Although impacts are not anticipated to bus routes, bus stops, or paratransit operations, coordination with both the City and County of Honolulu, Department of Transportation Services (DTS) and Oahu Transit Services, Inc. will be carried out if necessary to ensure minimal inconvenience to motorists and public transportation services: both entities would be informed of the project construction schedule prior to the commencement of construction activities. The contractor would be responsible for notifying the necessary DTS and Oahu Transit Services, Inc. personnel of the pertinent project details at least two weeks prior to construction activities.

The majority of construction work will be scheduled during daytime hours (as opposed to night work) when traffic volumes are generally low within the residential neighborhoods nearest to the project site. During the night, all associated construction equipment will be secured and located within either the project site or the designated off-site

construction staging area (if one is necessary) so as not to impede nighttime traffic.

Construction activities are not anticipated to have short-term impacts on roadways. It will be determined during the design phase whether the operation or transportation of any oversized and/or overweight vehicles and loads will be required during construction of the proposed project. If required, these activities will be coordinated with all applicable Federal, State, and County agencies and all necessary permits/approvals will be acquired.

There are no adverse long-term traffic related impacts associated with completion and operation of the proposed potable water supply facility improvement project. Currently existing vehicular and pedestrian traffic patterns and roadway layouts will remain the same as pre-existing conditions. No significant operational changes are expected as a result of the project, and the number and frequency of BWS personnel accessing the Kahuku Wells Station site for monitoring and maintenance is not expected to increase based on the improvements proposed. The effects on roadways and traffic associated with BWS personnel accessing the Kahuku Wells Station for monitoring and maintenance will continue to be negligible.

For the reasons stated above, the proposed project is expected to have negligible traffic-related impacts. As such, a traffic impact assessment report (TIAR) will not be prepared for the proposed potable water supply facility improvement project unless it is later determined that construction or operation of the proposed project will have substantial traffic-related impacts. Prepared in coordination with the DTS and/or the State of Hawaii, Department of Transportation (DOT), as appropriate, the TIAR would determine potential traffic impacts resulting from the proposed project and determine proper measures to mitigate those impacts.

3.13.2. Water System

The Kahuku Wells Station was established as a BWS potable groundwater supply facility by the BWS in 1979. It is the sole source for the municipal water supply serving the Kahuku service area, and the BWS is currently purveyor of potable water to most of Kahuku Town. As a stand-alone potable water supply system, the Kahuku system is an isolated system that is not connected to any other parts of the BWS system.

Major components of the existing potable water supply facility at the Kahuku Wells Station site include:

- a 0.5 MG reservoir;
- two wells, each with a pump and aboveground motor rated at 700 gpm (or 1 mgd); and
- a single-story control building.

A 12-in transmission main conveys the potable water from the facility to the Kahuku service area. **Figure 10** shows the various components of the existing Kahuku Wells Station water system as described in this section.

The two existing wells are located at near the southwestern boundary of the property. Well No. 1 extends approximately 420 ft belowground, and Well No. 2 extends approximately 365 ft belowground. Each well has a 12-in diameter steel encasing, and is encased to an elevation of 30 ft below MSL. Both wells draw freshwater from the Koolau Loa Aquifer System, which is a classified as an unconfined basal aquifer in a flank lava geological formation (Mink & Lau, 1990).

Pumps with aboveground 75-hp line shaft motors are used to draw the groundwater at both existing wells and are rated at 700 gpm (or 1 mgd) each. The pumps are controlled by an on-site telemetry system and motor controls which, along with the site's chlorinators, are located in the control building. The telemetry system is set to activate one of the well pumps once the water level in the reservoir drops below a pre-determined level. The same system automatically shuts down the pump once the reservoir has been filled.

Water is conveyed from each of the wells through 8-in water lines to a single 12-in water line. Flows through the 12-in water line are measured by a venturi meter before being conveyed to the reservoir. Water is stored in the reservoir until it is drawn through the 12-in transmission main, which runs directly below the access road.

The 12-in transmission main conveys potable water to the BWS' distribution system throughout the Kahuku service area. **Figure 3** shows the approximate boundaries of this service area. The service area consists primarily of residential areas, although it also includes several institutional uses (e.g., Kahuku Elementary School, Kahuku High and Intermediate School) and several emergency facilities (e.g., Kahuku Medical Center, Kahuku Fire Station, and Kahuku Police Substation).

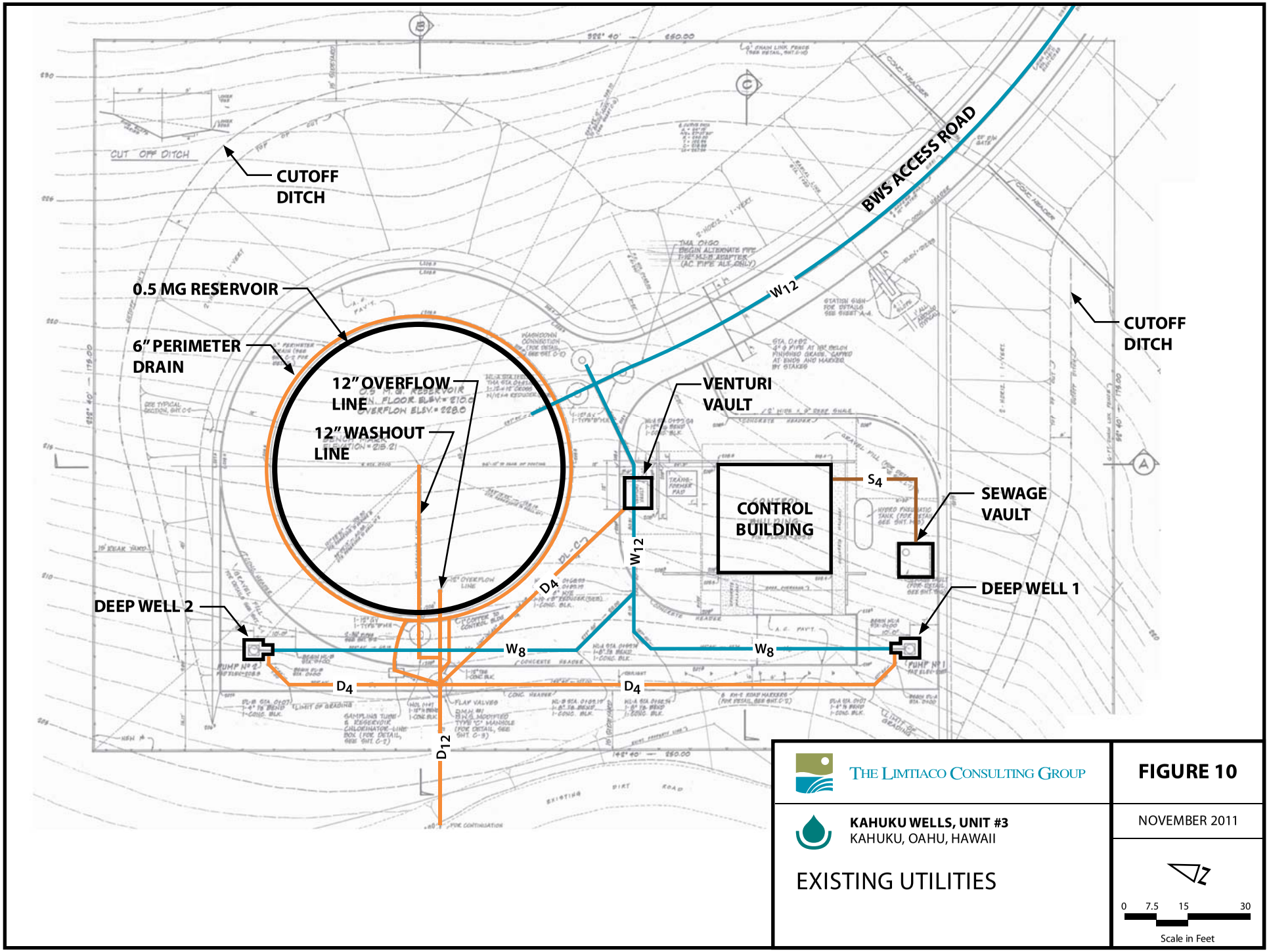
Currently not included within the service area are two already-planned developments: Kahuku Villages Phases IV and V, which are identified by the City's *Koolau Loa Sustainable Communities Plan* (1999). The BWS is

currently committed to supply potable water to these developments once they are constructed. However, based on current total average daily water withdrawals, the Kahuku Wells Station is already operating close to its design capacity. If the water commitments to the Kahuku Villages Phases IV and V developments were added to the current average water withdrawals, the Kahuku Wells Station would not meet the BWS water system standards for pumping capacity.

Impacts and Mitigation Measures

A well will be drilled, cased, and test pumped at the Well No. 3 location, approximately 100 ft from the two existing wells. Drilling and casing operations will not have an effect on existing operations at the Kahuku Wells Station. Test pumping will be performed in concurrence with normal operations of the facility, including pumping of the two existing wells. As described in detail in Section 3.4, Groundwater, the effects of test pumping will be carefully monitored by the BWS to ensure that the pumping does not have any detrimental effects to the aquifer underlying the Kahuku Wells Station. While some coordination may be required between regular operations and test pumping operations, the municipal water supply will not be interrupted and continued potable water service for the Kahuku service area will be maintained during these construction activities. As such, no impacts are anticipated due to well drilling, casing, and test pumping at the Kahuku Wells Station.

Installation of the permanent pump at Well No. 3 and construction of its appurtenant utilities (i.e., water, electrical, and drain lines) will include the use of excavation activities. While exact construction methods will not be determined until the design phase, it can reasonably be expected that the conventional method of open cut trenching will be used for installation of these utilities. Details of the sizes and layouts of all the water system utilities will be determined during the design phase and verified prior to construction of the proposed improvements. New utility installation will seek to avoid any disruptions to existing water utilities or damage to the water system. Additionally, for the most part, the new Well No. 3 will be constructed off-line and independent of the Kahuku Wells Station's existing components. Close coordination will be carried out as necessary in order to facilitate the new well's connection to the facility's existing components. Nonetheless, given the nature of the project, the existing two wells and/or reservoir will remain in service during all construction activities and municipal water service to the Kahuku service area will not be interrupted due to construction of the proposed improvements. As a result, no impacts


CUTOFF DITCH
BWS ACCESS ROAD
0.5 MG RESERVOIR
6" PERIMETER DRAIN
12" OVERFLOW LINE
12" WASHOUT LINE
VENTURI VAULT
CONTROL BUILDING
SEWAGE VAULT
DEEP WELL 1
DEEP WELL 2
CUTOFF DITCH
W12
W12
S4
D4
W8
W8
D4
D4
D12
THE LIMTIACO CONSULTING GROUP
KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII
EXISTING UTILITIES
FIGURE 10
NOVEMBER 2011
0 7.5 15 30
Scale in Feet

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are anticipated to the water system due to construction of the proposed improvements.

The completion and operation of the proposed project will result in the improvement of the Kahuku system's reliability in providing potable water and an increase in the Kahuku Wells Station's pumping capacity for supplying domestic demand and fire protection to Kahuku Town. The proposed improvements will entail the first significant upgrade and expansion to the Kahuku Wells Station since its installation over 30 years ago, and they will contribute to the Kahuku Wells Station's continued use in reliably and adequately serving the Kahuku service area.

The proposed improvements include the installation of a permanent pump and 75-hp motor at Well No. 3, which is rated at 700 gpm (or 1 mgd). Installation of the pump will add capacity to the Kahuku Wells Station. With the facility already nearing its design capacity, addition of Well No. 3 will provide additional flow for potential population growth in the Kahuku service area. It is also intended to increase the pumping capacity of the Kahuku Wells Station in accordance with BWS water system standards such that it can adequately accommodate average water demand to current facilities and uses as well as existing water commitments to Kahuku Villages Phases IV and V. The proposed project accounts for these needs, and it does not seek to support further development in Kahuku Town or in the surrounding area/Kahuku service area. This upgrade to meet BWS standards thereby provides sufficient pumpage and standby capacity to achieve water reliability. As a result, the proposed improvements will allow the BWS to address its previous potable water commitments as well as provide a pro-active approach to accommodating an increase in population within the existing Kahuku service area. Increasing the facility's pumping capacity will also improve fire protection requirements and the overall reliability of the system

Additionally, because the Kahuku Wells Station is a stand-alone system, the construction of Well No. 3 will add needed redundancy to the Kahuku Wells Station. As mentioned previously, a third well is intended to be on hand as a standby source, allowing two of the Kahuku Wells Station's wells to be available for operating at all times. The addition of Well No. 3 will allow the Kahuku Wells Station to meet BWS water system standards should one of the site's wells be inoperable. For example, a third well will provide for back-up in the event of an emergency (if one of the wells experiences a breakdown

and/or must be shut down for repair) or for maintenance purposes (if one of the wells must undergo routine maintenance). This added reliability is important because breakdowns and/or repairs can cut-off water service to various Kahuku Town water users until the facility is back in working order. In some cases, pumps can take up to months to repair, depending on the availability of replacement parts: replacement parts can often be difficult to obtain because all BWS pumps are designed specifically for the needs of each well.

The addition of an on-site emergency generator is also included as part of the proposed project. This will also add needed reliability to the Kahuku Wells Station. Because the Kahuku Wells Station is a stand-alone system, the loss of power at the site would mean the loss of pumping ability. The Kahuku potable water system is a gravity-fed system, and water service would continue as long as water is held in the 0.5 MG reservoir. This would typically allow enough time for a portable emergency generator to be shipped in from another site on the island. At that time, the portable emergency generator would restore power to the pumps at the site allowing the reservoir to be refilled. However, the BWS is concerned that a portable emergency generator would not be able to reach the Kahuku Wells Station in the event of a natural disaster due to road blockages or other unforeseen circumstances. In such an instance, the reservoir would be drained and water service would be lost to all users of the Kahuku system. The proposed emergency generator would be housed on-site and would supply power to the Kahuku Wells Station for continued operation in such a situation. As such, the proposed improvements are expected to improve the long-term reliability of the facility.

The Kahuku Wells Station currently provides water to the public at a level of quality in accordance with Federal, State, and County standards. The BWS regularly tests water from the Kahuku Wells Station to ensure that water quality falls within the standards for public water systems as outlined in Chapter 11-20, HAR. Additionally, the Kahuku system and its Kahuku Wells Station serving the Kahuku service area currently comply with Chapter 11-25, HAR, which requires public water systems to be under the responsible charge of certified distribution system and water treatment plant operators. While it is not anticipated that the proposed improvements will result in a change in water quality, the BWS will continue to monitor water quality for continued compliance with the quality standards outlined in HAR 11-20. The Kahuku system and its Kahuku Wells Station will continue to

be operated by certified distribution system and water treatment plant operators as required by HAR 11-25.

Additionally, the BWS will be required to submit monthly and annual groundwater use reports to the CWRM. These reports will include such parameters as pumpage, water level, and chlorides. This data is used by the CWRM in an effort to implement policies identified in the State Water Code and WRPP.

3.13.3. Drainage System

The drainage system at the Kahuku Wells Station consists of both aboveground drainage swales (referred to in record drawings as cutoff ditches) and underground drain lines. See **Figure 10** for a depiction of the Kahuku Wells Station's existing drainage system.

The aboveground cutoff ditches capture stormwater runon from adjacent upland parcels. The topography in the immediate vicinity of the Kahuku Wells Station causes stormwater to run onto the site from areas northeast and southeast of the project site. This stormwater runon is captured by the cutoff ditches before running onto the major cut slopes (shown in **Figure 4**) on the northeastern and southeastern sections of the site; thus, possible erosion of these slopes due to high-velocity stormwater runoff is mitigated. Stormwater captured by these cutoff ditches is redirected to the boundaries of the project site, and it is discharged on the southwestern boundary of the site where it sheetflows onto an adjacent Kahuku Agricultural Park parcel (TMK 5-6-006:037).

The on-site underground drainage system is used to convey both stormwater runoff and discharges associated with the facility's operations (i.e., process water discharges) off-site for disposal. This drainage system consists of a 6-in perimeter drain surrounding the 0.5 MG reservoir, a 4-in drain line from the venutri vault, a 4-in drain line from each of the existing wells, and a 12-in washout line and 12-in overflow line from the 0.5 MG reservoir. These drain lines converge at a single drainage manhole located near the southwestern boundary of the site. Currently, water entering this manhole leaves the Kahuku Wells Station site through a 12-in drain line and is discharged into an unlined drainage ditch on the adjacent Kahuku Agricultural Park parcel (TMK 5-6-006:037) (KAI Hawaii Inc., et al., 2002).

In 2002, the *Facilities Repair: Drainage Improvements Study for Kunia 665' Reservoir and Kahuku 228' Reservoir* (herein referred to as the drainage improvements study) was commissioned by the BWS. This drainage improvements study investigated the effect of current discharges from the

Kahuku Wells Station underground drainage system on neighboring parcels in the Kahuku Agricultural Park. It was determined that the discharge water causes "undesirable conditions for the lessee of (TMK parcel 5-6-006:037) as well as motorists using the (private State road in TMK 5-6-006:055)" (Kai Hawaii et al., 2002). Per the recommendation, a construction contract for the proposed drainage system modification has been awarded (construction of the drainage system modifications is scheduled to take place prior to construction of the project discussed herein) in order to mitigate the current effects of discharges from the Kahuku Wells Station onto adjacent Kahuku Agricultural Park parcels.

The proposed modified drainage system will entail approximately 600 ft of new buried drain line extending from the sites' 12-in overflow line to an existing 40-ft-wide State drainage easement on TMK 5-6-006:046, another agricultural parcel that is part of the DOA's Kahuku Agricultural Park. Generally, the new line will intercept the existing 12-in drain line within the Kahuku Wells Station site and be constructed along the Kahuku Wells Station's southwestern boundary (toward the property line between TMKs 5-6-006:036 and 037), along the southern property line of TMK 5-6-006:036 and toward the private State road (TMK 5-6-006:055) that services the Kahuku Agricultural Park, and along TMK 5-6-006:055 where it will cross over and outlet within the existing drainage easement on TMK 5-6-006:046 (refer to **Figure 2**). Through this proposed modified drainage system, instead of allowing the facility's collected flows to discharge into the unlined drainage ditch and onto the adjacent Kahuku Agricultural Park parcel (TMK 5-6-006:037), flows captured by the on-site underground drainage system will be conveyed via the modified drainage system to its eventual outlet point within an existing drainage easement. Flows within the existing 40-ft-wide drainage easement appear to be directed toward a gully, which lies within an 80-ft-wide State drainage easement that eventually empties into Ohia Ai Stream (also known and referred to as Kii Stream). (Kai Hawaii et al., 2002)

The on-site underground drainage system is responsible for capturing the majority of stormwater generated at the Kahuku Wells Station. The greater part of the site is graded to direct stormwater toward the 6-in perimeter drain surrounding the 0.5 MG reservoir, where it enters the underground drainage system. To a smaller extent, the 4-in drain line connected to the venturi vault also captures stormwater generated at the project site. Although not intended to capture large amounts of stormwater, this drain line transports any stormwater runoff that enters the grated cover of the vault. The purpose of this drain line is to keep the vault from flooding.

The underground drainage system is also responsible for capturing process water discharges at the Kahuku Wells Station. This includes discharges from pump priming, reservoir overflow, and reservoir drainage.

Pump priming discharges typically occur two or three times a day during pump startup operations. For the first five to seven minutes of each startup, the pump blow-off valves discharge potable-quality process water. These discharges may occur slightly more or less frequently depending on the intensity of water usage in the Kahuku service area. Each pump is connected to a 4-in underground drain line, which captures pump priming discharges in the underground drainage system for conveyance and disposal off-site.

Overflow discharges from the 0.5 MG reservoir, although not a typical part of operation, are carried through a 12-in overflow line when necessary. As previously described, an automated system is used to control water levels in the 0.5 MG reservoir. When water in the reservoir drops below a pre-determined level, the system switches on one of the pumps to fill the reservoir. Conversely, the system will shut down the pump once the reservoir is filled to a pre-determined level. In the event the monitoring system malfunctions and fails to shut off the pump, the overflow line captures excess water in the underground drainage system for conveyance and disposal off-site.

Reservoir drainage discharges, although not a typical part of operation, are carried through the 12-in washout line when necessary. Reservoir drainage discharges occur when the reservoir needs to be partly or fully drained, such as for reservoir maintenance activities.

Impacts and Mitigation Measures

The BWS will conduct test pumping of the new Well No. 3 in order to ascertain the viability of the well. A temporary pump will be installed to test pump the well, and test pumping will occur in two phases. Intermittent pumping will occur during the step-drawdown test at rates based on increasing fractions of the total anticipated pumping capacity of the new well: for a pumping capacity of 700 gpm, the step-drawdown test rates will likely be in the range of 500 to 1,000 gpm. Continuous pumping will occur during the constant-rate test, where the well will be pumped 24 hours a day at a proposed rate of 1,000 gpm for three to five days. The groundwater effluent from test pumping will be discharged into the Kahuku Wells Station's proposed modified drainage system and conveyed to the existing 40-ft-wide drainage easement on TMK 5-6-006:046 (a Kahuku Agricultural Park parcel). It is expected that a fair amount of this temporary discharge from the

new well should percolate into the soil of the existing drainage easement due to the permeable nature of the soils of this parcel (see Section 3.2, Geology and Soils for a discussion of soil types and characteristics). Additionally, these activities will be temporary in nature and consist of potable untreated groundwater. Moreover, the Kahuku Wells Station's modified drainage system is proposed to include a grouted rubble pavement lining at its outlet point within the existing 40-ft-wide drainage easement in order to mitigate for potential erosion associated with flows collected and conveyed through this system. Nonetheless, the BWS will explore appropriate measures to mitigate any potential erosion and flooding affects that could result from the test pumping discharge (e.g., measures to minimize the intensity and velocity of the test pumping discharge), and any such proper mitigation measures will be determined during the proposed project's design phase. It should be noted that while the modified drainage system is budgeted for construction prior to construction of the proposed project improvements (a construction contract for the drainage system modification has been awarded), a disposal plan for discharge of the groundwater effluent from test pumping will be developed and coordinated with the adjacent landowner (the DOA) if construction of Well No. 3 occurs prior to the proposed drainage system modification. Consideration was given to the capture of test pumping discharges for reuse. However, the cost to install the necessary infrastructure (holding tanks and distribution pipes) is not warranted given the temporary nature of test pumping discharges.

The proposed improvements include the addition of an underground drain line connecting the pump at Well No. 3 to the on-site underground drainage system. Details of its size and layout of this drain line will be determined during the design phase. The purpose of this drain line will be to capture pump startup discharges from Well No. 3 for conveyance and disposal off-site. Construction activities will seek to avoid any infrastructure conflicts and any damage to the underground drainage system.

Construction activities will not increase the volume of peak stormwater runoff. While drilling, grading, excavation, and/or open cut trenching activities are necessary during construction of the proposed improvements, erosion of soils due to site preparation and the construction of improvements is anticipated to be minimal. Nonetheless, these activities could result in increased soil migration through stormwater runoff. Proper erosion control BMPs (e.g., silt fence) will be used to minimize the amount of soil transported in

stormwater runoff during construction activities. All construction activities will comply with applicable Federal, State, and County regulations and rules for erosion control. See Section 3.9, Surface Water Quality for details regarding any potential impacts to the quality of surface water resources.

The project will not induce additional stormwater runoff and is not anticipated to increase the volume of peak stormwater runoff as the addition of impervious surface area within the project site will be minimal. Additionally, the proposed improvements will not result in significant operational changes at the Kahuku Wells Station. Developing Well No. 3 at the Kahuku Wells Station will enable use of the three wells to be rotated regularly such that two of the wells will be available for operating at all times with one of the wells on hand as a standby. The site's underground drainage system is expected to continue to operate and the typical process water discharges associated with the existing two wells are expected to continue. In such cases when Well No. 3 is operating, pump startup discharges from it will be captured in the aforementioned proposed drain line connecting the new well to the site's underground drainage system. These discharges will be similar in nature to the pump priming discharges for the existing wells, as described previously in this section.

For the reasons stated above, no short-term construction-related impacts are anticipated to drainage conditions at and in the vicinity of the Kahuku Wells Station as a result of the proposed project. However, the BWS will explore the need for temporary BMP measures that may be employed where necessary to mitigate any potential erosional effects that could result from test pumping activities, which will cease upon completion of the construction. No significant adverse drainage impacts are anticipated upon completion and during operation of the proposed project.

3.13.4. Wastewater System

The Kahuku Wells Station hosts its own self-contained (i.e., non-municipal) wastewater system. Wastewater at the Kahuku Wells Station is generated at a single restroom located in the control building. The restroom consists of one sink and one toilet, both connected to a single subsurface 4-in sewer line. The sewer line carries wastewater from the restroom into a subsurface sewage vault located adjacent to and south of the control building. **Figure 10** shows the location of the sewage vault and sewer line. Wastewater is stored in the sewage vault until it is pumped, removed from the site, and disposed of.

Wastewater is periodically pumped from the wastewater vault at the Kahuku Wells Station as necessary. All wastewater pumping, hauling, and disposal activities currently comply with, and will continue to comply with provisions for wastewater pumpers and haulers as described in Chapter 11-62, Subchapter 6, HAR.

Impacts and Mitigation Measures

No changes are proposed to the Kahuku Wells Station's wastewater system as part of the proposed improvements, and it is not anticipated that the project will result in relocation of any part of the site's existing wastewater system. Construction activities will seek to avoid any infrastructure conflicts and any damage to the wastewater system.

The wastewater system's sewage vault may need to be pumped with slightly greater frequency during construction activities as a result of an increased number of personnel at the Kahuku Wells Station. Alternatively, due to the size limitations of the existing wastewater system at the Kahuku Wells Station, portable toilets may be needed at the site during construction of the project depending on the number of personnel required for construction activities. The decision as to whether portable toilets will be required during construction will be made during the design phase.

In either case, the potential adjustments in use of the site's wastewater system during construction activities are both minor and temporary in nature. As such, only negligible impacts are expected due to construction of the proposed improvements. Additionally, because the wastewater system at the Kahuku Wells Station is an isolated system (i.e., does not connect to the municipal wastewater system), the proposed improvements will have no impact on the municipal wastewater system.

Completion and operation of the proposed water supply facility improvement project is not expected to result in any long-term impacts on the wastewater system at the Kahuku Wells Station. The proposed improvements will not result in any significant operational changes at the Kahuku Wells Station. Consequently, it is anticipated that the condition and usage of the site's wastewater system will return to its existing condition once construction is complete.

3.13.5. Electrical, Telephone, Cable, and Gas Service

Electrical Service: Electricity at the Kahuku Wells Station is supplied by the Hawaiian Electric Company, Inc. (HECO) through an overhead power line located along the access road to the site. Electricity from the HECO power line is distributed throughout the Kahuku Wells Station by underground electrical lines within the facility. One aboveground electrical transformer is located adjacent to the control building.

Telephone Service: A proprietary BWS telemetry system is used in order to manage the pumps at the Kahuku Wells Station. Flow rates are monitored through a SCADA system, with the data being submitted monthly to CWRM for regulatory purposes.

There are no other existing telephone utilities at the Kahuku Wells Station.

Cable & Gas Service: There are no existing cable or gas utilities at the Kahuku Wells Station.

Impacts and Mitigation Measures

The proposed improvements will include the installation of electrical lines and controls required for operating the new well's pump as well as any necessary appurtenances. It will be determined during the design phase through thorough investigations whether the existing control building and control panel are adequate in accommodating the new Well No. 3 or additional control cabinets and an extension to the existing control building will be required to support the addition of Well No. 3. The exact nature and layout of electrical system improvements will be determined during the design phase in order to adequately accommodate the facility's operational needs.

Upgrades to HECO facilities (e.g., the power line supplying electricity to the site) are not anticipated as a result of the proposed improvements. As such, all anticipated electrical system improvements will take place entirely within the Kahuku Wells Station. Due to the isolated nature of the proposed electrical system improvements, no impacts are anticipated to electrical service in the Kahuku area as a result of installation of the proposed improvements.

As described in Section 2.3.1, Proposed Action, the proposed improvements will not result in any significant operational changes at the Kahuku Wells Station. Use of the three wells will be rotated regularly such that two of the Kahuku Wells Station's wells will be

available for operating and one of the wells will be on hand as a standby source. The proposed Well No. 3 pump, similar to the Kahuku Wells Station's two existing well pumps, will be operated with an electric-operated motor. Thus, the increase in power generation by HECO in order to operate these pumps represents such a small portion of total power use that its effect would be insignificant. As such, only a negligible change in electrical use is expected as a result of the proposed improvements.

The new on-site emergency generator will support the Kahuku Wells Station in the event that power cannot be supplied by the HECO electrical system. Use of the new generator is expected to be infrequent and temporary in nature as it is intended to provide back-up power to the facility during power outages. The generator will include an associated housing unit and fuel storage tank; because its intent is to provide power in the event of a natural disaster, it is anticipated that the emergency generator will be housed in a weather-proof, hurricane-rated structure. Details of the location and size of the structure, as well as the type of generator, will be determined during the design phase. The use of biofuels will also be considered during design.

No significant changes to the existing SCADA system are anticipated as a result of the proposed improvements. Flow rates will continue to be monitored and reported to CWRM as per current operating procedures. No other telephone services will be affected as a result of the proposed improvements.

There are no existing cable and gas utilities at the Kahuku Wells Station, and no cable or gas improvements are anticipated as part of the project. As such, the proposed improvements will have no effect on any cable or gas services.

3.14. Socio-Economic Characteristics

3.14.1. Existing Businesses and Surrounding Uses

As described in Chapter 2, the proposed project is located entirely at the site of the Kahuku Wells Station. The approximately 1.0-acre parcel (TMK 5-6-008:00-5) that holds the Kahuku Wells Station is owned by the BWS. Therefore, the portions of the project site that will be affected by the proposed improvements are under the jurisdiction of the BWS.

The Kahuku Wells Station is located in a rural area characterized by agricultural activities and open, mostly undeveloped space. Immediately

adjacent to and sharing the site's southwestern boundary are two parcels which are part of the Kahuku Agricultural Park and being leased for the purpose of agricultural activities. A single, large parcel adjoins the remainder of the Kahuku Wells Station site's boundaries. The parcel currently remains as open space, and the property is now being considered for lease and use as a wind farm. As presented in Chapter 2, **Figure 2** provides information on the location and TMKs of the uses surrounding the project site.

Kahuku Town is generally located east of the Kahuku Wells Station site. It is characterized as a residential community and hosts a relatively limited amount of residential, commercial, and institutional uses. While agricultural activities are prominent in the region and in the immediate vicinity of the project site, the Kahuku Wells Station generally serves residential and institutional users in the Kahuku Town area, as well as several emergency service facilities (see **Figure 3** for the approximate boundaries of the Kahuku service area). The Kahuku Agricultural Park, although located in the immediate vicinity of the Kahuku Wells Station, does not use this facility as a source of water. The Kahuku Agricultural Park is served by a separate water system that is owned and operated by the DOA.

It should be noted that during the preparation of this EA, the BWS and The Limtiaco Consulting Group attended two Neighborhood Board No. 28, Koolau Loa meetings. At the meeting held on August 12, 2010, the BWS presented a description of the proposed Kahuku Wells Station improvement project. **Appendix A** includes a copy of the proposed project information handout provided at that meeting, the meeting agenda, and the minutes for the meeting. At the neighborhood board's meeting held on May 12, 2011, The Limtiaco Consulting Group presented a description of the proposed project and informed attendees of the availability of the Draft EA for public review and comment. A copy of the proposed project information handout provided at that meeting, the meeting agenda, and the minutes for the meeting are provided in **Appendix C**. In additional efforts to consult with the community regarding the proposed project, those recorded fee owners with properties neighboring the Kahuku Wells Station site and other possible stakeholders in the Kahuku community were consulted. Further relevant details regarding these consultation efforts are presented in Section 8, Consultation and records of any correspondences are provided in **Appendix B** and **Appendix D**.

Impacts and Mitigation Measures

The proposed project is expected to have a negligible impact on socio-economic considerations in the immediate vicinity of and in the general area surrounding the project site. Socio-economic factors could be

influenced by such things as transportation access, air quality, noise, and water system service from the Kahuku Wells Station.

As described in Section 3.13.1, Roadways and Traffic Considerations, a slight increase in traffic will occur during the construction of the proposed improvements. It is anticipated that this impact will occur primarily on Pualalea, Leleuli, and Huehu Streets and Pahelehala Loop. These roads provide access to residential areas in Kahuku Town, as well as provide access to the Kahuku Medical Center and Kahuku Elementary School. For the reasons stated in Section 3.13.1, these impacts are expected to be minimal and temporary in nature. As such, neither the proposed improvements nor its related construction activities are expected to have a significant impact to residential and institutional uses in the immediate vicinity. The proposed improvements are expected to have little, if any, impact on access to agricultural or other business-related uses in the vicinity of the project site.

As described in Section 3.8, Air Quality, regional air quality is expected to be unaffected by the proposed improvements. However, short-term construction-related impacts on air quality – namely the generation of dust and emissions from construction vehicles and equipment – may result. The potential air quality impacts associated with these construction-related activities are not anticipated to travel beyond the immediate vicinity of the Kahuku Wells Station. As such, these impacts will primarily affect those agricultural users and activities within the immediately adjacent parcels. Agricultural businesses deal with fugitive dust and emissions as a part of regular operations; as such, the impact on these businesses is expected to be negligible. Additionally, the contractor shall be responsible for compliance with Chapter 11-60, HAR and shall employ construction BMPs where it is necessary to reduce fugitive dust and emissions in order to meet such compliance. As such, any air-quality impacts related to construction of the proposed improvements are anticipated to have a negligible and temporary effect on agricultural activities in the immediate vicinity of the Kahuku Wells Station.

As described in Section 3.10, Noise, temporary noise-related impacts are anticipated during construction of the proposed improvements. Ambient noise levels in the vicinity of the project site will increase due to construction activities and the use of construction vehicles and equipment. However, contractors will be responsible for employing measures to ensure compliance with HAR, Title 11, Chapter, 46,

"Community Noise Control" during construction. As a result, construction activities related to the proposed improvements are expected to have only minimal noise impacts on agricultural uses in the immediate vicinity of the Kahuku Wells Station.

The 75-hp motor associated with Well No. 3 and the new emergency generator will be new sources of noise during normal operations at the Kahuku Wells Station. However, these noise sources will be operated only occasionally and any potential noise impact associated with them will be mitigated through the use of noise-attenuating structures and/or submersible pumps, as necessary. As such, long-term noise-related impacts from regular operations at the Kahuku Wells Station are not expected to change because of the proposed improvements. Combined with the fact that agricultural businesses directly adjacent to and residential and institutional uses within the Kahuku Town area have not had noise-related concerns associated with operation of the Kahuku Wells Station, it can be reasonably deduced that the proposed improvements will have no long-term adverse impacts on agricultural, residential, or institutional uses in the vicinity of the Kahuku Wells Station.

As described in Section 3.13.2, Water System, the proposed improvements will have largely positive impacts on water system considerations within the Kahuku service area. The average water withdrawals are already nearing the design capacity of the Kahuku Wells Station. The addition of Well No. 3 will add to the capacity of the facility, which will mean sufficient municipal water supply for current facilities and uses as well as the already-planned Kahuku Villages Phases IV and V developments, with existing BWS water commitments. The additional design capacity will also provide a pro-active solution to possible population growth in the existing Kahuku service area. The proposed improvements will also add to the reliability of the Kahuku Wells Station due to construction of a third well as a back-up in supporting Kahuku Town and the on-site emergency generator. Overall, the proposed improvements will help ensure a sufficient and reliable supply of potable water in the Kahuku Town area.

3.14.2. Emergency Services

Emergency services refer to critical facilities required during a disaster and first response units capable of addressing any type of disaster. A significant event created by human-induced or natural hazard could potentially create a situation where the provision of water, shelter, and medical services could be

impaired or paralyzed for days or weeks. These include: police stations; fire stations; hospitals, clinics, and dispensaries; and community/public emergency shelters.

The Kahuku Wells Station provides potable water to Kahuku Town's nearest emergency service facilities discussed below (refer to **Figure 2** for the location of these facilities in relation to the Kahuku Wells Station). Currently, any outages at the Kahuku Wells Station as a result of natural disasters, emergencies, breakdowns, and/or repairs could cut-off water service to all of the customers and emergency facilities and shelters of Kahuku Town until the facility is back in working order. In some cases this may take months; for example, replacement parts can be difficult to obtain because all of BWS' pumps are designed specifically for the needs of each well, which can cause repairs to be delayed significantly. Additionally, in the event of a disaster, roads accessing the Kahuku Wells Station site may be rendered inoperable; in such a case, an emergency generator may not be able to be transported to the site. Risks to public health and safety may result under any such circumstances.

Police: Police protection services in the vicinity of the project site are provided by the City and County of Honolulu, Honolulu Police Department (HPD). The project site is located within the HPD's largest patrol area: HPD's Patrol District 4, which extends along the entire Windward side of Oahu from Makapuu Point to Kawela Bay. The administrative offices for District 4 are located at the Kaneohe District Station, approximately 25 miles south of the project site. The Kahuku Substation is the nearest HPD facility to the project site, located approximately 1.0 mile east of the project site at 56-470 Kamehameha Highway. (HPD, 2010)

Fire: Fire protection services are provided by the City and County of Honolulu, Honolulu Fire Department (HFD). The nearest fire station in the vicinity of the project site is the Kahuku Fire Station located on Kamehameha Highway, approximately 1.0 mile east of the project site. (HFD, 2009)

Medical: Kahuku Medical Center, designated as a Critical Access Hospital by the State, is located approximately 0.6 mile east of the project site. The hospital provides 24 hour emergency care, general acute services, and a range of other medical services. No Emergency Medical Service ambulances are based at the hospital; however, ambulance service is provided to the area for emergency use only by the City with its closest emergency ambulance facility located behind the HPD's Kahuku Substation. These nearest ambulances are based approximately 0.25 mile from the Kahuku Medical Center and approximately 1.0 mile east of the project site.

The BWS water system standards call for the Kahuku Wells Station's pumping capacity to attain a specific fire-flow requirement given that the Kahuku potable water system is a single-reservoir system serving a hospital.

Emergency Shelters: Community/public emergency shelters designated by the SCD are used to provide an evacuation location for citizens in case of an emergency or threat of disaster. The State of Hawaii, Department of Education is the agency responsible for most public shelters, with numerous shelters provided throughout the State. (Hawaii Statewide Hazard Mitigation Forum, 2007) The nearest emergency shelters in the vicinity of the project site are Kahuku Elementary School and Kahuku High and Intermediate School; both facilities are located approximately 0.7 and 0.9 mile east of the project site, respectively. In addition to providing for the general population, the Kahuku High and Intermediate School is a shelter designated to provide limited support to household pets and persons with special health needs. (SCD, 2010)

Impacts and Mitigation Measures

The project site is located within existing emergency service areas. Additionally, the Kahuku Wells Station provides potable water to each of the nearest emergency service facilities: the HPD's Kahuku Substation, HFD's Kahuku Fire Station, Kahuku Medical Center, City's ambulance service facility/office, Kahuku Elementary School, and Kahuku High and Intermediate School.

Continued potable water service to each of Kahuku Town's emergency service facilities will be maintained during construction activities. Additionally, given that the proposed project is located entirely at the site of the Kahuku Wells Station, this project should have minimal impacts on police, fire, medical, and emergency shelter operations or their ability to provide adequate services to the surrounding area during construction of proposed project.

Although the existing agricultural activities adjacent to the Kahuku Wells Station project site and residences, businesses, and institutions within the BWS' Kahuku service area may occasionally require emergency services, the proposed water supply facility improvement project will not affect the demand for such services as the project is not intended to increase the resident population or visitors to the area and does not seek to support further development in Kahuku Town or the surrounding area/Kahuku service area. In fact, the proposed project would provide positive, long-term emergency service benefits to the

residents, businesses, institutions, and agricultural uses within and adjacent to Kahuku Town by implementing measures that would improve the reliability of the BWS' Kahuku potable water supply system. In the case of any breakdowns and/or repairs at either of the Kahuku Wells Station's two existing wells, use of the new Well No. 3 will minimize any long-term outages and enhance the system's ability to continuously provide potable water to the various emergency service facilities it serves. The new on-site emergency generator will be readily available for use at the Kahuku Wells Station during any power outages as a result of natural disasters or emergencies; thus, the Kahuku Wells Station will be able to continue operating if power is lost to the site and the generator should significantly reduce the length and severity of any water service cut-offs to Kahuku Town's emergency facilities. In addition, increasing the facility's pumping capacity will improve the fire-flow and fire protection of the system and help the system meet fire-flow requirements as a single-reservoir system serving a hospital.

No significant adverse impacts to police, fire, medical, or emergency shelter services are anticipated as a result of the completion of the project. In fact, the project will provide long-term benefits to the area through the improved reliability of the Kahuku system in providing potable water to all of Kahuku Town's many emergency service facilities.Therefore, no mitigation measures associated with emergency services are necessary.

4. RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS

4.1. State Land Use District

The State Land Use Law, Chapter 205, HRS, is intended to preserve, protect, and encourage the development of lands in the State for uses which are best suited to the public health and welfare for Hawaii's people. All lands in the State are classified into four land use districts by the State of Hawaii, Land Use Commission: Urban, Agricultural, Conservation, and Rural.

The entire project site is within the State "Agricultural" district.

Comment

The existing Kahuku Wells Station and its appurtenant equipment are allowable uses per the State's Agricultural district zoning designation. Therefore, the proposed project is consistent with this designation.

4.2. Hawaii State Plan

The Hawaii State Plan, Chapter 226, HRS, outlines broad goals, policies and objectives to serve as guidelines for the future growth and development of the State. The plan includes the following objectives, policies, and priority guidelines relating to the subject project:

§226-11 Objectives and policies for the physical environment – land-based, shoreline, and marine resources.

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

(1) Prudent use of Hawaii's land-based, shoreline, and marine resources.

(2) Effective protection of Hawaii's unique and fragile environmental resources.

(b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:

(3) Take into account the physical attributes of areas when planning and designing activities and facilities.

(8) Pursue compatible relationships among activities, facilities, and natural resources.

§226-13 Objectives and policies for the physical environment – land, air, and water quality.

(a) Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:

(1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.

(b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:
(2) Promote the proper management of Hawaii's land and water resources.
(3) Promote effective measures to achieve desired quality in Hawaii's surface, ground, and coastal waters.
(4) Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawaii's people.

§226-14 Objectives and policies for facility systems – in general.
(a) Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.
(b) To achieve the general facility systems objective, it shall be the policy of this State to:
(1) Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.
(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.
(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.

§226-16 Objective and policies for facility systems - water.
(a) Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.
(b) To achieve the facility systems water objective, it shall be the policy of this State to:
(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.

§226-26 Objectives and policies for socio-cultural advancement – public safety.
(a) Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:
(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social

and economic wellbeing of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.

§226-27 Objectives and policies for socio cultural advancement – government.
(b) To achieve the government objectives, it shall be the policy of this State to:
(1) Provide for necessary public goods and services not assumed by the private sector.

Comment

The proposed project responds to and is consistent with the above objectives and policies by providing improvements to the Kahuku Wells Station that support statewide social, economic, and physical objectives. Overall, the proposed improvements will allow the facility to provide continued potable water supply services to the Kahuku service area in a manner consistent with the Hawaii State Plan.

The existing Kahuku Wells Station currently provides water to the public at a level of quality in accordance with Federal, State, and County laws. As mandated under Title 11, Chapter 20, HAR, the DOH and the BWS regularly test drinking water quality. Routine examinations will continue, and the Kahuku Wells Station will be subject to the same water quality rules and regulations that the BWS currently follows.

The proposed improvements will have no significant long-term impact on the natural environment, including surface or ground water quality and air quality. The proposed improvements are consistent with the guidelines of the *Koolau Loa Watershed Management Plan: Oahu Water Management Plan* (2009), which provides guidance to maintaining a safe and dependable water supply. The Kahuku Wells Station will continue to operate in a sustainable fashion which balances the needs of Hawaii's people with the limitations of the environment.

The proposed improvements are not anticipated to have significant short-term impacts on the natural environment. Construction activities will comply with all relevant Federal, State, and County standards and regulations for the protection of land, air, and water resources. Appropriate mitigation measures will be employed where potential short-term impacts or inconveniences cannot be avoided.

The BWS will continue to closely coordinate with State and County agencies and applicable plans. The proposed improvements are consistent with planning documents, such as the *Koolau Loa Sustainable Communities Plan* dated October 1999 (see Section 4.4, Koolau Loa Sustainable Communities

Plan for more information), to ensure efficient resource allocation to meet existing and planned local needs. Particularly, by addressing the pumping capacity conditions of the Kahuku Wells Station the proposed project will provide for existing assigned BWS water commitments. This includes commitments to affordable housing developments that have been initiated by the City.

In addition to allowing the BWS to provide adequate water supply for projected water demand in the Kahuku Town area based on assigned BWS water commitments, the proposed project will better equip the facility to respond in emergency situations. Development of the new well will minimize long-term outages and improve the Kahuku system's reliability in providing potable water during of any breakdowns and/or repairs of the two existing wells. The new on-site emergency generator will allow the Kahuku Wells Station to operate in the event there is a power outage, in case portable generators currently housed at other locations cannot access the site. This is important considering the Kahuku system is a stand-alone system that services several emergency service facilities. Increasing reliability of the Kahuku Wells Station will enhance its preparedness for emergency situations.

4.3. City and County of Honolulu General Plan

The General Plan of the City and County of Honolulu sets forth broad statements of social, economic, environmental, and design objectives and policies which are desired over the long-term. The following policies and objectives are relevant to the subject project:

III. Natural Environment

Objective A To protect and preserve the natural environment.

Policy 1: Protect Oahu's natural environment, especially the shoreline, valleys, and ridges from incompatible development.

Policy 7: Protect the natural environment from damaging levels of air, water, and noise pollution.

Objective B To preserve and enhance the natural monuments and scenic views of Oahu for the benefit of both residents and visitors.

Policy 3: Locate roads, highways, and other public facilities and utilities in areas where they will least obstruct important views of the mountains and the sea.

V. Transportation and Utilities

Objective B To meet the needs of the people of Oahu for an adequate supply of water and for environmentally sound systems of waste disposal.

Policy 1: Develop and maintain an adequate supply of water for both residents and visitors.
Policy 2: Develop and maintain an adequate supply of water for agricultural and industrial needs.

Objective C To maintain a high level of service for all utilities.
Policy 2: Provide improvements to utilities in existing neighborhoods to reduce substandard conditions.
Policy 3: Plan for the timely and orderly expansion of utility systems.

Objective D To maintain transportation and utility systems which will help Oahu continue to be a desirable place to live and visit.
Policy 1: Give primary emphasis in the capital- improvements program to the maintenance and improvement of existing roads and utilities.
Policy 4: Evaluate the social, economic, and environmental impact of additions to the transportation and utility systems before they are constructed.

VIII. Public Safety
Objective B To protect the people of Oahu and their property against natural disasters and other emergencies, traffic and fire hazards, and unsafe conditions.
Policy 7: Provide adequate fire protection and effective fire prevention programs.

Comment

The proposed project is consistent with the policies and objectives listed above. Completion of the proposed project will improve the reliability of the Kahuku system and increase the Kahuku Wells Station's pumping capacity for supplying domestic demand and fire protection to Kahuku Town. The proposed improvements will contribute to the Kahuku Wells Station's continued use in reliably and adequately serving the Kahuku service area. Environmental impacts of the proposed improvements will be negligible, and mitigation measures will be utilized when necessary.

This EA is being prepared in order to evaluate social, economic, and environmental impacts of the proposed improvements before they are constructed. Overall, the proposed improvements are not anticipated to have any significant long-term impacts on air quality, water quality, or noise levels. Potential impacts resulting from the proposed improvements at the Kahuku Wells Station and the proposed measures to mitigate those impacts are described in detail in the various sections of Chapter 3 of this EA. Given proper use of those proposed mitigation measures, the proposed

improvements will result in negligible temporary impacts to levels of air, water, and noise pollution. As such, these mitigation measures will protect the natural environmental from damaging levels of pollution.

The Kahuku Wells Station is positioned on the downslope of a large hill, and the crest of this hill obstructs any view of the site from areas *makai* of the site, which includes the Kahuku Town area. The proposed improvements will not obstruct any important views of the mountains or of the sea as the site will remain obscured from view.

The Kahuku system is a stand-alone potable water supply system generally serving residential areas, institutional uses, and emergency service facilities within Kahuku Town. The BWS recognizes the need to provide improved reliability to Kahuku Town given that the Kahuku area is not connected to any other parts of the BWS' supply system, the Kahuku Wells Station is the only potable water supply facility serving the Kahuku service area, and no upgrades to the capacity of the facility have been implemented since its installation over 30 years ago. The intent for developing the new Well No. 3 is to use a third well as a back-up. Addition of Well No. 3 will increase reliability of the system, allowing for a well to be on standby should one of the wells be rendered inoperable or down for maintenance. The new on-site emergency generator will also increase reliability of the system by enabling the Kahuku Wells Station to continue operating if power is lost to the site. Additionally, current average daily water withdrawals are approaching the design capacity of the Kahuku Wells Station. In light of already-planned Kahuku Town developments with assigned BWS water commitments and identified in the *Koolau Loa Sustainable Communities Plan* (Kahuku Villages Phases IV and V), the proposed improvements are intended to help ensure adequate potable water can continue be supplied to customers within the Kahuku service area.

As mentioned above, the Kahuku Wells Station serves emergency facilities, such as the Kahuku Medical Center, and emergency shelters, such as Kahuku High and Intermediate School and Kahuku Elementary School. By improving the reliability of the Kahuku Wells Station, the proposed improvements in turn increase the likelihood that water service will be maintained to emergency service facilities in the event of a natural disaster, emergency, breakdown, and/or repair. The proposed improvements will also increase the pumping capacity of the Kahuku Wells Station, which will improve the fire-flow and fire protection of the system and help the system meet fire-flow requirements as a single-reservoir system serving a hospital.

4.4. Koolau Loa Sustainable Communities Plan

The Island of Oahu is divided into eight Development Plan areas; the plans for six of these areas have been designated as Sustainable Community Plans. Each plan implements the objectives and policies of the General Plan and serves as a guide for public policy, investment, and decision making within each respective region. Together with the General Plan, they guide population and land use growth over a 20- to 25-year time span.

The project site is located within the region encompassed by the *Koolau Loa Sustainable Communities Plan*. A major revision of the Development Plans, based on a 1992 City Charter change, was completed in 2004. The revised plans are visionary, conceptual plans without the parcel-specific detail of the first Development Plans adopted in the early 1980s. The *Koolau Loa Sustainable Communities Plan* Revision Program was completed in October 1999 and became effective in February 2000.

The *Koolau Loa Sustainable Communities Plan* incorporates input received from seven Community Advisory Committee meetings and two community-wide meetings. The plan establishes policy to shape the growth and development of the Kooloau Loa region to the year 2020. Chapter 1 defines the region's role and identity within the overall framework of islandwide planning and land use management; Chapter 2 sets forth the overall vision for the future of the Koolau Loa region and lists important elements of that vision; Chapter 3 is the plan's policy core with policy guidance for the region's various land use elements; Chapter 4 outlines the policies, principles, and actions needed to support the land use policies; and Chapter 5 discusses the plan implementation.

It should be noted that, the first 5-year review of the *Koolau Loa Sustainable Communities Plan* is currently underway. The purpose of the 5-year comprehensive review is to assess the appropriateness of the plan's regional vision, policies, design principles and guidelines, and implementing actions, as well as consistency with the General Plan. Various community outreach activities and meetings were held in 2007, 2009, and 2010. Although the Koolau Loa Planning Advisory Committee proposed changes to the *Koolau Loa Sustainable Communities Plan* in June 2009, the Public Review Draft revised version of the plan was prepared and dated October 2010 based on the community outreach activities and meetings. The Public Review Draft of the *Koolau Loa Sustainable Communities Plan* was circulated for public review and comment, and a proposed revised plan is being prepared.

The plan includes the following vision, policies, principles, and guidelines applicable to the subject project:

VISION:

Maintain the Rural Character of the Koolau Loa Region

THEMES:

- *Rural Communities: Maintain the existing rural development pattern in Koolau Loa through in-fill of vacant lands in Kaaawa, Punaluu and Hauula, with moderate targeted growth in Laie and Kahuku.*
- *Agricultural Areas: Reserve agricultural lands for diversified agriculture.*
- *Preservation and Park Areas: Provide for access to mountain and shoreline resources for recreational and cultural purposes. Preserve scenic views of ridges, valley slopes, prominent land features and coastal views.*

IMPLEMENTATION TOOLS:

Koolau Loa consists of natural resource elements and man-made expressions. The tools we use to protect its rural character include: ahupua'a divisions, rural community boundaries, village centers and rural development standards.

The *Koolau Loa Sustainable Communities Plan* indicates that the project site is within an area designated as Agricultural and outside the Rural Community Boundary. The Kahuku Wells Station is not shown on the plan's "Public Facilities Map" in Appendix A as water supply facilities are not illustrated.

Chapter 3: Land Use Policies, Principles and Guidelines

3.2 AGRICULTURAL AREAS

- *Allow for appropriate non-agricultural uses that are compatible with open space and resource character, such as recreational or educational programs, or other uses consistent with the character of a rural agricultural area which provide supplemental income necessary to sustain the primary agricultural activity. There should be a direct connection between those activities and the maintenance of agricultural uses on the same or nearby properties.*

3.5 RESIDENTIAL USES

3.5.4.2 Rural Residential

… In Kahuku, the final phase of Kahuku Villages proposes 177 affordable housing units. No additional housing units are proposed for Kahuku, but any future affordable housing should be accommodated mauka of Kahuku Elementary School, within the State Urban District Boundary, with the support of the Kahuku community.

3.9 INSTITUTIONAL USES

3.9.1 HEALTH AND WELLNESS FACILITIES

3.9.1.1 General Policies

Where possible, government land use policies, public facility improvements and community assistance programs should support the retention and long-term viability of Kahuku Hospital. …

Chapter 4: Public Facilities and Infrastructure Policies and Principles
In Koolau Loa, municipal water is supplied by the Board of Water Supply (BWS) and the Laie Water Company (LWC). The BWS supplies water to most of Koolau Loa, while the LWC provides water to approximately 8,000 residences as well as commercial and agricultural uses in Laie, BYU-Hawaii, and the Polynesian Cultural Center (PCC).

4.2 WATER ALLOCATION AND SYSTEM DEVELOPMENT

4.2.1 GENERAL POLICIES

- *Integrate management of all potable and nonpotable water sources, including groundwater, stream water, storm water and effluent, following State and City legislative mandates.*

4.2.2 PLANNING PRINCIPLES AND GUIDELINES

- ***Development and Allocation of Potable Water.***
  While the State CWRM has final authority in all matters regarding administration of the State Water Code, the BWS should coordinate development of potable water sources intended for urban use on Oahu. The BWS and other public utilities should certify that adequate potable and nonpotable water is available for a new residential or commercial development to be approved. State and private well development projects should be coordinated and made consistent with City water source development plans.

4.8 CIVIC AND PUBLIC SAFETY FACILITIES

4.8.1 GENERAL POLICIES

- *Support adequate staffing and facilities to ensure effective and efficient delivery of basic governmental service, emergency and primary medical services, and protection of public safety.*

Comment

The proposed improvements are consistent in supporting the current *Koolau Loa Sustainable Communities Plan* and land use designations. Furthermore, the proposed project supports the plan's policies and principles pertaining to potable water supply within the region.

The BWS manages its municipal water system in keeping with the *OWMP*, a County water resource use and development plan for Oahu required and established under the State Water Code and City Ordinance 90-62. The BWS revised its planning approach to evolve the *OWMP* into a framework of eight regional WMPs for the management of all water resources within each watershed. As such, the BWS recently prepared the *Koolau Loa Watershed Management Plan: Oahu Water Management Plan* dated August 2009 in

collaboration with the DPP and through oversight of the CWRM. The proposed Kahuku Wells Station improvement project is identified in the aforementioned WMP as a potential water supply system improvement project.

As noted above, the BWS is the purveyor of potable water to most of Koolau Loa, including the rural community of Kahuku Town. As a result of its ongoing effort and proactive approach to address concerns associated with its Kahuku potable water supply system, the BWS initiated the proposed Kahuku Wells Station improvement project to address pumping reliability and capacity at the Kahuku Wells Station. Overall, the BWS is seeking to address these concerns specific to supporting Kahuku Town's current facilities and uses (such as Kahuku's emergency facilities and shelters, including the Kahuku Medical Center) and already-planned Kahuku Town developments with assigned BWS water commitments (Kahuku Villages Phases IV and V, which are identified in the *Koolau Loa Sustainable Communities Plan*). The BWS recognizes the need to provide improved reliability to Kahuku Town given that the Kahuku area is not connected to any other parts of the BWS' supply system, this is the only potable water supply facility serving the Kahuku service area, no upgrades to the capacity of the Kahuku Wells Station have been implemented since its installation, and current average daily water withdrawals are approaching the design capacity of the Kahuku Wells Station with the BWS obligated to be capable of supplying water to meet the projected needs of already-planned developments with assigned BWS water commitments. Completion of the proposed project will result in the improvement of the Kahuku system's reliability in providing potable water and an increase in the Kahuku Wells Station's pumping capacity for supplying domestic demand and fire protection to Kahuku Town.

Planning and coordinating potential Kahuku system improvements has involved determining how best to implement potential improvements to the Kahuku Wells Station such that it can continue to reliably and adequately serve the Kahuku service area. The intent for developing the new Well No. 3 is to use a third well as a back-up in supporting Kahuku Town. The new well is intended to fulfill the facility's pumping capacity requirements in accordance with BWS water system standards for supplying average water demand to current facilities and uses and already-planned Kahuku Town developments with assigned BWS water commitments. The proposed project accounts for these needs, and the additional capacity will also provide a pro-active solution to potential population growth in the existing Kahuku service area. However, it does not seek to support further development in Kahuku Town or the surrounding area/Kahuku service area.

As mentioned above, the Kahuku Wells Station serves emergency facilities (such as the Kahuku Medical Center, HPD's Kahuku Substation, HFD's Kahuku Fire Station) and emergency shelters (such as Kahuku High and Intermediate School and Kahuku Elementary School). Addition of Well No. 3 will allow for a well to be on standby should one of the existing wells be rendered inoperable or down for maintenance. The new on-site emergency generator will enable the Kahuku Wells Station to continue operating during any power outages to the site. These proposed improvements improve reliability of the Kahuku Wells Station, in turn increasing the likelihood that water service will be maintained to emergency service facilities in the event of natural disasters, emergencies, breakdowns, and/or repairs. The proposed improvements will also increase the pumping capacity of the Kahuku Wells Station; thus, the project will improve fire protection requirements and the overall reliability of the system.

As part of the project, test pumping of the new Well No. 3 will be conducted in order to ascertain the viability of the new well. The test pumping will also include monitoring of existing wells. If the standards are not met during the test pumping, the new well will be abandoned and capped or turned into a monitoring well. If the standards are met, a permanent pump will be installed in Well No. 3. Compliance with applicable DOH standards and rules for public potable water systems will be maintained for the Kahuku Wells Station under the proposed improvements to ensure the facility continues to provide safe drinking water. Additionally, the BWS will submit a well construction permit and pump installation permit to the CWRM for development and placement of the new Well No. 3 into production. Nonetheless, the proposed project will not entail obtaining a new WUP from the CWRM; the BWS is not seeking to increase the Kahuku Wells Station's existing WUP groundwater allocation under this project.

The proposed improvements would occur entirely at the site of the Kahuku Wells Station, and use of the site for public facility and water supply purposes will continue. Continued use of the site with this appropriate non-agricultural use is compatible and consistent with the character of the surrounding rural agricultural area and would not entail a change to any designated land uses or existing activities. The proposed improvements will occur entirely within the project site and will not infringe on or restrict access to any open spaces, agricultural uses, or mountain and shoreline resources for recreational and cultural purposes. Additionally, the rural nature and character of the project site will be maintained. Views to, from, and of the project site will not be negatively affected: any scenic views of ridges, valley slopes, prominent land features, and coastal views would be maintained. While installation and placement of some improvement components aboveground will be required,

they will be no taller than any of the facility's existing components currently located at the project site and will not detract from scenic amenities or visual resources.

4.5. Koolau Loa Public Infrastructure Map

Of Oahu's eight Development Plan areas, each area has a Public Infrastructure Map (PIM). The PIMs are administered by the DPP. Each PIM is adopted by City Council resolution and revised by resolution in accordance with Section 4-8.1, Revised Ordinances of Honolulu, as amended, and with the procedures set forth in the Administrative Rules of the DPP.

Revisions to the PIM are requested to identify major planned facilities projects needed to support the desired land use. A request for revision of the PIM may be submitted for consideration through the filing of a completed application with the DPP. Each application for revision of the PIM is reviewed from the perspective of its contribution to the well-being of the people of Oahu and how it will support implementation of the applicable Development Plan and/or Sustainable Communities Plan. All phases of a project are considered when determining whether the project meets the PIM applicability criteria.

Comment

In accordance with Section 4-8.3(17), Revised Ordinances of Honolulu, as amended, constructing a new potable water well is required to be shown on a PIM. Therefore, for the proposed improvements, an application will need to be submitted to the DPP to revise the Koolau Loa PIM by adding a potable water well symbol for the proposed new Well No. 3. The process will take approximately three to four months to complete and will be approved by the City Council by resolution.

4.6. Koolau Loa Watershed Management Plan

The *OWMP*, adopted by City Ordinance 90-62 in 1990, was prepared pursuant to the State Water Code (Chapter 174C, HRS). The State Water Code requires each County within the State to prepare a County water use and development plan.

Starting in the late 1990s, the BWS revised its planning approach to evolve the *OWMP* into a framework of regional WMPs and create WMPs for each of the eight Development Plan areas established on Oahu. The BWS is preparing WMPs for each of Oahu's eight Development Plan areas in collaboration with the DPP and through oversight of CWRM. This holistic approach focuses on sustainability in water use and development, including watershed protection, management, conservation,

and restoration. The CWRM approved of this watershed management plan approach and scope on March 17, 2004.

Once completed, the eight WMPs will together constitute the *OWMP*. Specific to the proposed project, the BWS recently developed the district-wide Koolau Loa WMP. The *Koolau Loa Watershed Management Plan: Oahu Water Management Plan*, dated August 2009, was made available for review with a public hearing held by the CWRM in June 2010. The plan was adopted by the City Council on August 18, 2010 as Bill 10 (2010), CD 2, it was approved and signed by the Mayor as City Ordinance 10-18 on September 2, 2010, and the CWRM adopted the plan at its March 2011 meeting.

The plan includes the following objectives relating to the subject project:

Objective 2: Protect and enhance water quality and quantity.
Sub-Objective 2.1: Maintain and improve the water quality and quantity of groundwater

Objective 3: Protect Native Hawaiian Rights and Traditional and Customary Practice
Sub-Objective 3.2: Consult with native Hawaiian agencies/community on water-related issues.

Objective 4: Facilitate public participation, education, and project implementation
Sub-Objective 4.3: Empower residents to be part of resource planning processes and provide education on watershed issues and protection and water conservation measures.

Objective 5: Meet water demands at reasonable costs.
Sub-objective 5.1: Provide water at a reasonable cost to the community.
Sub-objective 5.2: Efficiently meet water demands and match water quality to appropriate use.
Sub-objective 5.3: Maintain and improve BWS system reliability.

The plan identifies the addition of a third, standby pump/well as a potential water supply system improvement project.

Comment

The proposed project is consistent with all relevant objectives outlined in the *Koolau Loa Watershed Management Plan: Oahu Water Management Plan*.

Regional water availability will remain unaffected by the proposed project. As previously discussed in Section 3.4, Groundwater, the proposed improvements will not result in significant operational changes at the Kahuku Wells Station; additional capacity resulting from construction of the proposed improvements is intended for standby purposes. The proposed improvements will not result in an increase in water demand. No additional water allocation will be sought with the construction of Well No. 3. The current allotment for the Kahuku Wells Station will remain at 0.6 mgd under WUP No. 322, and Well No. 3 will be added as a source to that permit.

In order to protect local water quantity and quality in the aquifer, test pumping will be performed prior to installation of a permanent pump at Well No. 3. Test pumping will ascertain the viability of the well and determine if the operation of Well No. 3 will have detrimental effects on the water table due to possible effects such as upconing and drawdown. Additionally, procedures and BMPs used during construction and operation of Well No. 3 will further protect the portion of the groundwater aquifer contributing to the Kahuku Wells Station's water supply. As discussed in Section 3.4, Groundwater, many of the construction activities for the proposed project will occur in Zones A and B as identified in the *HISWAP* (2004) and the BWS recognizes that proper precautions need to be taken to protect the quality of the groundwater.

Public participation in the planning process has been solicited as part of this EA process in order to evaluate potential social, economic, and environmental impacts of the proposed improvements before they are constructed. During preparation of this EA, those recorded fee owners with properties neighboring the Kahuku Wells Station site and other possible agency, organization, and individual stakeholders were consulted. Included among the individuals contacted are those identified by the OEQC to have special knowledge of native Hawaiian cultural practices and resources in the Koolau Loa area. These cultural assessment providers were given a description of the proposed project and asked to respond with any knowledge regarding cultural practices and resources that may be impacted as a result of the proposed improvements. The State of Hawaii, Office of Hawaiian Affairs was also solicited for any comments or concerns regarding the proposed improvements. See Section 8, Consultation for more information, and records of any correspondences are included in **Appendices B and D**. Additionally, the BWS and The Limtiaco Consulting Group provided a description of the proposed project at two Neighborhood Board No. 28, Koolau Loa meetings held on August 12, 2010 and May 12, 2011, of which records are provided in **Appendix A** and **Appendix C**. Also as part of the EA process, public notification of the proposed project was published through the OEQC's *Environmental Notice*, copies of the Draft EA were made available to the

public, and any comments received during the public review of the Draft EA were considered and addressed as part of this Final EA.

Finally, as described throughout this EA, the proposed project will improve the reliability of the Kahuku system and increase the Kahuku Wells Station's pumping capacity for supplying domestic demand and fire protection to Kahuku Town. Development of the new well will minimize long-term outages and improve the Kahuku system's reliability in providing potable water during any breakdowns and/or repairs of the two existing wells. Reliability and potable water service will also be improved by means of the new on-site emergency generator: the generator would enable the Kahuku Wells Station to continue operating during any power outages at the site and reduce the length and severity of water service cut-offs to the BWS' Kahuku service area customers. In addition, the new well is intended to fulfill the facility's pumping capacity requirements in accordance with BWS water system standards for supplying average water demand to current facilities and uses and already-planned Kahuku Town developments with assigned BWS water commitments (Kahuku Villages Phases IV and V). This water system infrastructure upgrade to meet BWS standards thereby provides sufficient pumpage and standby capacity to achieve water reliability. Increasing the facility's pumping capacity will also improve the fire-flow and fire protection of the system.

In its ongoing effort and proactive approach to address concerns associated with its Kahuku potable water supply system, the BWS evaluated the reliability and capacity conditions of the existing Kahuku system. The BWS reviewed the conditions of the system to determine how best to implement potential future improvements for supplying potable water to Kahuku Town. The proposed Kahuku Wells Station improvement project was initiated to address pumping reliability and capacity at the Kahuku Wells Station. Options for addressing the Kahuku Wells Station's pumping reliability and capacity were evaluated for the proposed project, and alternatives to the proposed action are described in Chapter 5 of this EA. As presented therein, the proposed project is the most economical alternative (with the exception of the No-Action Alternative, which was dismissed because of its unacceptable consequences).

4.7. City and County of Honolulu Land Use Ordinance

The City and County of Honolulu Land Use Ordinance (LUO) regulates land use in accordance with adopted land use policies, including the City and County of Honolulu General Plan and the Development/Sustainable Community Plans. The project site is designated as within the AG-2/General Agriculture zoning district.

Comment

The existing Kahuku Wells Station and its appurtenant equipment are classified as Type A Utility Installations. According to the LUO, Type A utility installations are defined as "those with minor impact on adjacent land uses and typically include: 46 kilovolt transmission substations, vaults, water wells and tanks and distribution equipment, sewage pump stations, telecommunications antennas (except as provided in the paragraph below on Type B utility installations), and other similar uses" and are permitted uses within the AG-2/General Agriculture district (City, 1990 as amended). Therefore, the proposed project is consistent with the LUO.

4.8. State Coastal Zone Management Program

Hawaii's Coastal Zone Management (CZM) program, established pursuant to Chapter 205A, HRS, as amended, is administered by the State of Hawaii, Office of Planning and provides for the beneficial use, protection, and development of the State's coastal zone. Any significant development activity within the coastal zone is required by law to conform to Hawaii's CZM program objectives and policies. The objectives and policies of the Hawaii CZM program encompass broad concerns such as impacts on recreational resources, historic and archaeological resources, coastal scenic resources and open space, coastal ecosystems, coastal hazards, and the management of development.

Through the CZM program and pursuant to the Hawaii Coastal Zone Management Act (Chapter 205A, HRS, as amended), all counties have enacted ordinances establishing Special Management Areas (SMAs). Development within the SMA, including most development proposed by the State, requires a SMA permit from the appropriate County. On Oahu, the SMA permit is administered by the DPP and acted upon by the City Council pursuant to Chapter 25, Revised Ordinances of Honolulu.

Comment

The proposed water supply facility improvement project is not located within the coastal zone with the SMA boundary located more than 0.5 miles east of the project site. Therefore, the project site is located outside the boundaries of the City's SMA, and approval of a SMA permit is not required.

5. ALTERNATIVES TO THE PROPOSED ACTION

5.1. No-Action Alternative

Under the No-Action Alternative, the Kahuku Wells Station would continue to operate under existing conditions as described in Section 2.2.5, Existing Conditions at the Kahuku Wells Station Site.

The design and pumping capacity of the Kahuku Wells Station would remain unchanged. The total average daily water withdrawals from the Kahuku Wells Station are currently close to the design capacity of the facility. An increase in average daily water withdrawals – perhaps due to population increase in the Kahuku service area – could leave the Kahuku Wells Station with insufficient design and pumping capacity according to BWS water system standards. Additionally, the BWS has existing assigned commitments to supply water to the Kahuku Villages Phases IV and V developments, which are identified in the City's *Koolau Loa Sustaianable Communities Plan* (1999). These two planned Kahuku developments are projected to increase the average water demand on the facility such that it exceeds the facility's existing design and pumping capacity according to BWS standards. As such, the No-Action Alternative would leave the Kahuku Wells Station with insufficient capacity according to BWS standards should the Kahuku Villages Phases IV and V be constructed.

The reliability at the Kahuku Wells Station would remain a concern under the No-Action Alternative. A loss of one of the existing pumps (e.g., if either of the two existing wells experience a breakdown, must be shut down for repair, and/or must undergo routine maintenance) would leave the facility with insufficient standby capacity according to BWS standards. Also, a loss of electrical power at the Kahuku Wells Station would leave the existing wells without pumping capability. Currently, a power loss at the Kahuku Wells Station would require a portable generator to be shipped from another site on the island. However, the concern that a portable generator may not be able to access the Kahuku Wells Station (for example, if roads were rendered inaccessible due to a natural disaster) would not be addressed under the No-Action Alternative. Risks to public health and safety may result under any such circumstances.

The No-Action Alternative would have no construction related impacts on the environment or to the residents, businesses, and institutional and public uses in the surrounding area. It would also not require any funding or capital improvement costs.

However, the BWS has determined that reliability at the Kahuku Wells Station is of foremost importance due to the isolated nature of the Kahuku system. Additionally, the BWS is obligated to be capable of supplying water to meet the projected needs of the already-planned Kahuku Villages Phases IV and V developments with BWS

water commitments. The BWS would find it unacceptable for the Kahuku Wells Station to have insufficient design or pumping capacity to support the projected increase in water demand in the Kahuku service area. As such the No-Action Alternative has been determined to have unacceptable consequences.

5.2. New Wells Station Alternative

In the late 1990s, development and construction of an additional BWS potable water supply system to serve the Kahuku service area was considered in order to address the BWS' two primary interrelated concerns associated with its Kahuku potable water supply system: reliability and capacity. The project proposed a new groundwater supply facility and associated transmission main located in Malaekahana (referred to as the Malaekahana Wells project), which would connect with the existing Kahuku system. The BWS, in cooperation with the DLNR, drilled two exploratory wells to determine the feasibility of constructing the new facility. In 2001, the *Final Environmental Assessment: Malaekahana Production Wells* (referred to herein as the Malaekahana EA) was prepared for the project pursuant to Chapter 343, HRS and associated Title 11, Chapter 200, HAR. However, this system has not been constructed because the BWS deemed it too expensive relative to the demand it aimed to serve at the time.

The Malaekahana EA discusses in detail the improvements that would be required to construct a new wells station and associated transmission main in Malaekahana, along with the potential benefits and impacts. Much of the information in this section has been obtained from that document.

Description

The proposed location for the Malaekahana Wells project's new wells station is an approximately 0.35-acre portion of TMK parcel 5-6-007:001, which is located within the Koolau Loa Aquifer System. The site is located approximately 1.75 miles *mauka* of Malaekahana Bay and is accessed by a dirt road within an existing easement that traverses TMKs 5-6-008:002, 5-6-006:006, 5-6-006:018, and 5-6-006:019.

Two exploratory wells have previously been drilled at the proposed Malaekahana Wells Station site. Malaekahana Well No. 1 (State Well No. 3957-08) was drilled and test pumped in 1997, and Malaekahana Well No. 2 (State Well No. 3957-09) was drilled and test pumped in 1999. Test pumping determined that the wells could provide a sustained yield of 700 gpm (1 mgd); meaning that the proposed site may be feasible for development of a wells station.

Required Improvements

Development of the Malaekahana Wells project's new wells station would require conversion of the two existing exploratory wells into production wells. This conversion would require the installation of permanent pumps, construction of a control building, pipeline improvements, roadway improvements, and installation of other ancillary facilities.

One pump and 75-hp motor would be installed at each of the exploratory wells. Each pump would be capable of drawing 1 mgd from the groundwater aquifer. A single-story control building would be constructed to house the pump controls, monitoring equipment, and an automated chlorination system.

An approximately 9,000-ft-long, 16-in transmission main would be constructed to convey water from the new wells station to its connection point with the existing Kahuku system. The transmission main would connect to a 12-in BWS main located in the Kamehameha Highway right-of-way.

A majority of the unimproved, dirt access road was determined to be adequate to service the Malaekahana Wells project's new wells station. However, an approximately 180-ft-long section of the access road (nearest the access gate to the site) would need to be paved to improve site accessibility. The pavement would be 12 ft wide with 4-ft shoulders on both sides in conformance with BWS standards.

The proposed Malaekahana Wells Station would require extension of existing overhead electrical lines. Currently, overhead electrical lines run more than half way up the access road from 46-kilovolt HECO transmission lines on Kamehameha Highway. The proposed improvements would require these overhead electrical lines to be extended up the access road approximately 0.8 mile to the Malaekahana Wells project's new wells station site.

Comparison to the Proposed Action

The Malaekahana Wells project would increase the design capacity of the Kahuku system. Construction of the new wells station would provide sufficient standby capacity to adequately address existing water commitments to the already-planned Kahuku Phases IV and V developments as well as provide additional capacity for possible population growth in the Kahuku service area.

The Malaekahana Wells project would also enhance the reliability of BWS' Kahuku system. The proposed addition of two wells would allow the Kahuku system to maintain adequate design flow should one of the pumps within the system (at either the new Malaekahana Wells Station or the existing Kahuku Wells Station)

experience a breakdown, be shut down for repair, and/or require routine maintenance.

One advantage described in the Malaekahana EA is that the proposed Malaekahana Wells Station would have a separate transmission main from the existing Kahuku Wells Station, and this would further add to the reliability of the BWS' Kahuku system. Currently, water service in the Kahuku service area would be lost if a break occurs in the 12-in transmission main from the Kahuku Wells Station; service would only be restored once the transmission main is repaired. Construction of the Malaekahana Wells Station would allow water service to be maintained despite a break in one of the transmission mains: if a break were to occur in the Kahuku Wells Station's existing 12-in transmission main, then water service would continue through the Malaekahana Wells Station, and visa-versa. However, main breaks are sufficiently rare that this is not considered to be a significant advantage.

The Malaekahana EA does not identify any significant adverse probable impacts that would result from construction and operation of the proposed Malaekahana Wells project's new wells station. The Malaekahana Wells project was evaluated against the significance criteria outlined in Section 12 of Title 11, Chapter 200, HAR, and the Malaekahana EA determined that the project would not have a significant effect on the environment: a FONSI was filed with the OEQC.

Because the Malaekahana Wells project would generally have similar benefits to the proposed action and it would not have any significant effect on the environment, construction of the Malaekahana Wells Station can be thought of as functionally equivalent to the construction and addition of Well No. 3 at the Kahuku Wells Station. However, the Malaekahana EA states that the cost of construction of the Malaekahana Wells project would be approximately $2.9 million in year-2000 dollars. This would be equivalent to approximately $3.6 million in year-2010 dollars, based on Consumer Price Index rates made available through the Federal Bureau of Labor Statistics (BLS, 2010).

The cost of construction of the Malaekahana Wells project ($3.6 million) would be significantly greater than the cost of construction of the proposed action ($1.6 million). This cost difference can be attributed to the fact that many of the components required for construction of the Malaekahana Wells Station would not be required for construction and addition of Well No. 3 at the Kahuku Wells Station. For example, the Malaekahana Wells Station would require construction of a new control building, along with the associated monitoring and control equipment. In contrast, the new Well No. 3 at the Kahuku Wells Station would be able to take advantage of existing control facilities.

Because of the significant difference in cost and the minor difference in impacts and benefits between the Malaekahana Wells project and the proposed action, the latter was determined to be a more practical and cost-effective use of existing resources for purposes of meeting the project's need and objectives. As a result, it was concluded that construction of the proposed action is preferred over the Malaekahana Wells project in order to best accomplish the project need and objectives.

5.3. Connect to Adjacent City and County of Honolulu, Board of Water Supply System Alternative

The BWS' Kahuku system is a stand-alone potable water supply system; this system is not connected to any other parts of the BWS system. The isolated nature of the Kahuku system plays a large part in the reliability and capacity concerns described in Section 2.1.1, Project Need. It may be possible to address the Kahuku system's reliability and capacity concerns by connecting it to an adjacent BWS system. Connecting to an adjacent BWS system could add to the capacity of the Kahuku system; if the Kahuku system were connected to an adjacent BWS system with sufficient available capacity, that system's additional capacity could supplement the Kahuku system. Connection to an adjacent BWS system could add to the reliability of the Kahuku System; if one or both of the existing wells at the Kahuku Wells Station were to become inoperable due to a breakdown, repairs, or a loss in electrical power, water service could continue in the Kahuku service area through the Kahuku system's connection to the adjacent BWS system.

The most feasible of such an alternative would be to connect the Kahuku system to the nearby Kawela 228' Wells Station (TMK 5-7-002:006) as indicated in **Figure 11**.

Description

A connection the Kawela 228' Wells Station would be accomplished by tying the Kahuku system into the nearby North Shore 206' system. The North Shore 206' system is currently connected to the Kawela 228' system and can draw water from the Kawela 228' Wells Station. Thus, connecting the Kahuku system to the North Shore 206' system would allow the system to supply water from both the existing Kahuku Wells Station and the Kawela 228' Wells Station.

In order to tie the Kahuku system into the North Shore 206' system, an approximately 11,000-ft transmission main would need to be installed between the two systems. The minimum size of the transmission main would be 12-in, and it would connect an existing 12-in line in the Kahuku system at the intersection of Kamehameha Highway and Pualalea Street to an existing 12-in line in the North Shore 206' system at the intersection of Kamehameha Highway and Marconi Road. The majority of this transmission main would likely be located within the

Kamehameha Highway right-of-way. **Figure 11** shows the location of this transmission main and its connections to the Kahuku and North Shore 206' systems.

Due to the length of the transmission main between the Kahuku and North Shore 206' systems, a booster station would be required to provide sufficient water pressure throughout the main. This booster station would be located somewhere along the alignment of the proposed transmission main.

Required Improvements

Installation of the transmission main would require excavation and pipe-laying activities within the Kamehameha Highway right-of-way, along with the installation of equipment appurtenant to the transmission main. Once the transmission main is installed, the excavated portions of the highway would be backfilled and paved according to DOT standards. The completed transmission main would be pressure tested (to ensure its proper construction) and chlorine disinfected.

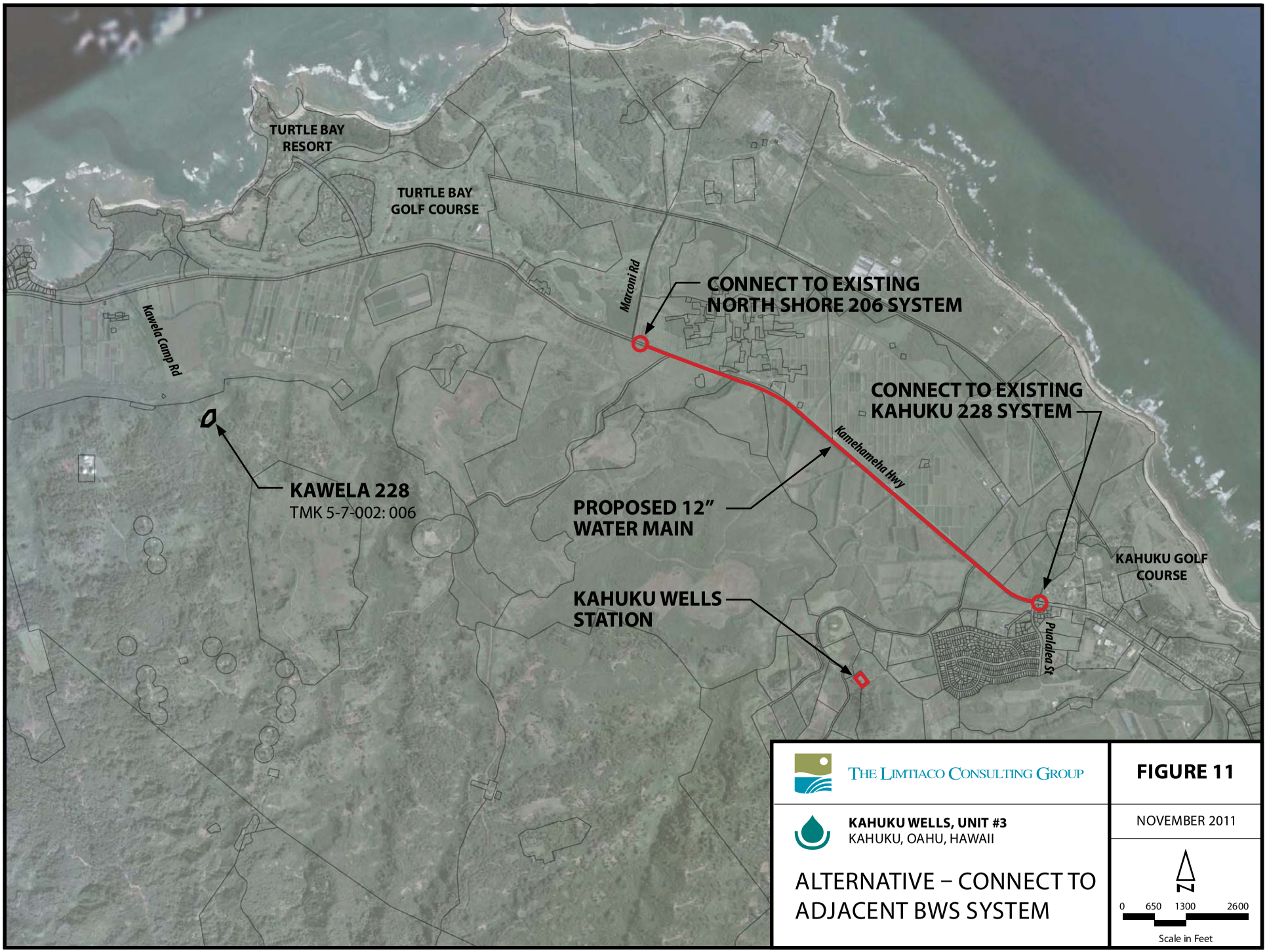
Construction of the transmission main would occur primarily within the Kamehameha Highway right-of-way. Between Marconi Road and Pualalea Street, Kamehameha Highway is a two-lane highway. As such, careful consideration would need to be given to traffic impacts associated with construction of the transmission main. It is likely that traffic controls would be required for the duration of construction.

The booster station would be constructed somewhere along the transmission main alignment in order to provide sufficient pressure throughout the transmission main. Two booster pumps would be installed with one of the pumps serving as a standby pump. A housing building, back-up power, and other associated infrastructure would also be required. It is likely that land would need to be acquired for construction of the booster station.

Comparison to the Proposed Action

The cost of construction of the transmission main – including mobilization, excavation, pipe installation, valve installation, chlorination, pressure testing, traffic control, and connections to the Kahuku and North Shore 206' systems – is estimated to cost approximately $3.3 million. Construction of a booster station – including two booster pumps, a housing building, emergency power, and other related infrastructure – is estimated to cost approximately $3.5 million. This would result in a total construction cost of approximately $6.8 million for this adjacent BWS system connection alternative.

Because connecting to the nearby Kawela 228' Wells Station would provide additional reservoir capacity, this alternative cannot be directly compared to the


TURTLE BAY RESORT
TURTLE BAY GOLF COURSE
Marconi Rd
CONNECT TO EXISTING NORTH SHORE 206 SYSTEM
Kawela Camp Rd
CONNECT TO EXISTING KAHUKU 228 SYSTEM
Kamehameha Hwy
KAWELA 228
TMK 5-7-002: 006
PROPOSED 12" WATER MAIN
KAHUKU GOLF COURSE
KAHUKU WELLS STATION
Pualalea St
THE LIMTIACO CONSULTING GROUP
KAHUKU WELLS, UNIT #3
KAHUKU, OAHU, HAWAII
ALTERNATIVE – CONNECT TO ADJACENT BWS SYSTEM
FIGURE 11
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N
0 650 1300 2600
Scale in Feet

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proposed action, which, by comparison, does not provide additional reservoir capacity. As such, the construction cost for a new, additional 0.5 MG reservoir at the Kahuku Wells Station was added to the cost of the proposed action for the purposes of comparison. This addition would bring the cost of construction of the proposed action to approximately $4.0 million.

The cost of connecting the Kahuku system to an adjacent BWS system ($6.8 million) would be significantly greater than the cost of construction of the proposed action plus an additional 0.5 MG reservoir ($4.0 million). Because of the significant difference in cost, the proposed action is considered to be a much more practical and cost-effective use of existing resources for purposes of meeting the project's need and objectives. Additionally, it is anticipated that construction of the connection between the Kahuku system and the Kawela 228' Wells Station would result in greater environmental impacts than the proposed action. As a result, it was concluded that construction of the proposed action is preferred over this adjacent BWS system connection alternative in order to best accomplish the project need and objectives.

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6. PERMITS AND APPROVALS

Although exact permitting and approval requirements will be determined during the design phase, the following list contains permits and approvals that may be required for the proposed project:

6.1. State of Hawaii

National Pollutant Discharge Elimination System General Permit

Community Noise Permit

Community Noise Variance

Lane Use Permit for Construction Work

New Source Report Approval, DOH-Safe Drinking Water Branch

Oversized and Overweight Vehicles on State Highways Permit

Transfer an existing Water Use Permit

Well Construction/Pump Installation Permit

6.2. City and County of Honolulu

Building Permit

Grubbing, Grading, and Stockpiling Permit

Erosion Control Plan/Best Management Practices

Street Usage Permit

Koolau Loa PIM Revision Approval

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7. AGENCY DETERMINATION

The BWS has made a FONSI determination for the proposed project. The proposed Kahuku Wells Station improvement project will not have a significant impact based on the criteria set forth in the DOH Rules, Title 11, Chapter 200, Section 12. The proposed project's relationship to the criteria is discussed below.

(1) Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;

Completion of the proposed Kahuku Wells Station improvement project is not anticipated to involve an irrevocable commitment to loss or destruction of natural or cultural resources. As discussed in detail in the various sections of Chapter 3 of this EA, the proposed improvements would not negatively or significantly impact any natural or cultural resources.

The proposed project is located entirely at the BWS' existing Kahuku Wells Station site. Hence, the proposed project would be constructed at a site that has been previously developed and disturbed. Additionally, the project site is located adjacent to and within an altered rural environment: extensive sugarcane cultivation occurred throughout this area, including the project site and immediately adjacent parcels, prior to the Kahuku Wells Station's initial development. The adjacent parcels within the DOA's Kahuku Agricultural Park have likewise been disturbed by current agricultural activities. No Federal or State listed or candidate threatened or endangered species are known to inhabit or occur within the project site. No archaeological sites have been identified within the project site, and no impacts to archaeological sites are anticipated as a result of construction or operation of the project. No cultural resources or practices have been identified within or in the immediate vicinity of the project site; thus, no impacts on cultural resources or practices are anticipated as a result of construction or operation of the project.

Careful consideration will be given to protecting the quality and quantity of groundwater resources during construction and operation of the proposed improvements. All necessary measures will be taken during construction in order to ensure the protection of the groundwater aquifer from accidental contamination. Additionally, the BWS will only proceed with production of Well No. 3 if measurements taken during test pumping activities determine that no long-term adverse effects will occur to the groundwater aquifer during operation of Well No. 3. If test pumping determines that Well No. 3 does not comply with standards for drinking water wells or will have detrimental effects on the groundwater aquifer, then it will be abandoned and capped or converted into a monitoring well. No other natural resources of significance are known to occur within the project site.

(2) Curtails the range of beneficial uses of the environment;

The proposed Kahuku Wells Station improvement project would not curtail the range of beneficial uses of the surrounding environment. The present and recent historic use of the project site has been as a potable groundwater supply facility, and the primary present and recent historic uses of the immediately adjacent area has been agricultural. The proposed project would not change the existing uses of any lands.

In particular, the proposed improvements will not curtail beneficial uses of the groundwater aquifer underlying the site. The proposed improvements will not result in any significant operational changes at the Kahuku Wells Station as the intent for the development of Well No. 3 is to use a third well as back-up in supporting Kahuku Town. As such, the BWS is not seeking to increase the existing Kahuku Wells Station's WUP groundwater allocation in association with the proposed improvements. The WUP allocation for the Kahuku Wells Station will remain at 0.6 mgd, which is only a minor fraction of the 36 mgd sustainable yield of the Koolau Loa Aquifer System.

Additionally, as discussed in detail in the various sections of Chapter 3 of this EA, construction or operation of the proposed improvements will not result in any significant adverse impacts on surface water, floral, or faunal resources.

(3) Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders;

The proposed project is consistent with the environmental policies, goals, and guidance set forth in Chapter 344, HRS. The proposed project seeks to meet the potable water needs of Kahuku Town in a manner that is environmentally sustainable. This EA addresses the potential environmental impacts associated with the project, most of which would be short-term temporary impacts associated with construction activities. Design and construction considerations are included as components of the proposed project in order to minimize disruptions to existing agricultural activities, residences, institutions, and traffic adjacent to the project site and within the surrounding Kahuku Town area.

(4) Substantially affects the economic or social welfare of the community or State;

The project would not have any significant adverse impacts on the economic or social welfare of the Kahuku community or of the State. The proposed project is

anticipated to have short-term beneficial economic impacts due to the hiring of construction workers and the purchasing of materials. Short-term negative impacts or inconveniences (e.g., air quality impacts, increases in ambient noise levels) may occur to adjacent agricultural uses during construction of the proposed project and would be minimized through the application of mitigation measures and BMPs, as appropriate. In the long-term, the project would have positive economic and social welfare effects by maintaining a sufficient and reliable potable water supply for the residential, institutional, commercial, and emergency service uses within the Kahuku service area.

(5) Substantially affects public health;

Public health would not be adversely affected by the proposed project, which will maintain compliance with applicable DOH standards and rules for public potable water systems to ensure the facility continues to provide safe drinking water. The use of proper construction techniques and BMPs in compliance with applicable DOH rules and regulations will be implemented to minimize and mitigate any potential short-term impacts or inconveniences (such as fugitive-dust, increases in ambient noise levels, or storm water runoff quality impacts during construction). Conversely, the proposed project would provide positive, long-term public health and safety benefits to residential, institutional, commercial, and emergency service uses within the Kahuku service area by providing sufficient municipal water supply and by increasing the reliability of the Kahuku Wells Station. Specifically, the proposed improvements would increase the likelihood that water service will be maintained to such customers in the event of natural disasters, emergencies, breakdowns, and/or repairs. Also, the project will improve fire protection requirements and the overall reliability of the Kahuku system.

(6) Involves substantial secondary impacts, such as population changes or effects on public facilities;

No substantial secondary impacts are anticipated as a result of the proposed Kahuku Wells Station improvement project. Overall, the proposed improvements would not result in any significant operational changes at the Kahuku Wells Station, and the BWS is not seeking to increase the existing 0.6 mgd groundwater allocation of the existing Kahuku Wells Station's WUP (WUP No. 322) in association with the proposed improvements. The BWS is obligated to be capable of supplying water to meet the projected needs of already-planned Kahuku Town developments with assigned BWS water commitments (Kahuku Villages Phases IV and V, identified in the City's *Koolau Loa Sustainable Communities Plan* dated October 1999). The addition of Well No. 3 will increase the pumping capacity of the Kahuku Wells Station in order to provide sufficient

capacity according to BWS water system standards. Specifically, the intent for developing the new Well No. 3 is to use a third well as a back-up in supporting Kahuku Town. Without the additional standby capacity, the Kahuku Wells Station would not be able to sufficiently support current facilities and uses and the already-planned Kahuku Villages Phases IV and V developments with BWS water commitments. The proposed project accounts for these needs and is not designed to foster population growth or to promote economic development. While the additional capacity would also provide a pro-active solution to any anticipated population growth in the existing Kahuku service area, it does not seek to support further development in Kahuku Town or the surrounding area/Kahuku service area.

Although the proposed project is intended to support the abovementioned planned Kahuku Town developments with assigned BWS water commitments, the BWS recognizes and understands that improving the Kahuku Wells Station's pumping capacity may enable the BWS to provide water service to any future-approved new developments and that the current partial building moratorium on any such development in the Kahuku Town area may be alleviated. Approval of any such developments, however, does not fall under the authority or responsibility of the BWS; any future new developments would have to be authorized by responsible agencies through the appropriate City development and land use plans, reviews, and approvals. Additionally, growth policies expressed in the City's *Koolau Loa Sustainable Communities Plan* (dated October 1999) limit the amount of development and population growth that may occur in the Kahuku area. Consequently, the availability of this water is not expected to lead to substantial development within the Kahuku service area.

(7) Involves a substantial degradation of environmental quality;

The proposed water supply facility improvement project is not anticipated to involve a substantial degradation of environmental quality. As discussed in detail in the various sections of Chapter 3 of this EA, short-term impacts to air and water quality, ambient noise levels, traffic operations, and groundwater resources may occur during construction of the proposed project. Environmental impacts that may be incurred as a result of construction activities would be mitigated through the implementation of BMPs, as appropriate.

The proposed improvements would not negatively or significantly impact the quality of the existing environment in the long-term. Design measures and considerations are included as components of the proposed project in order to minimize potential impacts on environmental factors. For example, Well No. 3 will only be developed for production if measurements taken during test pumping activities determine that no long-term adverse effects will occur to the

groundwater aquifer during operation of the proposed improvements. Additionally, the BWS will continue to be required to submit monthly and annual groundwater use reports to the CWRM to ensure conformance with policies and guidelines identified in the State Water Code and WRPP.

(8) Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

The proposed Kahuku Wells Station improvement project would have no foreseeable cumulative effect on the surrounding environment or require a commitment to any larger actions. While the facility is part of the larger Kahuku system, the proposed improvements are intended primarily to increase the reliability of the system rather than to increase its overall capacity. The project is intended to provide sufficient pumpage and standby capacity for existing water demand in the Kahuku service area and for already-planned Kahuku Town developments with assigned BWS water commitments. The proposed project accounts for these needs; it is not intended to promote population growth and does not seek to support further development in Kahuku Town or the surrounding area/Kahuku service area. The proposed project would not result in any significant operational changes at the Kahuku Wells Station. It does not involve an increase to the existing groundwater allocation of the facility's existing WUP No. 322.

(9) Substantially affects a rare, threatened, or endangered species, or its habitat;

The project site consists of and solely contains the BWS' existing Kahuku Wells Station. Hence, the proposed project is located on a previously developed and disturbed site. The majority of the Kahuku Wells Station is either paved or landscaped, with several aboveground structures. Additionally, the project site is located adjacent to and within an altered rural environment: extensive sugarcane cultivation occurred throughout this area, including the project site and immediately adjacent parcels, prior to the Kahuku Wells Station's establishment. Also, the project site is adjacent to parcels within the DOA's Kahuku Agricultural Park, which have likewise been previously disturbed by current agricultural activities. Lands altered and influenced by a high degree of rural development and human activity, such as the project site, are often characterized by floral and faunal communities dominated by introduced species. Consequently, species found within and adjacent to the project site are primarily non-native species. There are no known rare, threatened, or endangered species or habitat for such species present within the project site.

(10) Detrimentally affects air or water quality or ambient noise levels;

A detailed discussion of the project's potential effects on air quality, water quality, and ambient noise levels is provided in the applicable sections of this EA (Sections 3.8, 3.9, 3.10). As discussed in those various sections, short-term impacts to air quality, water quality, and ambient noise levels may occur during construction of the proposed project. Such environmental impacts will be mitigated through the use of proper construction techniques and compliance with applicable DOH rules and regulations. In the long-term, no significant adverse impacts related to these resources are anticipated due to the completion and operation of the proposed Kahuku Wells Station improvement project. Design measures are included as components of the proposed project in order to minimize any such potential impacts.

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

The project site is not situated within an environmentally sensitive area and is not anticipated to affect such areas. The Kahuku Wells Station is not located within a known flood zone and is approximately 0.3 miles from the nearest stream. Additionally, the project site is located outside of the tsunami evacuation zone and is approximately 1.5 miles from the coastline. As such, it is unlikely that the Kahuku Wells Station will suffer damage from flood or tsunami. The proposed project is also not anticipated to negatively affect any surface water resource as appropriate erosion control measures and BMPs will be implemented to prevent pollutants from entering any surface waterbodies during construction.

The proposed water supply facility improvement project is not likely to affect or to suffer damage by being located in any geologically hazardous or erosion-prone areas. The Kahuku Wells Station is a previously developed site consisting of large paved surfaces and landscaped areas. As such, there is only a negligible risk of erosion due to the proposed improvements. Soil disturbances during construction will temporarily cause soil at the project site to be more susceptible to erosion; however, appropriate erosion control BMPs will be utilized to mitigate this impact. The proposed improvements may include the construction of housing for the proposed emergency generator as well as expansion of the existing control building. Construction contractors will be required to employ sound engineering practices and adhere to appropriate UBC requirements, including structural design standards for earthquake resistance.

As discussed in detail in Section 3.4, Groundwater, the proposed improvements are located within WHPA Zones A and B as identified by the *HISWAP*, dated

2004. The increased presence of petroleum hydrocarbons within these WHPA zones during construction activities may temporarily increase the risk of groundwater contamination at the site. However, the proper use of BMPs during construction will ensure protection of the groundwater aquifer from accidental contamination.

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

The City's *Kooalau Loa Sustainable Communities Plan* (1999) does not identify the area near the Kahuku Wells Station to be within a significant view plane or scenic vista. The facility is positioned in the hills *mauka* of Kahuku Town: specifically, it is located on the opposite side of a large hill such that the crest of the hill obstructs any view of the site's aboveground structures from areas *makai* of the site, including from the Kahuku Town area.

The general aesthetics of the project site and surrounding area are not anticipated to change as a result of the proposed project. Any aboveground improvement components will be constructed at heights similar to the site's existing components and such that the site will remain obscured from view. Additionally, none of the on-site ironwood trees or adjacent vegetation along the site's boundaries are expected to be removed as part of the proposed improvements. Overall, the current use, nature, and character of the project site will remain the same and views to, from, and of the project site will not be altered or negatively affected. As such, the proposed Kahuku Wells Station improvement project is not expected to detract from the rural quality of the area or substantially affect any scenic vistas or view planes in the vicinity of the project site.

(13) Requires substantial energy consumption.

Only a negligible change in energy consumption is anticipated as a result of the proposed Kahuku Wells Station improvement project. The proposed improvements will include the installation of electrical equipment and controls required for operation of the new Well No. 3. However, the intent for developing the third well at the site is to use a third well as a back-up in supporting Kahuku Town (i.e., to increase the standby capacity of the Kahuku Wells Station). Thus, the increase in power generation by the electric company in order to operate these pumps represents such a small portion of total power use that its effect would be insignificant. As such, the proposed improvements will not result in any significant operational changes at the Kahuku Wells Station. Thus, its construction and operation will not result in a significant increase in the energy consumption of the facility.

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8. CONSULTATION

8.1. Pre-Assessment Consultation

The following agencies, organizations, and individuals were consulted during the preparation of the Draft EA. A total of 20 of these parties formally replied during the pre-assessment period, as indicated by the √ below. Two individuals responded with a phone call or email during the pre-assessment period and provided comments, as indicated by the X below. Comments and responses are reproduced herein (**Appendix B**).

In an additional effort to consult with the community regarding the proposed project, the BWS and The Limtiaco Consulting Group attended a Neighborhood Board No. 28, Koolau Loa meeting held on August 12, 2010. The BWS presented a description of the proposed Kahuku Wells Station improvement project. Comments and questions were solicited from the Kahuku area residents and community members and were addressed by the BWS during the meeting. Additionally, comments received during the meeting which relate to this EA have been addressed herein. A copy of the proposed project information handout provided at that meeting, the meeting agenda, and the minutes for the meeting are provided in **Appendix A**.

Federal Agencies

Department of the Interior, U.S. Fish and Wildlife Service – Pacific Region
√ Department of the Interior, U.S. Geological Survey – Hawaii Water Science Center
U.S. Environmental Protection Agency, Region 9 – Pacific Islands

State of Hawaii

Department of Agriculture
Department of Business, Economic Development & Tourism, Office of Planning
√ Department of Education
Department of Education, Kahuku Elementary School
Department of Education, Kahuku High & Intermediate School
Department of Health, Environmental Planning Office
Department of Health, Environmental Management Division
Department of Health, Environmental Management Division, Clean Air Branch
√ Department of Health, Environmental Management Division, Clean Water Branch
√ Department of Health, Environmental Management Division, Safe Drinking Water Branch
Department of Health, Environmental Health Services Division
√ Department of Health, Environmental Health Services Division, Indoor and Radiological Health Branch
Department of Health, Office of Environmental Quality Control
√ Department of Land & Natural Resources[1]
√ Department of Land & Natural Resources, Commission on Water Resource Management[1]
√ Department of Land & Natural Resources, Department of Forestry and Wildlife[1]
Department of Land & Natural Resources, Historic Preservation Division
√ Department of Transportation

Office of Hawaiian Affairs
Senator, 23rd Senatorial District
Representative, 46th Representative District
University of Hawaii, Environmental Center

City and County of Honolulu

Department of Community Services
√ Department of Design and Construction
Department of Environmental Services
√ Department of Facility Maintenance
√ Department of Parks and Recreation
Department of Planning and Permitting
√ Department of Transportation Services
√ Honolulu Fire Department
√ Honolulu Police Department
X City Councilmember, District 2
Neighborhood Board No. 28, Koolau Loa

Utilities

Hawaiian Electric Company, Inc.
√ Hawaiian Telcom
Oceanic Time Warner Cable
√ The Gas Company

Other Interested Parties

√ Continental Pacific, LLC
√ Kahuku Community Association
Kahuku Medical Center
Kahuku Village Association
X Creighton Mattoon
David Bruce Leonard
Kepa Maly
Maria Kaimiono Orr
Wendell Kekai Perry, PhD
Dawn Wasson

Neighboring Property Recorded Fee Owners

√ Department of Agriculture, Agricultural Resource Management Division[2]
Department of Land & Natural Resources, Supervising Land Agent Oahu

Neighboring Property Recorded Lessees

5-6-006:029
5-6-006:036
5-6-006:037

[1] Individual pre-assessment consultation letters were not addressed to the DLNR, Engineering Division and Land Division-Oahu District. However, responses from these divisions were received with the comment letter from the DLNR. Additionally, although individual pre-assessment consultation letters were addressed to the DLNR, Commission on Water Resource Management and Department of Forestry and Wildlife, responses from these divisions were also received with the comment letter from the DLNR.

[2] The DOA is the recorded fee owner of neighboring TMK parcels 5-6-006:029, 036, and 037. Consultation for all of these TMK parcels consisted of a single pre-assessment consultation letter addressed to the DOA, and a single response letter was received from the DOA.

8.2. Draft Environmental Assessment Consultation

The following agencies and interested parties were consulted during the public review period of the Draft EA. A total of 16 of these entities formally replied with comment letters, as indicated with a √ below. 4 individuals responded with a phone call or email during this period and provided comments, as indicated by the X below. All comments along with responses are reproduced herein (**Appendix D**).

In an additional effort to consult with the community regarding the proposed Kahuku Wells Station improvement project, the BWS and The Limtiaco Consulting Group attended a Neighborhood Board No. 28, Koolau Loa meeting held on May 12, 2011. The Limtiaco Consulting Group presented a description of the proposed project and informed attendees of the availability of the Draft EA for public review and comment. Comments and questions were also solicited from the Kahuku area residents and community members and were addressed during the meeting. Additionally, comments received during the meeting which relate to this EA have been addressed herein. A copy of the proposed project information handout provided at that meeting, the meeting agenda, and the minutes for the meeting are provided in **Appendix C**.

Federal Agencies

Department of the Interior, U.S. Fish and Wildlife Service – Pacific Region
Department of the Interior, U.S. Geological Survey – Hawaii Water Science Center
U.S. Environmental Protection Agency, Region 9 – Pacific Islands

State of Hawaii

Department of Agriculture
Department of Business, Economic Development & Tourism, Office of Planning
√ Department of Education
Department of Education, Kahuku Elementary School
Department of Education, Kahuku High & Intermediate School
Department of Health, Environmental Planning Office
Department of Health, Environmental Management Division, Clean Air Branch
Department of Health, Environmental Management Division, Clean Water Branch
√ Department of Health, Environmental Management Division, Safe Drinking Water Branch
Department of Health, Environmental Health Services Division, Indoor and Radiological Health Branch
Department of Health, Office of Environmental Quality Control
√ Department of Land & Natural Resources[3]
Department of Land & Natural Resources, Commission on Water Resource Management[3]
√ Department of Land & Natural Resources, Division of Forestry and Wildlife[3]
Department of Land & Natural Resources, Historic Preservation Division[3]
√ Department of Transportation
√ Office of Hawaiian Affairs
Senator, 23rd Senatorial District
Representative, 46th Representative District
√ University of Hawaii, Environmental Center

City and County of Honolulu

√ Department of Community Services
√ Department of Design and Construction
Department of Environmental Services
√ Department of Planning and Permitting
√ Department of Transportation Services
√ Honolulu Fire Department
√ Honolulu Police Department
City Councilmember, District 2
√ Neighborhood Board No. 28, Koolau Loa

Utilities

Hawaiian Electric Company, Inc.
√ Hawaiian Telcom
Oceanic Time Warner Cable
√ The Gas Company

Other Interested Parties

Continental Pacific, LLC
X Kahuku Community Association
Kahuku Medical Center
Kahuku Village Association
David Bruce Leonard[4]
X Kepa Maly[4]
X Maria Kaimiono Orr[4]
Wendell Kekai Perry, PhD[4]
Dawn Wasson[4]
X Choon James[5]

Libraries and Repositories

Hawaii State Library, Hawaii Documents Center (2 hardcopies)
Kahuku Public Library (2 hardcopies)
Legislative Reference Bureau
Library, Honolulu Department of Customer Services

Neighboring Property Recorded Fee Owners

Department of Agriculture, Agricultural Resource Management Division
Department of Land & Natural Resources, Supervising Land Agent Oahu

Neighboring Property Recorded Lessees[6]

5-6-006:029
5-6-006:036
5-6-006:037

[3]An individual Draft EA was not addressed to the DLNR, Engineering Division. However, a response from this division was received with the comment letter from the DLNR. Additionally, although individual Draft EAs were addressed to the DLNR, Commission on Water Resource Management, Division of Forestry and Wildlife, and Historic Preservation Division a response from only the Division of Forestry and Wildlife was received with the comment letter from the DLNR.

[4] A letter was sent to these Cultural Assessment Providers. The letter notified each individual of the availability of the Draft EA at the Kahuku Public Library and Hawaii State Library and solicited comments during the public review.

[5] An individual Draft EA was not addressed to Ms. Choon James. Comment was received via email.

[6] A letter was sent to the recorded lessees of these neighboring properties. The letter notified each owner of the availability of the Draft EA at the Kahuku Public Library and Hawaii State Library and solicited comments during the public review.

8.3. Final Environmental Assessment Consultation

The following agencies and interested parties will be provided copies of the Final EA.

State of Hawaii

Office of Hawaiian Affairs
University of Hawaii, Environmental Center

City and County of Honolulu

Neighborhood Board No. 28, Koolau Loa

Utilities

Hawaiian Telcom

Libraries and Repositories

Hawaii State Library, Hawaii Documents Center
Kahuku Public Library
Legislative Reference Bureau
Library, Honolulu Department of Customer Services

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APPENDIX A
KAHUKU WELLS STATION- UNIT NO. 3 PROJECT INFORMATION FACT SHEET AND NEIGHBORHOOD BOARD NO. 28, KOOLAU LOA AUGUST 12, 2010 MEETING AGENDA & MINUTES

Kahuku Wells Station-Unit No. 3

City and County of Honolulu
Board of Water Supply

Kahuku, Oahu, Hawaii

Contact Information:

Honolulu Board of Water Supply
Contact: Barry Usagawa
Phone: 748-5900
Email: busagawa@hbws.org

The Limtiaco Consulting Group
Contact: John Katahira
Phone: 596-7790
Email: john@tlcghawaii.com

Introduction

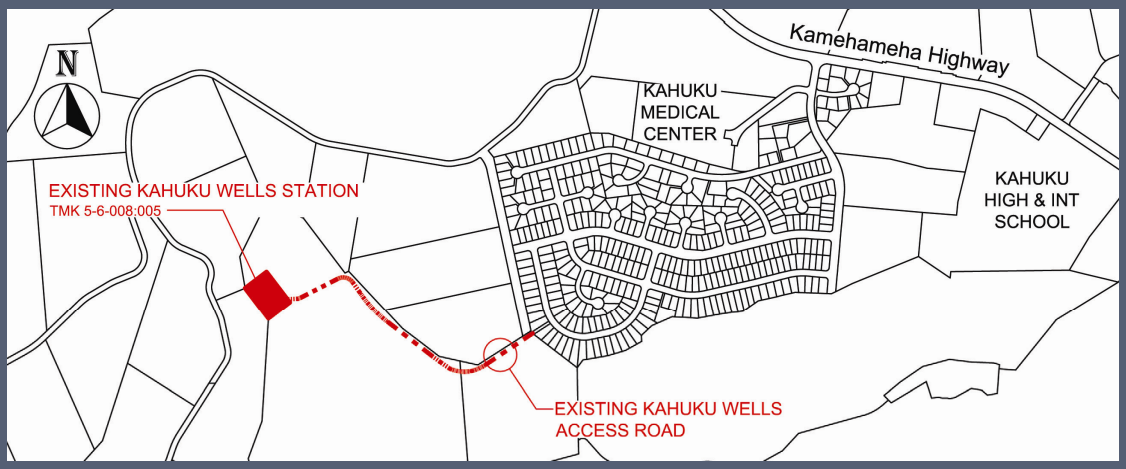
The City and County of Honolulu, Board of Water Supply (BWS) proposes to install a third well and an emergency generator at its existing Kahuku Wells Station. The Kahuku Wells Station is an existing potable groundwater supply facility serving the Kahuku area, and the site encompasses an approximately 1.0-acre parcel owned by the BWS (TMK: 5-6-008:005).

Established as a BWS water supply facility in 1979 in order to serve future planned affordable housing development projects for replacement of old plantation dwellings in the Kahuku area, the site currently includes (see figure on reverse side):

- A 0.5 million gallon reservoir;
- Two approximately 340-ft deep wells, each with an aboveground pump rated at 1 million gallons per day (gpd) pumping capacity;
- A single-story control building;
- A portion of an approximately 2,000-ft long private BWS maintenance road; and
- A portion of an approximately 4,000-ft long 12-inch (in) transmission main that conveys the potable water to the Kahuku area.

The site is currently the only BWS potable water supply system serving the Kahuku area, including its emergency facilities and shelters at Kahuku Medical Center, Kahuku High and Intermediate School, and Kahuku Elementary School.

Location Map



Project Cost

The project will be fully funded by the BWS. Funding for this project is currently proposed in the BWS' 6-year Capital Program for Fiscal Years 2010-2015, with an estimated capital cost of $1,820,000.

Project Description

The proposed project will entail drilling, casing, and production of a Well No. 3 and installing an emergency generator at the Kahuku Wells Station. The new well will be drilled within the site, approximately 100 ft from the two existing wells. The well will be constructed and test pumped to determine the quantity and quality of the groundwater. Upon meeting the standards during the test pumping, a permanent 1 mgd pump will be installed. The new emergency generator will be installed and housed on the site. Exact location of the new well and emergency generator and/or their specific design requirements will be determined during the design phase. All physical improvements will be confined to the existing Kahuku Wells Station site. The Site Map (see figure below) shows the approximate anticipated location of the Well No. 3 with respect to existing structures within the Kahuku Wells Station site.

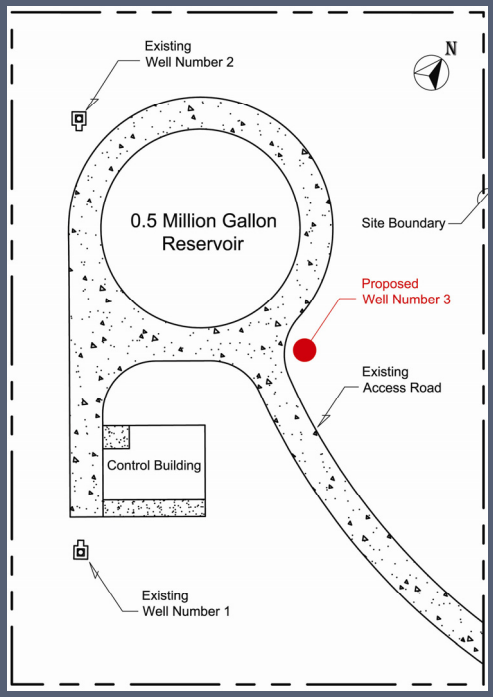
Purpose and Need

The proposed project seeks to:

- Improve reliability of the stand alone Kahuku potable water system, and
- Increase pumping capacity of the Kahuku Wells Station to supply domestic demand and fire protection to Kahuku Town.

The new well and emergency generator will minimize long-term outages and improve water reliability and service during natural disasters, emergencies, breakdowns, and/or repairs. The well will provide additional pump capacity to support Kahuku Town developments identified in the Koolau Loa Sustainable Communities Plan. Due to capacity constraints, a partial building moratorium exists in Kahuku.

Site Map



Project Schedule

The drilling, casing, and testing of Well No. 3 is planned for 2012. It is anticipated that the design of the production well and other station improvements (including emergency generator) will begin in 2012 as well, followed by construction activities to begin as early as 2014.

KOOLAULOA NEIGHBORHOOD BOARD NO. 28

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 • HONOLULU, HAWAII, 96813
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: http://www.honolulu.gov

REGULAR MEETING AGENDA
Thursday, August 12, 2010
Hau'ula Community Center
54-010 Kukuna Road
6:00 p.m. to 8:00 p.m.

Rules of Speaking: Anyone wishing to speak is asked to raise their hand, and when recognized by the Chair, to address comments to the Chair. Speakers are encouraged to keep their comments under 3 minutes, and those giving reports are urged to keep their reports less than 3 minutes. Please silence all electronic devices.

Note: The Board may take action on any agenda item. As required by the State Sunshine Law (HRS 92), specific issues not noted on this agenda cannot be voted on, unless added to the agenda.

I. CALL TO ORDER: Chair Richard Fale

II. ELECTIONOF OFFICERS/BOARD ORGANIZATION
   a. Election of Chair, Vice Chair, Secretary and Treasurer
   b. Selection of Meeting Date, Time and Location

III. CITY MONTHLY REPORTS (Limited to 3 minutes each)
   a. Honolulu Fire Department
   b. Honolulu Police Department
   c. Mayor's Representative
   d. Council Member Donovan Dela Cruz's Representative
   e. Board of Water Supply

IV. APPROVAL OF JUNE 10, 2010 REGULAR MINUTES

V. BOARD BUSINESS
   a. Kahuku Military Training Grounds Update
   b. Hauula Health and Wellness Presentation
   c. Discussion on Continued Videography of Board Meetings

VI. RESIDENTS'/COMMUNITY CONCERNS (Limited to 3 minutes each)

VII. REPORTS (Limited to 3 minutes each)
   a. Treasurer's Report
   b. Elected Officials
      i. Congresswoman Mazie Hirono
      ii. Governor's Representative
      iii. State Legislators
   c. Committee Chair Reports
      i. Housing- John Elkington
      ii. Cultural Affairs- Norman Kaluhiokalani
      iii. CIP/Public Works- Creighton Mattoon
      iv. Parks & Recreation- Junior Primacio
      v. Planning and Land Use- Les Steward
      vi. Public Information- Kela Miller
      vii. Health & Welfare- Dotty Kelly-Paddock
      viii. Public Safety/Transportation- Moana Kalua'u
      ix. Water- Dee Dee Letts
      x. Education- Jimmy Leonardi
   d. Department of Education
   e. Ka'a'awa Elementary School
   f. Kahuku Community/School Library

g. Marine Corps/U.S. Army
h. Correspondence
i. Community Reports

VIII. ANNOUNCEMENTS

Next meeting on Thursday, September 9, 2010 at 6:00 p.m. at the Hauula Community Center

IX. ADJOURNMENT

A mailing list is maintained for interested persons and agencies to receive this Board's agenda and minutes. Additions, corrections, and deletions to the mailing list may be directed to the Neighborhood Commission Office (NCO), Honolulu Hale, 530 South King Street, Room 406, Honolulu, Hawaii 96813; Telephone (808) 768-3710 or Fax (808) 768-3711; or call Neighborhood Assistant Leland Ribac at 768-3790. Agendas and minutes are also available on the internet at www.honolulu.gov/nco.

Any individual wishing to attend a Neighborhood Board meeting who has questions about accommodations for a physical disability or a special physical need should call the NCO at 768-3710 between 8:00 a.m. and 4:00 p.m., at least 24-hours before the scheduled meeting.

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DRAFT REGULAR MEETING MINUTES
THURSDAY, AUGUST 12, 2010
HAU'ULA COMMUNITY CENTER

CALL TO ORDER: Vice Chair Steward called the meeting to order at 6:00 p.m. **with a quorum of 10 members present.** Note—This 11 member Board requires six (6) members for a quorum and to take official action. The gavel was given to Chair Richard Fale upon arrival at 6:03 p.m.

Board Members Present: John Elkington, Richard Fale (arrived at 6:03 p.m.), Moana Kalua'u, Norman Kaluhiokalani, Dotty Kelly-Paddock, Dee Dee Letts, Jimmy Leonardi, Creighton Mattoon, Kela Miller, Junior Primacio and Les Steward.

Board Members Absent: None

Vacancies: There are no vacancies at this time.

Guests: Marvin Iseke, Barbara Kahana, Captain Ron Johnson (Honolulu Fire Department), Verla Moore (La'ie Community Association), Lieutenant James Causey (Honolulu Police Department), Barry Usagawa (Board of Water Supply), John Katahira and Jason Nakata (The Limtiaco Consulting Group), Siosifa Tiueti and Deldrene Herron (Punalu'u Community Association), Choon James, Fran Corcoran (Kahuku Public Library), John Olszowka, Maureen Malanaphy (Hau'ula Community Association), Ben Shafer (Friends of Kahana), Steve Hoag (Hawaii Reserves Inc.), KC Connors, Lea Albert (State Department of Education), Bryan Mick (Mayor's Representative), Ernie Martin, Mike Sakata (Councilmember Donovan Dela Cruz's office), Major Alan Crouch (Marine Corps Base Hawaii), Captain Fredericks (U.S. Army), Leland S.M. Ribac (Neighborhood Commission Office staff).

ELECTION OF OFFICERS/BOARD ORGANIZATION:

Election of Chair, Vice Chair, Secretary and Treasurer: **Primacio moved to keep the Board officers the same. Hearing no second, the motion was not discussed, and no action was taken.**

Chair: **Primacio nominated Fale, Mattoon nominated Letts. Fale was elected Chair, 7-4-0, (Fale:** Elkington, Fale, Kaluhiokalani, Leonardi, Miller, Primacio and Steward; **Letts:** Kalua'u, Kelly-Paddock, Letts and Mattoon**.)**

Vice Chair: **Miller nominated Steward, Mattoon nominated Letts. Steward was elected Vice Chair, 6-5-0, (Steward:** Elkington, Fale, Kaluhiokalani, Miller, Primacio and Steward; **Letts:** Kalua'u, Kelly-Paddock, Leonardi, Letts and Mattoon**.)**

Secretary: **Miller nominated Kalua'u. Hearing no other nominations, Kalua'u was elected Secretary UNANIMOUSLY, 11-0-0, (Aye:** Elkington, Fale, Kalua'u, Kaluhiokalani, Kelly-Paddock, Leonardi, Letts, Mattoon, Miller, Primacio and Steward**.)**

Treasurer: **Primacio nominated Miller. Hearing no other nominations, Miller was elected Treasurer UNANIMOUSLY, 11-0-0, (Aye:** Elkington, Fale, Kalua'u, Kaluhiokalani, Kelly-Paddock, Leonardi, Letts, Mattoon, Miller, Primacio and Steward**.)**

Selection of Meeting Date, Time and Location: **Kaluhiokalani moved and Leonardi seconded to hold the Koolauloa Neighborhood Board regular meetings every second Thursday of each month from 6:00 p.m. to 8:00 p.m. at the Hau'ula Community Center; with recesses in December and July. The motion was ADOPTED UNANIMOUSLY, 11-0-0, (Aye:** Elkington, Fale, Kalua'u, Kaluhiokalani, Kelly-Paddock, Leonardi, Letts, Mattoon, Miller, Primacio and Steward**.)**

CITY MONTHLY REPORTS:

Honolulu Fire Department (HFD): Captain Ron Johnson reported;

- Fire Statistics for July 2010: Included the Hau'ula Fire Station: 1 structure fire, 2 rubbish fires, 14 medical emergencies and 3 miscellaneous; Kahuku Fire Station: 1 structure fire, 1 rubbish fire, 17 medical emergencies and 5 miscellaneous; Ka'a'awa Station: 1 structure fire, 2 rubbish fires, 2 vehicle fires, 12 medical emergencies and 2 search and rescues.

- Fire Safety Tip: A home fire escape plan is an integral part of your family's safety. Having an advanced warning from a working smoke alarm increase a family's ability to exit safely and quickly. Fire can quickly fill a home with toxic smoke, thus creating a dangerous environment. Several safety tips were provided.

Questions, comments and concerns followed:

Disaster Preparedness: It was questioned and noted that there have not been any new developments within HFD in regards to disaster preparedness along the Koolauloa coast.

Honolulu Police Department (HPD): Lieutenant James Causey reported;

Crime Statistics for July 2010: Included 20 alarm calls, 34 argument, 4 simple assault, 1 aggravated assault, 1 auto theft recovery, 20 burglaries, 37 dropped calls, 1 disorderly conduct, 11 family arguments, 10 fireworks violations, 6 harassment, 2 property damage, 28 motor vehicle collisions, 48 noise complaint, 1 robbery, 16 parking violations and 10 threatening.

Questions, comments and concerns followed:

1. Illegal Camping: A Board member thanked HPD for their continued vigilance in the community, especially in regards to illegal campers; Lt. Causey noted that with the closing of Maili Beach Park on the Waianae Coast, homeless individuals may be moving to other parks.

2. Vehicle Break-ins: A community member noted that at last month's meeting he reported that a friend's vehicle had been broken into and would like to know if the perpetrator was caught; Lt. Causey did not know of that particular incident, but did note that an island-wide car thief has been caught.

3. Neighborhood Security Watch (NSW): A Board member noted that she is working on establishing an NSW for the Hau'ula area. It was also questioned and clarified that temporary restraining orders (TRO) violations are indicated under the 'order violations' statistic.

4. Homeless Hideouts: A community member noted that homeless individuals have begun to camp out near the business areas and post office, as well as on private property near the fishponds in Waihole.

Mayor's Representative: Bryan Mick reported the following;

- Tax Payer Monies: According to the City Corporation Council (COR), no tax payer funds have been used in legal fees regarding the City's Mass Transit Environmental Impact Statement (EIS). Should there be anticipated lawsuits; funds have been put aside for legal fees.

- Kahuku, Kii and Malaekahana Bridges: Currently the City Department of Facility Maintenance (DFM) does not maintain the private Kahuku and Kii Bridge ditches. Due to limited resources and furlough schedule, the city does not have the resources to do the work and bill the owners.

- Completed District Parks: It was clarified that the City Department of Parks and Recreation (DPR) will require more information regarding the request; it was reiterated that the Board would like to know which of the island's district parks are completed and what the definition of a 'district park' is.

- Hau'ula Community Park Fence: DPR has submitted a work request and will inspect the backstop to clearly understand the safety hazard. Temporary fixtures have been implemented to address some of the issues.

- Rail Transit Authority: The City Council passes resolution 09-252, CD1 in November 2009, authorizing the inclusion of the City Charter amendment in the 2010 general election ballet to create the transit authority. If passed the authority can be established by July 1, 2011, and will be responsible to develop, operate,

maintain, and expand the City's fixed guide way system. The authority will also set fares and have the power of public domain.

- Kahekili Highway Lanes: According the City Department of Transportation Services (DTS), Kahekili Highway is under the jurisdiction of the State Department of Transportation (DOT).

Questions, comments and concerns followed:

1. Anti-Graffiti: The Board requested a presentation by the City Department of Facility Maintenance regarding the newly publicized efforts of the anti-graffiti chemical to be used on City signs; Mick to follow-up.

2. City Refuse Pick-Up: A Board member raised concern of the City refusing to pick up garbage in the Kahuku Village area due to dust complaints from the refuse workers. Elderly residents will now have to haul their own trash. It was requested that the City continue their refuse pick-up.

3. Kahuku and Kii Bridges: A Board member raised concern to the response given towards the cleaning of Kahuku, Kii and Malaekahana bridges ditch area, noting that the Board has been seeking help from the City for three years, before furloughing had started.

4. Hau'ula Fire Station: A community member raised concern with a document related to the Hau'ulaFire Station, noting the document is not a binding contract; a second community member also raised concern with Mick using the letter against her, and noted her disenchantment with several comments made against her during the June regular meeting.

5. Legal Fees Used: It was clarified that residents would like to know how much money the City has spent in legal fees fighting the lawsuit invalidating Turtle Bay Resort's 20 year old Environmental Impact Statement.

Council Member Donovan Dela Cruz's Representative: Mike Sakata reported;

- Upcoming Bill Readings: Included Bill 24 Council Draft (CD) 1; amending the Land Use Ordinance, the bill was amended into a CD2 and will be heard for its third reading on Wednesday, August 18, 2010. Bill 34 2010; regarding the total ban of fireworks, the bill has also been amended into a CD2 and will be heard on the same day, along with Bill 10, regarding the Koolauloa Watershed Management Plan.

- Request Statuses: Requests for Investigation and Service Reports (RISR) have been sent out requesting the statuses of the Ka'a'awa Signage project, La'ie bus shelters and the district park inquiry.

Questions, comments and concerns followed:

1. Kahuku Trash Concerns: A Board member requested the aid of the Councilmember's office regarding the trash pick-up at the Kahuku Villages. It was noted that he had spoken to Reed Matsuura regarding the matter. Currently the City refuse pick-up is refusing to go onto the roadways due to dust.

2. Hau'ula Play Courts: A Board member pointed out that in the Councilmember's monthly newsletter may require clarification regarding the difference between the Hau'ula skate park and the play courts.

3. La'ie Bus Shelters: It was clarified that the request included bus shelters in La'ie not bus stops.

Board of Water Supply (BWS): Barry Usagawa reported;

- Water Main Break: No water main breaks were reported in the month of July. The Oahu potable pumpage rate as of the week ending August 7, 2010 was 152.7 million gallons per day (mgd).

- General Water Announcements: According to the National Weather Service, Hawaii has become the driest state in the nation and will continue to experience below normal rainfall for the rest of the summer. BWS will continue to monitor water levels and continue to promote conserved water use.

- Koolauloa Watershed Management Plan: The Koolauloa Watershed Management Plan is close to being adopted by City Council. Bill 10 regarding the management plan has been amended to a CD2 with minor

changes, will be heard for final reading on Wednesday, August 18, 2010.

- Kahuku Exploration Well No. 3: Board members were provided a handout outlining the proposal of a third exploratory well in Kahuku. The Kahuku system is currently a stand alone system, cut off from the rest of the island. The third well will increase stability and reassurance of water use during a natural disaster.

Questions, comments and concerns followed:

1. Billing Process: It was questioned and clarified that BWS does bill residents for water and sewage rates, and has recently began to bill residents in La'ie; Usagawa will follow-up on whether a letter was sent.

2. Watershed Plan: It was clarified that no substantive changes were made to the Watershed Management Plan, minor changes including the date was corrected in the CD2.

3. Emergency Generator: A community member raised concern with an emergency generator not being within the vicinity, noting the closest would be in Wahiawa; it was noted that BWS should look at a permanent generator within the Koolauloa area, which would be accessible in times of a natural disaster.

4. Exploratory Well Time-Line: It was questioned and clarified that the third well will take a five year process to complete; currently the project is in its infant stages with an EIS to follow. A community member thanked the BWS for their transparency in the EIS process.

5. Military Water/Kahuku Water: It was questioned and clarified that the military utilizes its own water system and that the Kahuku water system will not be hooked up to the City mainstream anytime soon.

APPROVAL OF JUNE 10, 2010 REGULAR MINUTES: **Leonardi moved and Primacio seconded to approve the June 10, 2010 regular meeting minutes as circulated. The motion was ADOPTED UNANIMOUSLY, 11-0-0, (Aye:** Elkington, Fale, Kalua'u, Kaluhiokalani, Kelly-Paddock, Leonardi, Letts, Mattoon, Miller, Primacio and Steward**.)**

BOARD BUSINESS:

Kahuku Military Training Grounds Update: Chair Fale deferred this item until further noticed.

Hau'ula Health and Wellness Presentation: Chair Fale deferred this item until the September meeting.

Discussion on Continued Videography of Board Meetings: Treasurer Kalua'u read the July 2010 Treasurer's Report highlighting a total appropriation of $2,000 consisting of $650 for operating and $1,350 for publicity.

Discussion Followed:

- Community Support Video: Several Board and community members voiced support for the videotaping of the Board meetings. Several elderly community members have voiced strong support, noting that they are incapable of physically going to the meeting, but can be kept up to date via the broadcasting.

- Airing Times/Date: It was questioned and clarified that the board meetings are broadcasted on Olelo every Friday at 2:30 p.m. The broadcasts have been kept up-to-date showing the previous month's meeting.

- Audio and Lighting Difficulty: Several Board members noted lighting and audio concerns, explaining that when the audience speaks, they are very soft spoken and only show the back of their heads. Audience members were encouraged to speak into the microphone to be better heard and seen on camera.

- Fiscal Constraint: Board members raised concern with the $1,350 appropriated for publicity. Noting that a regular meeting costs $200-$250 for videotaping. If the Board continues to videotape, it would have to be subject to every other meeting. It was also noted the Board does not pay for facility use.

- Priority List: A community member noted that although the Board may have fiscal restraints, videotaping should remain a priority as the community benefits from the broadcasts.

- High School Students: A community member noted that Kahuku High School has a media group that could possibly be contacted and questioned if they would like to videotape the meetings.

Letts moved and Mattoon seconded that Chair Fale contact Kahuku High School's Media Team and inquire of possible rates and further to discuss the item of videotaping at the September regular meeting. The motion was ADOPTED UNANIMOUSLY, 11-0-0, (Aye: Elkington, Fale, Kalua'u, Kaluhiokalani, Kelly-Paddock, Leonardi, Letts, Mattoon, Miller, Primacio and Steward**.)**

RESIDENTS'/COMMUNITY CONCERNS: Several concerns were voiced at this time;

Minute Taking: A community member raised concern with the wording used in the May 2010 set of minutes, noting that several phrases insinuate negative comments have been made.

Hau'ula Fire Station: Concerns were reiterated regarding the proposed Hau'ula Fire Station and the lack of transparency during the Environmental Assessment (EA) phase.

La'ie Community Association (LCA): Residents were provided a flyer announcing the ground breaking of a bike path from La'ie to Kahuku on Saturday, September 4, 2010. Board invitations should be shortly forthcoming.

Envision Center: The Envision Center, once completed, will be open to the public, Mondays through Fridays. The center is aimed to provide residents with additional information of the Envision La'ie Project, and other happenings within La'ie. The center will be located near the La'ie Shopping Center.

Agenda Item Requests: A Board member raised concern with the lack of presentation and information of projects in La'ie, not including the Envision La'ie Project. Chair Fale noted that he had placed the item on a past month's agenda, where the Board member was absent. The Board member reiterated the agenda item request.

Board Mail Out: A community member noted that she was not being sent the Board's mail out; Neighborhood Assistant Ribac will double check with the Neighborhood Commission Office.

Hawaii Reserves Inc. (HR); Steve Hoag of HRI explained that he would be happy to provide a presentation regarding the projects in La'ie; however the projects are still in their infancy stages, where not much information would be provided. The proposed La'ie hotel has been placed lower on the priority list.

Proposed La'ie Marriot: A community member raised a concern brought up in June, questioning why the community has not been provided information regarding the La'ie Hotel. Concerns were raised regarding transparency and slowness in development causing economic hardship to the entire coast. Statistical questions were asked regarding the proposed hotel.

Economic Growth: A community member voiced support of a local Hawaiian and Polynesian food and crafts market, noting that this would provide residents with economic stability and provide shopping opportunities to he tourists that visit the area.

Brigham Young University Hawaii (BYUH): A community member raised concern with the possible influx of students and the lack of housing options for those students of BYUH. It was noted that the school has mentioned a total of 700 new students are to be expected in the upcoming semester.

REPORTS:

Treasurer's Report: Kalua'u read the report earlier in the agenda.

Elected Officials:

Congresswoman Mazie Hirono: No report or representative present.

Governor's Representative: No report or representative present.

State Legislators: Representative Jessica Wooley: Creighton Mattoon provided the representative's monthly newsletter and reported;

- Hau'ula Loop Trail: The representative is working with the State Department of Land and Natural Resources (DLNR) in providing signage at Hau'ula Loop Trail cautioning hikers of the parking situation.

- Ka'a'awa Elementary School: The representative remains hopeful that the Board of Education (BOE) and Department of Education (DOE) will keep Ka'a'awa Elementary School open.

- La'ieloa Bridge: The State Department of Transportation (DOT) intends to replace the La'ieloa Bridge near Foodland; the work requires an Environmental Assessment (EA). For more information contact 692-7572.

- Hanaimoa Street Park: The representative is aware of the Hau'ula community's intent in requesting DLNR Director Thielen to transfer the deed of the new park on Hanaimoa Street to the City.

- Abstinence Programs: In regards to concerns raised regarding Kahuku High School's abstinence programs, there have been no changes in policy in any schools.

Questions, comments and concerns followed:

House Bill (HB) 777: A Board member clarified that due to the passage of HB777; his brother-in-law will loose his job and eliminate the 'Try Wait' program, which is an abstinence program.

Representative Michael Magaoay: No report or representative available.

Senator Clayton Heen: No report or representative available.

Committee Chair Reports: In the interest of time all committee reports were deferred excluding the Public Safety/Transportation Committee report;

Public Safety/Transportation: Marian Nakama, a Civil Engineer and Project Manager with AECOM, has been contracted by the State DOT, Highways Division, to provide design services for the La'ieloa Bridge Replacement Project. Should residents have any questions, contact Nakama at AECOM, 521-3051 or www.aecom.com.

Department of Education (DOE): Lea Albert reported;

- Race to the Top: Residents may view the executive summary of the Race to the Top application at the DOE homepage. The application has been sent to Washington D.C. It was noted that regardless if Hawaii is awarded the funds, the Race to the Top program will be implemented.

- Adequate Yearly Progress (AYP): Sunset and Ka'a'awa Elementary has made AYP; Hau'ula Elementary has achieved AYP for their first time.

- Principal Statuses: Mr. Izumi will be staying with Hau'ula Elementary for the time being. La'ie Elementary School is currently in the process of hiring a new Vice Principal.

- Improvement Grant: Hau'ula Elementary School was awarded a School Improvement Grant ranging from $675,000 to $1.2 million. The funds will be used to hire additional support staff.

- Policy on Abstinence: Albert will provide more information on the abstinence policies and programs in schools at the next meeting.

Questions, comments and concerns followed:

1. Principal Positions: It was clarified that La'ie Elementary Principal Wendy Matsuzaki is still with the school and Hau'ula Elementary will also be hiring a Vice Principal through the School Improvement Grant.

2. Superintendent Position: It was questioned and clarified that the inquiry of a possible superintendent in the district will hopefully be brought up at the next Board of Education (BOE) meeting.

3. Mahalo for Letter: Several Board members thanked Albert for her continued work for the schools and community. Albert was also thanked for her letter in supporting to keep Ka'a'awa Elementary School open.

Ka'a'awa Elementary School: Previously reported in the meeting.

Kahuku Community/School Library: Fran Corcoran provided resident and Board members with the calendar of events for August and September encouraging residents to utilize the library and book mobile. Board member Kelly-Paddock was thanked for her presentation regarding the Koolauloa Ahupua'a Initiative. Community members were strongly urged to utilize the book mobile as it travels through the district.

U.S. Marine Corps: Major Alan Crouch reported;

- Hours of Operation: Hours of operation remain mostly unchanged; Monday through Thursday: 7:00 a.m. through midnight; Friday: 7:00 a.m. through 10:00 p.m.; Saturday: 8:00 a.m. through 5:00 p.m.

- News and Events: The Kaneohe Bay command changed from Lieutenant Colonel Antonio to Lieutenant Colonel Pellegrino on Friday, August 6, 2010. Today a full military honors and helicopter fly-over was done for World War II Marine Julius Ireland. MCBH will host Kokusai Gakuin students on August 13, 2010. Marines will participate in Samoan Flag Day memorial ceremonies on August 13 and 14, 2010.

- Kaneohe Bay Air Show: Residents were encouraged to attend the air show featuring the Navy's Blue angels aerial demonstration team and many others. There will be games for keiki, music and food throughout the weekend of September 25 and 26, 2010.

Questions, comments and concerns followed:

Military Employees: It was questioned and noted that the Marine Corps Base Hawaii (MCBH) has approximately 13,000 service members along with retirees and civilian positions.

U.S. Army: Captain Fredericks reported;

- Makua Valley Access Dates: Malama Makua access dates, for cultural purposes, include August 14 and 22, 2010; for future dates or more information, contact Dr. Fred Dodge at 696-4677.

- Kolekole Pass Use: The pass will be closed on August 12, 13, 19, 20, 26 and 27, 2010. The pass is open to military personnel throughout the work week. There will be various days in august that the pass may be closed due to military training in the area.

- Living History Day: Residents were welcomed to participate in the Living History day festivities on Saturday, October 9, 2010 at Schofield Barracks. For more information contact 655-0438.

- School Partnership Program: The Army is partnered with 51 schools state-wide including Sunset Elementary School and Kahuku Elementary and Intermediate School. Through the partnership program, schools have been provided additional funds to help purchase needed materials. For more information contact 655-9818.

Questions, comments and concerns followed:

1. Current War: It was questioned and clarified that the previously named 'Iraqi Freedom' was has been re-named 'New Dawn'. It was also questioned how many soldiers have died thus far; Fredericks to follow-up.

2. Cultural Monitor: It was questioned if Kolekole Pass has been assigned a Cultural Monitor due to possible kupuna iwi and historic cultural sites near the pass; Captain Fredericks to follow-up.

Correspondence: Board member Letts requested that correspondence be circulated through the Board members prior to the start of the meeting, to familiarize themselves of incoming mail. Chair Fale agreed.

Community Reports: Hauula: Kelly-Paddock provided a written report to Board members and highlighted;

- Hanaimoa Street Park: The deed has not yet been transferred from the State to City, which must be done prior to work commencing. A community meeting was held on Wednesday, August 11, 2010 to plan the design of the meeting. A second meeting is scheduled for Wednesday, September 15, 2010.

- New Website: The Hau'ula Community Association (HCA) will have its own website in the near future. HCA currently has a Facebook page.

- Hau'ula Loop: A new gate and signage at the Hau'ula Loop Trail have been erected. The purpose of the new fixtures is to prevent unknowing tourists from getting their vehicle broken into.

- Hau'ula Elementary School: Acting Principal Izumi will be with the school for another year. The schools' open house will be on Wednesday, September 1, 2010. The school will be getting a vice-principal and additional support positions through the School Improvement Grant.

- Ahupua'a Hui: Next meeting is scheduled for Thursday, August 26, 2010 at 6:30 p.m. at the Hau'ula Community Park building. Resident welcome to participate.

- Community Movie: Residents were invited to attend a showing of Food Inc., a film to raise awareness of childhood obesity. The movie will be shown at Hau'ula Elementary School, date to be announced.

- HELP Team: The Hau'ula Emergency Leadership Preparedness (HELP) Team is making progress; the next meeting is to be announced shortly.

La'ie: The community continues to flourish; the Kupuna Council will be meeting with the La'ie Community Association (LCA). Kaluhiokalani was thanked for his volunteer work in La'ie. The Envision Center will be a move in the right direction in understanding the envision La'ie Project.

Punalu'u: Mattoon noted that he has inquired with the State DOT regarding possible flood mitigation measures due to the amount of sand that has piled up near the bridge.

ANNOUNCEMENTS: Several announcements were made at this time;

- Next Meeting: The next meeting is scheduled for Thursday, September 9, 2010 at 6:00 p.m. at the Hau'ula Community Center (current location).

ADJOURNMENT: The meeting adjourned at 8:35 p.m.

Submitted By:
Leland S.M. Ribac
Neighborhood Assistant

Reviewed By:
Richard Lee Fale
Chair

APPENDIX B
PRE-ASSESSMENT CONSULTATION CORRESPONDENCE

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

August 13, 2010

Ms. Katherine Puana Kealoha, Esq., Director
State of Hawaii
Department of Health
Office of Environmental Quality Control
235 South Beretania Street, Suite 207
Honolulu, HI 96813

Subject: Pre-Assessment Consultation, Draft Environmental Assessment
Kahuku Wells, Unit No. 3
Kahuku, Oahu, Hawaii
Tax Map Key: 5-6-008:005

Dear Madam,

On behalf of the City and County of Honolulu's Board of Water Supply, The Limtiaco Consulting Group is preparing a Draft Environmental Assessment (EA) for the proposed Kahuku Wells, Unit No. 3 project. Pursuant to Chapter 343, Hawaii Revised Statutes and Title 11, Chapter 200, Hawaii Administrative Rules of the Department of Health, we are soliciting comments for the pre-assessment consultation phase of the Draft EA.

Additionally, to address and assess potential cultural and archaeological resource impacts in the Draft EA, we would appreciate any input and information that you may have related to the subject project's possible impacts on the traditional and cultural practices and beliefs of any cultural or ethnic group(s). The name(s) and contact information of any responsible and knowledgeable individual(s) whom we could contact regarding any such beliefs, practices, or resources that may be affected would be very helpful to us.

A summary of the proposed project is attached for your review. We would appreciate the submission of any comments by September 20th, 2010.

Please send your original comments to:
Wayne M. Hashiro, P.E., Manager and Chief Engineer
Attn: Scot Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96843

Please provide a copy of your comments to:
John Katahira, Project Manager
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, Hawaii 96817
Fax: 596-7361

Thank you for your participation in the environmental review process. Should you have any questions, please contact me at 596-7790.

Sincerely,

John Katahira
Project Manager

cc: Mr. Scot Muraoka, Project Engineer, Board of Water Supply (w/ attachment)

SAMPLE

United States Department of the Interior

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

TAKE PRIDE IN AMERICA

September 10, 2010

Mr. Wayne M. Hashiro, P.E.
Manager and Chief Engineer
Attn: Scot Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 South Beretania St.
Honolulu, Hawaii 96843

Dear Mr. Hashiro:

Subject: Pre-Assessment Consultation, Draft Environmental Assessment, Kahuku Wells, Unit No.3, Kahuku, Oahu, Hawaii, Tax Map Key: 5-6-008:005

Thank you for forwarding a summary of the subject proposed project for review and comment by staff of the U.S. Geological Survey Pacific Islands Water Science Center. We regret however, that due to prior commitments and lack of available staff, we are unable to review this document.

We appreciate the opportunity to participate in the review process.

Sincerely,

Stephen S. Anthony
Center Director

cc: John Katahira, Project Manager, The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

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MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

October 7, 2010

Mr. Stephen S. Anthony
Center Director
Pacific Islands Water Science Center
U.S. Geological Survey
United States Department of the Interior
677 Ala Moana Boulevard, Suite 415
Honolulu, Hawaii 96813

Dear Mr. Anthony:

Subject: Your Letter of September 10, 2010 Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-08:05, Kahuku, Oahu

Thank you for your letter regarding the pre-assessment consultation phase for the Kahuku Wells Unit No. 3 project.

We acknowledge that you are unable to review the document due to prior commitments and lack of staff.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

Wayne M. Hashiro

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: Jason Nakata, The Limtiaco Consulting Group

LINDA LINGLE
GOVERNOR

XXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXX
KATHRYN S. MATAYOSHI
INTERIM SUPERINTENDENT

09-13-10 A10:00 IN

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

OFFICE OF THE SUPERINTENDENT

September 7, 2010

Mr. Wayne M. Hashiro, P.E., Manager and Chief Engineer
City and County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96813

Attn: Mr. Scot Muraoka, Project Engineer

Dear Mr. Hashiro:

Subject: Pre-Assessment Consultation, Draft Environmental Assessment
Kahuku Wells, Unit No. 3, TMK 5-6-008:005, Kahuku, Oahu

The Department of Education (DOE) has reviewed the pre-assessment consultation request for the Kahuku Wells, Unit No. 3 project.

The DOE would like to know if water service to Kahuku Elementary or Kahuku High & Intermediate will be affected at any time during the construction of this project.

Thank you for the opportunity to comment. If you have any questions, please call Jeremy Kwock of the Facilities Development Branch at 377-8301.

Very truly yours,

Kathryn S. Matayoshi
Interim Superintendent

KSM:jmb

c: Randolph Moore, Assistant Superintendent, OSFSS
Lea Albert, CAS, Castle/Kahuku Complex Areas
✓ John Katahira, Project Manager, The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
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RANDALL Y. S. CHUNG, Chairman
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JEOFFREY S. CUDIAMAT, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

October 7, 2010

Ms. Kathryn S. Matayoshi
Superintendent
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, Hawaii 96804

Dear Ms. Matayoshi:

Subject: Your Letter of September 7, 2010 Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-08:05, Kahuku, Oahu

Thank you for your letter regarding the pre-assessment consultation phase for the Kahuku Wells Unit No. 3 project.

Water service to Kahuku High, Intermediate and Elementary Schools will not be affected at any time during construction of the third well unit. The two existing well units will remain in service.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

Wayne M. Hashiro

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: Jason Nakata, The Limtiaco Consulting Group

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD / CWB

09047PSW.10

September 15, 2010

Mr. Wayne M. Hashiro, P.E.
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawai'i 96843

Attn: Mr. Scot Muraoka
Project Engineer

Dear Mr. Hashiro:

SUBJECT: **Pre-assessment Consultation Phase for the Draft Environmental Assessment**
Kahuku Wells, Unit No. 3
Kahuku, Oahu, Hawaii
Tax Map Key: 5-6-008:005

The Department of Health, Clean Water Branch (CWB), has reviewed the document received August 16, 2010, regarding the subject project and offers these comments. Please note that our review is based solely on the document for the subject project and its compliance with Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at http://hawaii.gov/health/environmental/env-planning/landuse/CWB-standardcomment.pdf

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Anti-degradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2 State waters, you may apply for NPDES general permit coverage by submitting a Notice of Intent (NOI) form:

   a. Storm water associated with construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. This includes areas used for a construction base yard and the storage of any construction related equipment, material, and waste products. An NPDES permit is required before the start of the construction activities.

   b. Hydrotesting water,

   c. Construction dewatering effluent.

   You must submit a separate NOI form for each type of discharge at least 30 calendar days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI forms may be picked up at our office or downloaded from our website at http://hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html

3. For other types of wastewater not listed in Item No. 2 above or wastewater discharging into Class 1 or Class AA waters, an NPDES individual permit will need to be obtained. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. The NPDES application forms may be picked up at our office or downloaded from our website at http://hawaii.gov/health/environmental/water/cleanwater/forms/environmental/water/cleanwater/forms/indiv-index.html

4. Please call the Army corps of Engineers at (808) 438-9258 to determine which Department of the Army (DA) permit(s) shall be required for the subject project. Permits may be required for work performed in, over, and under navigable waters of the United States. Projects requiring a DA permit also require a Section 401 Water Quality Certification (WQC) from our office.

5. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

If you have any questions, please visit our website at http://hawaii.gov/health/environmental/water/cleanwater/index.html, or contact the Engineering Section, CWB, at 586-4309.

Sincerely,

ALEC WONG, P.E. CHIEF
Clean Water Branch

SW:ml

c: Mr. John Katahira, The Limtiaco Consulting Group [via fax 596-7361 only]

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
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JEFFREY CHANG, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

December 28, 2010

01-05-11 P04:43 IN

COPY

Mr. Alec Wong, P.E., Chief
Clean Water Branch
Department of Health
State of Hawaii
919 Ala Moana Boulevard, Room 301
Honolulu, Hawaii 96814

Dear Mr. Wong:

Subject: Your Letter of September 15, 2010 Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-008:005, Kahuku, Oahu

Thank you for your letter regarding the subject project.

We have the following responses to your comments:

1. **Any project and its potential impacts to State waters must meet the following criteria:**

   a. **Anti-degradation policy (Hawaii Administrative Rules (HAR), Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.**

   b. **Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.**

   c. **Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).**

   We acknowledge that the proposed project must meet the rules and regulations contained in HAR, Chapter 11-54.

2. **You may be required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2 State waters, you may apply for NPDES general permit coverage by submitting a Notice of Intent (NOI) form:**

   a. **Storm water associated with construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or sale. This includes area used for a construction base yard and the storage of any construction related equipment, material, and waste products. An NPDES permit is required before the start of the construction activities.**

   b. **Hydrotesting water,**

   c. **Construction dewatering effluent.**

   You must submit a separate NOI form for each type of discharge at least 30 days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity.

   We acknowledge that the proposed project must meet the rules and regulations contained in HAR, Chapter 11-55. The applicable NPDES general permits will be acquired as necessary. A blanket discharge permit for exploratory well drilling and test pumping has been approved for water that may reach the City's Municipal storm system.

3. **For other types of wastewater not listed in Item No. 2 above or wastewater discharging into Class 1 or Class AA waters, an NPDES individual permit will need to be obtained. An application for an individual permit must be submitted at least 180 calendar days before the commencement of the discharge.**

   We do not anticipate the need for an NPDES individual permit.

4. **Please call the Army Corps of Engineers at (808) 438-9258 to determine which Department of the Army (DA) permit(s) shall be required for the subject project. Permits may be required for work performed in, over, and under navigable waters of the United States. Projects requiring a DA permit also require a Section 401 Water Quality Certification (WQC) from our office.**

   The proposed project does not involve work in, over, or under navigable waters of the United States. Therefore, the proposed project will not be required to obtain a DA permit or a Section 401 WQC.

5. **Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.**

   We acknowledge that any discharges related to the project's construction or operation activities must comply with the State's Water Quality Standards.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: John Katahira, The Limtiaco Consulting Group

08-25-10 P03:11 IN

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
SAFE DRINKING WATER BRANCH
919 Ala Moana Boulevard, Room 308
Honolulu, Hawaii 96814

In reply, please refer to:
File: SDWB

August 23, 2010

Mr. Wayne M. Hashiro, P.E.
Manager and Chief Engineer
Attn: Scot Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 South Beretania Street
Honolulu, HI 96843

Dear Mr. Hashiro:

SUBJECT: PRE-ASSESSMENT CONSULTATION, DRAFT ENVIRONMENTAL ASSESSMENT, KAHUKU WELLS, UNIT NO. 3
KAHUKU, OAHU, HAWAII
TAX MAP KEY: 5-6-008:005

The Safe Drinking Water Branch has reviewed the subject document and offers the following comments:

Federal and state regulations define a public water system as a system that serves 25 or more individuals at least 60 days per year or has at least 15 service connections. All public water system owners and operators are required to comply with Hawaii Administrative Rules, Title 11, Chapter 20, titled "Rules Relating to Potable Water Systems," which include the following major components:

- Projects that propose development of new sources of potable water serving or proposed to serve a public water system must comply with the terms of Section 11-20-29 of Chapter 20. This section requires that all new public water system sources be approved by the Director of Health prior to its use. Such approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set in Section 11-20-29.

- The engineering report must identify all potential sources of contamination and evaluate alternative control measures which could be implemented to reduce or eliminate the potential for contamination, including treatment of the water source. In addition, water quality analyses for all regulated contaminants,

performed by a laboratory certified by the State Laboratories Division of the State of Hawaii, must be submitted as part of the report to demonstrate compliance with all drinking water standards. Additional parameters may be required by the Director for this submittal or additional tests required upon his or her review of the information submitted.

- All sources of public water system sources must undergo a source water assessment which will delineate a source water protection area. This process is preliminary to the creation of a source water protection plan for that source and activities which will take place to protect the source of drinking water.

- All public water systems must be operated by certified distribution system and water treatment plant operators as defined by Hawaii Administrative Rules, Title 11, Chapter 11-25 titled, "Rules Pertaining to Certification of Public Water System Operators."

- All projects which propose the establishment of a potentially contaminating activity (as identified in the Hawai`i Source Water Assessment Plan) within the source water protection area of an existing source of water for a public water supply should address this potential, and activities that will be implemented to prevent or reduce the potential for contamination of the drinking water source.

Should you have any questions, please contact Alain Carey of the Safe Drinking Water Branch, Engineering Section, at 586-4258.

Sincerely,

STUART YAMADA, P.E., CHIEF
Safe Drinking Water Branch
Environmental Management Division

AC:cb

c: ✓ John Katahira, Project Manager
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, HI 96817

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

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GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

January 19, 2011

01-25-11 P02:23 IN

COPY

Mr. Stuart Yamada, P.E., Chief
Safe Drinking Water Branch
Environmental Management Division
Department of Health
State of Hawaii
919 Ala Moana Boulevard, Room 308
Honolulu, Hawaii 96813

Dear Mr. Yamada:

Subject: Your Letter of August 23, 2010 Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-008:005, Kahuku, Oahu

Thank you for your letter regarding the subject project.

We have the following responses to your comments:

1. **"Projects that propose development of new sources of potable water serving or proposed to serve a public water system must comply with the terms of Section 11-20-29 of Chapter 20. This section requires that all new public water system sources be approved by the Director of Health prior to its use. Such approval is based primarily upon the submission of a satisfactory engineering report which addresses the requirements set in Section 11-20-29."**

   We acknowledge that the proposed project is required to obtain approval from the Director of Health and the preparation of a satisfactory engineering report pursuant to Hawaii Administrative Rules (HAR), Section 11-20-29 is prerequisite to this approval.

2. **"The engineering report must identify all potential sources of contamination and evaluate alternative control measures which could be implemented to reduce or eliminate the potential for contamination, including treatment of the water source. In addition, water quality analyses for all regulated contaminants, performed by a laboratory certified by the State Laboratories Division of the State of Hawaii, must be submitted as part of the report to demonstrate compliance with all drinking water standards. Additional parameters may be required by the Director for this submittal or additional tests required upon his or her review of the information submitted."**

   We note the requirements for a satisfactory engineering report, including additional parameters or tests that may be required by the Director.

3. **"All sources of public water system sources must undergo a source water assessment which will delineate a source water protection area. This process is preliminary to the creation of a source water protection plan for that source and activities which will take place to protect the source of drinking water."**

The Hawaii Source Water Assessment Program (SWAP) report dated November 2004 includes our Kahuku Wells Station and Well Nos. 1 and 2 (USGS Nos. 4057-15 and 16). The capture zone delineation for each well has been included in the SWAP report. The proposed third well will be approximately 100 feet from the existing wells and remain within the Kahuku Wells Station property. Therefore, the proposed well will be within the capture zone delineation for the existing wells.

4. **"All public water systems must be operated by certified distribution systems and water treatment plant operators as defined by Hawaii Administrative Rules (HAR), Title 11, Chapter 11-25 titled, 'Rules Pertaining to Certification of Public Water System Operators (WSO)'."**

   We acknowledge that all public water systems must be operated by certified distribution system and water treatment plant operators as defined in HAR, Chapter 11-25, "Rules Pertaining to Certification of Public Water System Operators." Our WSO have the appropriate certifications per HAR, Title 11, Chapter 11-25.

5. **"All projects which propose the establishment of a potential contaminating activity (PCA) (as identified in the Hawaii Source Water Assessment Plan) within the source water protection area of an existing source of water for a public water supply should address this potential, and activities that will be implemented to prevent or reduce the potential for contamination of the drinking water source."**

   The proposed third well and emergency generator will not introduce any PCA. However, the fuel storage tank for the generator will be constructed above ground, and meet required containment and monitoring requirements. The aforementioned SWAP report identifies a number of PCAs within the source water protection area of the existing facility, which includes agricultural activities, residential areas, and sanitary sewer systems. An engineering report will be prepared according to State of Hawaii, Department of Health, Safe Drinking Water Branch (DOH-SDWB) guidelines, which includes the identification of PCAs and control measures that could be implemented to reduce or eliminate the potential for contamination of the water source. This report will be submitted to the DOH-SDWB prior to development of the proposed well.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

Wayne M. Hashiro

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: John Katahira, The Limtiaco Consulting Group

08-18-10 P02:09 IN

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

August 16, 2010

TO: Wayne M. Hashiro, PE
City & County of Honolulu – Board of Water Supply

FROM: Russell S. Takata, Program Manager
Indoor and Radiological Health Branch

SUBJECT: Pre-Assessment Consultation, Draft Environmental Assessment
Kahuku Wells, Unit No. 3
Kahuku, Oahu, Hawaii
Tax Map Key: 5-6-008:005

Our comments should be printed as follows:

"Project activities shall comply with the Administrative Rules of the Department of Health:

- Chapter 11-46 Community Noise Control.

Should there be any questions, please contact me at 586-4701.

cc: Mr. John Katahira, Project Manager, The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

KIRK W. CALDWELL, Acting Mayor

RANDALL Y. S. CHUNG, Chairman
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

JEOFFREY S. CUDIAMAT, Ex-Officio
BRENNON T. MORIOKA, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

September 16, 2010

10-01-10 P02:22 IN

Ms. Lynn M. Nakasone, Acting Chief
Environmental Health Services Division
Department of Health
State of Hawaii
P. O. Box 3378
Honolulu, Hawaii 96801-3378

Attention: Russell S. Takata, Chief
Indoor and Radiological Health Branch

Dear Ms. Nakasone:

Subject: Your Letter of August 16, 2010 Regarding the Board of Water Supply's Pre-Assessment Consultation Draft Environmental Assessment for Kahuku Wells Unit No. 3 for TMK: 5-6-008: 005

Thank you for your letter regarding the pre-assessment consultation for the Draft Environmental Assessment (EA) for Kahuku Wells Unit No. 3.

We will incorporate your comments into the Draft EA and include the following:

"Project activities shall comply with the Administrative Rules of the Department of Health:

- Chapter 11-46 Community Noise Control."

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

Wayne M. Hashiro

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: John Katahira, The Limtiaco Consulting Group

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

09-21-10 P02:17 IN

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 20, 2010

City & County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96843

Attention: Mr. Scott Muraoka, Project Engineer

Ladies and Gentlemen:

Subject: Pre-Assessment Consultation for Draft Environmental Assessment for Kahuku Wells, Unit No. 3

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR), Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comment.

Other than the comments from Division of Forestry & Wildlife, Commission on Water Resource Management, Land Division-Oahu District, Engineering Division, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

Morris M. Atta
Acting Administrator

Cc: The Limtiaco Consulting Group

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 17, 2010

MEMORANDUM

TO: **DLNR Agencies:**
x Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
x Engineering Division
x Div. of Forestry & Wildlife
__Div. of State Parks
x Commission on Water Resource Management
x Office of Conservation & Coastal Lands
x Land Division –Oahu District
x Historic Preservation

FROM: Charlene Unoki, Assistant Administrator
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for Kahuku Wells, Unit No. 3
LOCATION: Island of Oahu
APPLICANT: The Limtiaco Consulting Group on behalf of Board of Water Supply

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by September 18, 2010.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: _____
Date: 8/18/2010

→ For Section - water

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 17, 2010

RECEIVED
LAND DIVISION
2010 AUG 26 P 12: 09
DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

MEMORANDUM

TO: **DLNR Agencies:**
x Div. of Aquatic Resources
__ Div. of Boating & Ocean Recreation
x Engineering Division
x Div. of Forestry & Wildlife
__ Div. of State Parks
x Commission on Water Resource Management
x Office of Conservation & Coastal Lands
x Land Division –Oahu District
x Historic Preservation

FROM: Charlene Unoki, Assistant Administrator
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for Kahuku Wells, Unit No. 3
LOCATION: Island of Oahu
APPLICANT: The Limtiaco Consulting Group on behalf of Board of Water Supply

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by September 18, 2010.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: Paul J Conry
Date: 8/23/10

LINDA LINGLE
GOVERNOR OF HAWAII

RECEIVED
LAND DIVISION
2010 SEP -9 P 2:42

LAURA H. THIELEN
CHAIRPERSON

WILLIAM D. BALFOUR, JR.
SUMNER ERDMAN
NEAL S. FUJIWARA
CHIYOME L. FUKINO, M.D.
DONNA FAY K. KIYOSAKI, P.E.
LAWRENCE H. MIIKE, M.D., J.D.

LENORE N. OHYE
ACTING DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

September 9, 2010

TO: Morris Atta, Administrator
Land Division

FROM: Lenore N. Ohye, Acting Deputy Director Lenore N. Ohye
Commission on Water Resource Management

SUBJECT: Pre-assessment Consultation for Draft EA for Kahuku Wells, Unit No. 3

FILE NO.: N/A
TMK NO.: 5-6-008:005

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore, all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at http://www.hawaii.gov/dlnr/cwrm.

Our comments related to water resources are checked off below.

☒ 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.

☐ 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

☐ 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.

☐ 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at http://www.usgbc.org/leed. A listing of fixtures certified by the EPA as having high water efficiency can be found at http://www.epa.gov/watersense/pp/index.htm.

☐ 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at http://hawaii.gov/dbedt/czm/initiative/lid.php.

☐ 6. We recommend the use of alternative water sources, wherever practicable.

☐ 7. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

Permits required by CWRM:
Additional information and forms are available at http://hawaii.gov/dlnr/cwrm/resources_permits.htm.

☒ 8. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water.

☒ 9. A Well Construction Permit(s) is (are) required any well construction work begins.

☒ 10. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.

☐ 11. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.

☐ 12. Ground water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

☐ 13. A Stream Channel Alteration Permit(s) is (are) required before any alteration(s) can be made to the bed and/or banks of a stream channel.

☐ 14. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is (are) constructed or altered.

☐ 15. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.

☐ 16. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.

☒ OTHER:

An interim water use permit (WUP no. 322) was issued for the Kahuku Wells (4057-15 & -16) for 0.600 mgd. An additional allocation was to be reviewed by the Commission upon submission of additional information supporting the requested amount of 1.000 mgd, but none was ever submitted. If the current allocation of 0.600 mgd is sufficient for the demand after improvements are done, the allocation can be transferred from the original two sources, to add the third source in battery, in accordance with DEC-ADM97-A1. If additional allocation is required, the applicant should submit an application to modify the existing water use permit. Further, electronic water use reporting data is current only up through 2009 and reports for 2010 should be submitted to bring the reporting requirements for the applicant into compliance.

If there are any questions, please contact Ryan Imata at 587-0255.

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 17, 2010

MEMORANDUM

RECEIVED
LAND DIVISION
2010 SEP 13 A 11: 25
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

TO: **DLNR Agencies:**
x Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
x Engineering Division
x Div. of Forestry & Wildlife
__Div. of State Parks
x Commission on Water Resource Management
x Office of Conservation & Coastal Lands
x Land Division –Oahu District
x Historic Preservation

FROM: Charlene Unoki, Assistant Administrator
SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment for Kahuku Wells, Unit No. 3
LOCATION: Island of Oahu
APPLICANT: The Limtiaco Consulting Group on behalf of Board of Water Supply

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by September 18, 2010.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(X) Comments are attached.

Signed:
Date: 9/10/10

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/CharleneUnoki
RE:PreAssessConDEAKahukuWells3
Oahu.791

COMMENTS

( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ___.

(X) **Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zones X. The Flood Insurance Program does not have any regulations for developments within Flood Zones X.**

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

( ) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

( ) Mr. Robert Sumitomo at (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.

( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.

( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.

( ) Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.

( ) The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands requiring water service from the Honolulu Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

( ) Additional Comments: _____

( ) Other: _____

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: _____
CARTY S. CHANG, ACTING CHIEF ENGINEER

Date: 9/10/10

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

October 29, 2010

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
ANTHONY R. GUERRERO, JR.
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

GEORGE "KEOKI" MIYAMOTO, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

Mr. Morris M. Atta
Acting Administrator
Land Division
Department of Land and Natural Resources
State of Hawaii
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Atta:

Subject: Your Letter Dated September 20, 2010, Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for Kahuku Wells Unit No. 3, TMK: 5-6-008:005, Kahuku, Oahu

Thank you for your letter regarding the pre-assessment consultation phase for the Kahuku Wells Unit No. 3 project.

We have the following responses to your comments:

1. We acknowledge that the Division of Forestry & Wildlife and Land Division have no comments.

2. We note your comment that the project site is located within Flood Zone X. However, per conversation with your staff, we have clarified that the project site is within Flood Zone D, which will be indicated in the Draft Environmental Assessment (DEA).

3. The DEA will consider and incorporate the objectives outlined in the Board of Water Supply's (BWS) recently developed Koolau Loa Watershed Management Plan: Oahu Water Management Plan, dated August 2009, which was prepared pursuant to the State Water Code (Hawaii Revised Statutes 174-C). This plan was adopted by the City Council on August 18, 2010 as Bill 10 (2010), CD 2, and it was approved and signed by the Mayor as City Ordinance 10-18 on September 2, 2010.

4. We acknowledge that Well Construction and Pump Installation Permits are required prior to the construction of the well.

100774

WR/LT

LINDA LINGLE
GOVERNOR

2010 AUG 27 A 9:50

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

BRENNON T. MORIOKA
DIRECTOR

Deputy Directors
MICHAEL D. FORMBY
FRANCIS PAUL KEENO
JIRO A. SUMADA

IN REPLY REFER TO:

STP 8.0193

August 19, 2010

Mr. Wayne M. Hashiro, P.E.
Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 S. Beretania Street
Honolulu, Hawaii 96843

Attention: Scot Muraoka, Project Engineer

Dear Mr. Hashiro:

Subject: Kahuku Wells, Unit No. 3 Pre-Assessment Consultation (PreCon) for Draft Environmental Assessment (DEA)

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

DOT understands that the applicant proposes to install a third well and an emergency generator at its existing Kahuku Wells Station located in Kahuku, Oahu, and that direct access to the subject project site is from the Kahuku Wells Access Road.

Given the project's location, DOT does not anticipate any significant, adverse impacts to the nearby State transportation facilities, Kamehmeha Highway. However, the applicant should also coordinate with DOT Highways Division, Oahu District Office, regarding a permit to transport any oversized or overweight equipment/loads within State highway facilities as well as its plans to keep the State highway facilities clean of products or debris hauled or tracked from the subject project site.

DOT appreciates the opportunity to provide comments. If there are any other questions, please contact Mr. David Shimokawa of the DOT Statewide Transportation Planning Office at telephone number (808) 587-2356.

Very truly yours,

BRENNON T. MORIOKA, Ph.D., P.E.
Director of Transportation

c: John Katahira, Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
ANTHONY R. GUERRERO, JR.
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

GEORGE "KEOKI" MIYAMOTO, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

November 2, 2010

Mr. Michael D. Formby
Interim Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Formby:

Subject: Your Letter of August 19, 2010 Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK; 5-6-008: 005, Kahuku, Oahu

Thank you for your letter regarding the pre-assessment consultation phase for the proposed Kahuku Wells Unit No. 3 project.

We acknowledge that significant adverse impacts to the nearby Kamehameha Highway are not anticipated in association with the proposed project given the project site's location and access.

The required permit to operate or transport any oversized and/or overweight vehicles and loads within State highways will be obtained and coordinated with the State Department of Transportation-Highways Division, Oahu District Office.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

Wayne M. Hashiro

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: John Katahira, The Limtiaco Consulting Group

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

KIRK CALDWELL
ACTING MAYOR

CRAIG I. NISHIMURA, P.E.
DIRECTOR

COLLINS D. LAM, P.E.
DEPUTY DIRECTOR

September 1, 2010

Mr. Wayne M. Hashiro, P.E. Manager and Chief Engineer
Attn: Scot Muraoka, Project Engineer
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Hashiro:

Subject: Pre- Assessment Consultation, Draft Environmental Assessment
Kahuku Wells, Unit No. 3
Kahuku, Oahu, Hawaii
Tax Map Key: 5-6-008:005

Thank you for inviting us to review the above Final Environmental Assessment/ Environmental Impact Statement Preparation Notice. The Department of Design and Construction does not have any comments to offer at this time.

Should you have any questions, please contact me at 768-8480.

Very truly yours,

Collins D. Lam
Craig I, Nishimura, P.E.
FORDirector

CN:pg(379980)

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

October 7, 2010

KIRK W. CALDWELL, Acting Mayor

RANDALL Y. S. CHUNG, Chairman
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

JEOFFREY S. CUDIAMAT, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

TO: COLLINS D. LAM, P.E., ACTING DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

Wayne M Hashiro

FROM: WAYNE M. HASHIRO, P.E., MANAGER AND CHIEF ENGINEER

SUBJECT: YOUR LETTER OF SEPTEMBER 1, 2010 REGARDING THE PRE-ASSESSMENT CONSULTATION FOR THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS UNIT NO. 3, TMK: 5-6-08:05, KAHUKU, OAHU

Thank you for your letter regarding the subject project.

We acknowledge that you have no comments to offer at this time.

If you have any questions, please contact Scot Muraoka at 748-5942.

cc: Jason Nakata, The Limtiaco Consulting Group

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768-3381
Website: www.honolulu.gov

09-27-10 P01:31 IN

KIRK W. CALDWELL
ACTING MAYOR

JEOFFREY S. CUDIAMAT, P.E.
DIRECTOR AND CHIEF ENGINEER

GEORGE "KEOKI" MIYAMOTO
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 10-724

September 22, 2010

MEMORANDUM

TO: WAYNE M. HASHIRO, P.E., MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTENTION: SCOT MURAOKA, PROJECT ENGINEER

FROM: JEOFFREY S. CUDIAMAT, P.E.
DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF FACILITY MAINTENANCE

SUBJECT: PRE-ASSESSMENT CONSULTATION
DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
KAHUKU WELLS, UNIT NO. 3, KAHUKU, OAHU, HAWAII
TAX MAP KEY: 5-6-008:005

Thank you for the opportunity to provide comments on the pre-consultation for the proposed installation of a third well and emergency generator at the existing Kahuku Wells Station.

We have no comments to offer as the proposed improvements will be within property under the jurisdiction of the Board of Water Supply and will have negligible impact on our facilities and operations.

Since the proposed improvements will not affect our facilities or operations, we request the Department of Facility Maintenance be removed from the environmental assessment process for this project.

Should you have any questions, please call Charles Pignataro of the Division of Road Maintenance, at 768-3697.

c: The Limtiaco Consulting Group, Mr. John Kitahira

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

November 2, 2010

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
ANTHONY R. GUERRERO, JR.
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

GEORGE "KEOKI" MIYAMOTO, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

TO: GEORGE "KEOKI" MIYAMOTO, ACTING DIRECTOR
DEPARTMENT OF FACILITY MAINTENANCE

Wayne M. Hashiro

FROM: WAYNE M. HASHIRO, P.E., MANAGER AND CHIEF ENGINEER

SUBJECT: YOUR LETTER OF SEPTEMBER 22, 2010 REGARDING THE PRE-ASSESSMENT CONSULTATION FOR THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS UNIT NO. 3, TMK: 5-6-008:005, KAHUKU, OAHU

Thank you for your letter regarding the subject project.

We acknowledge that the proposed Kahuku Wells Unit No. 3 project will have negligible impacts on facilities and operations of the Department of Facility Maintenance (DFM). As requested, DFM will be removed as a consulted entity for the remainder of the environmental assessment process for this project.

If you have any questions, please contact Scot Muraoka at 748-5942.

cc: John Katahira, The Limtiaco Consulting Group

DEPARTMENT OF PARKS AND RECREATION

CITY AND COUNTY OF HONOLULU

KAPOLEI HALE, 1000 ULUOHIA STREET, STE. 309 • KAPOLEI, HAWAII 96707
Phone: (808) 768-3003 • FAX: (808) 768-3053 • Internet: www.honolulu.gov

KIRK W. CALDWELL
ACTING MAYOR

LESTER K. C. CHANG
DIRECTOR

RICHARD HARU
DEPUTY DIRECTOR

09-23-10 P03:47 IN

September 23, 2010

TO: WAYNE M. HASHIRO, P.E.
MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

FROM: LESTER K. C. CHANG, DIRECTOR

SUBJECT: PRE-ASSESSMENT CONSULTATION
DRAFT ENVIRONMENTAL ASSESSMENT
KAHUKU WELLS, UNIT NO. 3
TAX MAP KEY: 5-6-008:005

Thank you for the opportunity to review and comment at the pre-assessment consultation stage of the Draft Environmental Assessment for the Kahuku Wells, Unit No. 3 project.

The Department of Parks and Recreation has no comment, as the proposed project will not impact any program or facility of the department. You may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact Mr. John Reid, Planner, at 768-3017.

LESTER K. C. CHANG
Director

LKCC:jr
(379830)

cc: Mr. John Katahira, The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

KIRK W. CALDWELL, Acting Mayor

RANDALL Y. S. CHUNG, Chairman
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

JEOFFREY S. CUDIAMAT, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

October 7, 2010

TO: LESTER K.C. CHANG, DIRECTOR
DEPARTMENT OF PARKS AND RECREATION

Wayne M Hashiro

FROM: WAYNE M. HASHIRO, P.E., MANAGER AND CHIEF ENGINEER

SUBJECT: YOUR LETTER OF SEPTEMBER 23, 2010 REGARDING THE PRE-ASSESSMENT CONSULTATION FOR THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS UNIT NO. 3, TMK: 5-6-08:05, KAHUKU, OAHU

Thank you for your letter regarding the subject project.

We acknowledge that you have no comments, as the proposed project will not impact any program or facility of the department. As requested, we will remove your department as a consulted party for the remainder of the environmental assessment process.

If you have any questions, please contact Scot Muraoka at 748-5942.

cc: Jason Nakata, The Limtiaco Consulting Group

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK W. CALDWELL
ACTING MAYOR

WAYNE Y. YOSHIOKA
DIRECTOR

SHARON ANN THOM
DEPUTY DIRECTOR

KENNETH TORU HAMAYASU P.E.
DEPUTY DIRECTOR

TP8/10-379817R

September 7, 2010

MEMORANDUM

TO: WAYNE M. HASHIRO, P.E., MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTN: SCOTT MURAOKA, PROJECT ENGINEER

FROM: WAYNE Y. YOSHIOKA, DIRECTOR

SUBJECT: ENVIRONMENTAL ASSESSMENT (EA) PRE-ASSESSMENT CONSULTATION, KAHUKU WELLS
UNIT NO. 3 TAX MAP KEY 5-6-008:005

This responds to your letter dated August 13, 2010, requesting a pre-consultation for comments in preparing the Draft Environmental Assessment (DEA) for the subject project. Our comments are as follows.

The DEA should conduct a traffic impact assessment report (TIAR) that addresses the potential traffic impacts of the project and possible mitigation measures. The study should include a discussion of any possible traffic disruption during constructions periods (i.e. lane closures, equipment movement, etc.) and proposed mitigation measures to resolve construction impacts to traffic.

Prior to the start of the project, the affected Neighborhood Board, residents, and businesses should be informed about the scope and duration of the project.

Should you have any questions on the matter, you may contact Virginia Bisho of my staff at 768-5461.

WAYNE Y. YOSHIOKA
Director

cc: Mr. John Katahira, Project Manager
The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
ANTHONY R. GUERRERO, JR.
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

GEORGE "KEOKI" MIYAMOTO, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

November 4, 2010

11-09-10 P02:46 IN

TO: WAYNE Y. YOSHIOKA, DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES

Wayne M. Hashiro

FROM: WAYNE M. HASHIRO, P.E., MANAGER AND CHIEF ENGINEER

SUBJECT: YOUR LETTER OF SEPTEMBER 7, 2010 REGARDING THE PRE-ASSESSMENT CONSULTATION FOR THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS UNIT NO. 3, TMK: 5-6-008:005, KAHUKU, OAHU

Thank you for your letter regarding the subject project.

We have the following responses to your comments:

1. We note your request to conduct a Traffic Impact Assessment Report (TIAR). The proposed project should not increase traffic to the project site except during construction. The project site is located sufficiently distant from residential lots, approximately a half-mile away, and one mile from Kamehameha Highway. Therefore, the proposed project should have negligible traffic-related impacts and a TIAR will not be prepared unless it is later determined that construction or operation of the proposed project will have substantial traffic-related impacts. A discussion on traffic impacts will be provided in the Draft Environmental Assessment (DEA).

2. The Koolauloa Neighborhood Board was informed of the proposed project at their August 12, 2010 meeting. The properties neighboring the Kahuku Wells site and other stakeholders in the Kahuku community were consulted regarding the proposed project. In addition, notice of publication of the proposed project's DEA will be published in the *Environmental Notice* pursuant to Hawaii Revised Statutes, Chapter 343. Copies of the DEA will be made available to the public.

If you have any questions, please contact Scot Muraoka at 748-5942.

cc: John Katahira, The Limtiaco Consulting Group

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

09-13-10 A10:00 IN

KIRK W. CALDWELL
ACTING MAYOR

KENNETH G. SILVA
FIRE CHIEF

ROLLAND J. HARVEST
DEPUTY FIRE CHIEF

September 8, 2010

TO: WAYNE HASHIRO, P.E., MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTN: SCOT MURAOKA, PROJECT ENGINEER

FROM: KENNETH G. SILVA, FIRE CHIEF

SUBJECT: PREASSESSMENT CONSULTATION
DRAFT ENVIRONMENTAL ASSESSMENT
KAHUKU WELLS, UNIT NO. 3
KAHUKU, OAHU, HAWAII
TAX MAP KEY: 5-6-008: 005

In response to a letter from John Katahira of The Limtiaco Consulting Group dated August 13, 2010, regarding the above-mentioned subject, the Honolulu Fire Department reviewed the material provided and has no comments.

Should you have any questions, please call Battalion Chief Socrates Bratakos of our Fire Prevention Bureau at 723-7151.

KENNETH G. SILVA
Fire Chief

KGS/SY:bh

cc: John Katahira, The Limtiaco Consulting Group ✓

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

KIRK W. CALDWELL, Acting Mayor

RANDALL Y. S. CHUNG, Chairman
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

JEOFFREY S. CUDIAMAT, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

October 7, 2010

TO: KENNETH G. SILVA, FIRE CHIEF
HONOLULU FIRE DEPARTMENT

Wayne M Hashiro

FROM: WAYNE M. HASHIRO, P.E., MANAGER AND CHIEF ENGINEER

SUBJECT: YOUR LETTER OF SEPTEMBER 8, 2010 REGARDING THE PRE-ASSESSMENT CONSULTATION FOR THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS UNIT NO. 3, TMK: 5-6-08:05, KAHUKU, OAHU

Thank you for your letter regarding the subject project.

We acknowledge that you have no comments.

If you have any questions, please contact Scot Muraoka at 748-5942.

cc: Jason Nakata, The Limtiaco Consulting Group

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

LOUIS M. KEALOHA
CHIEF

DELBERT T. TATSUYAMA
RANDAL K. MACADANGDANG
DEPUTY CHIEFS

OUR REFERENCE SB-LKA

August 25, 2010

TO: WAYNE M. HASHIRO, P.E., MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTENTION: SCOT MURAOKA, PROJECT ENGINEER

FROM: LOUIS M. KEALOHA, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

SUBJECT: PRE-ASSESSMENT CONSULTANT, DRAFT ENVIRONMENTAL ASSESSMENT, KAHUKU WELLS, UNIT NO. 3,
TAX MAP KEY: 5-6-008:005

Thank you for the opportunity to review and comment on the subject project.

This project should have no significant impact on the facilities or operations of the Honolulu Police Department.

If there are any questions, please call Major Susan Ballard of District 4 at 247-2166.

LOUIS M. KEALOHA
Chief of Police

By
DAVE M. KAJIHIRO
Assistant Chief of Police
Support Services Bureau

cc: Mr. John Katahira, Project Manager
The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

KIRK W. CALDWELL, Acting Mayor

RANDALL Y. S. CHUNG, Chairman
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

JEOFFREY S. CUDIAMAT, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

October 7, 2010

TO: LOUIS M. KEALOHA, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

ATTN: DAVE M. KAJIHIRO, ASSISTANT CHIEF OF POLICE

Wayne M. Hashiro

FROM: WAYNE M. HASHIRO, P.E., MANAGER AND CHIEF ENGINEER

SUBJECT: YOUR LETTER OF AUGUST 25, 2010 REGARDING THE PRE-ASSESSMENT CONSULTATION FOR THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS UNIT NO. 3, TMK: 5-6-08:05, KAHUKU, OAHU

Thank you for your letter regarding the subject project.

We acknowledge that this project should have no significant impact on the facilities or operations of the Honolulu Police Department.

If you have any questions, please contact Scot Muraoka at 748-5942.

cc: Jason Nakata, The Limtiaco Consulting Group

THE LIMTIACO CONSULTING GROUP

CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

Phone Log

Contact:	Reid Matsuura	Date:	August 19, 2010	Time of Call:	
Company:	Office of Donovan Dela Cruz, Honolulu City Council, 2nd District	Position:			
Phone:	(808) 768-5038	Fax:			
Email address:		Project #:	10510		
☐ Follow-Up	☐ Will call back	Meeting Date:			

Notes:

Mr. Reid Matsuura from the office of Donovan Dela Cruz contacted The Limtiaco Consulting Group (TLCG) to ask if Kahuku Village Association and Kahuku Community Association were included as part of the pre-assessment consultation for the Kahuku Wells, Unit No. 3 Environmental Assessment.

TLCG confirmed these groups were included.

Mr. Matsuura informed TLCG that the Kahuku Community Association was no longer receiving mail at its PO Box. The private address for the current president was provided:

Ralph Makalau
President
Kahuku Community Association
[redacted]

08-25-10 P03:11
08-25-10 P03:11 IN

Hawaiian Telcom

August 23, 2010

Wayne M. Hashiro, P.E., Manager and Chief Engineer
Attention: Scot Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Muraoka:

Subject: **Pre-Assessment Consultation, Draft Environmental Assessment - Kahuku Wells, Unit No. 3**

Thank you for the opportunity to review and comment on the pre-assessment consultation phase for the subject project.

Hawaiian Telcom does not have any comments to offer at this time.

If you have any questions or require assistance in the future on this project, please call Les Loo at 546-7761.

Sincerely,

Lynette Yoshida
Senior Manager - OSP Engineering
Network Engineering & Planning

cc: J. Katahira - The Limtiaco Consulting Group
File [Laie]

PO Box 2200 • Honolulu • Hi 96841

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

KIRK W. CALDWELL, Acting Mayor

RANDALL Y. S. CHUNG, Chairman
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

JEOFFREY S. CUDIAMAT, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

October 7, 2010

Ms. Lynette Yoshida
Senior Manager – OSP Engineering
Network Engineering and Planning
Hawaiian Telcom
P.O. Box 2200
Honolulu, Hawaii 96841

Dear Ms. Yoshida:

Subject: Your Letter of August 23, 2010 Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-08:05, Kahuku, Oahu

Thank you for your letter regarding the pre-assessment consultation phase for the Kahuku Wells Unit No. 3 project.

We acknowledge that Hawaiian Telcom does not have any comments to offer at this time.

If you have any questions, please contact Scot Muraoka at 748-5942.

Me ka mahalo pumehana,

Wayne M. Hashiro

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: Jason Nakata, The Limtiaco Consulting Group

THE GAS COMPANY

09-01-10 P02:16 IN

P.O. Box 3000
Honolulu, Hawaii 96802-3000
www.hawaiigas.com

August 30, 2010

Mr. Wayne M. Hashiro, P.E.
Manager and Chief Engineer
Attn: Scot Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Muraoka:

Subject: Pre-Assessment Consultation, Draft Environmental Assessment
Kahuku Wells, Unit No. 3
TMK: 5-6-008:005
Plan Review and Comment

In response to your letter dated August 13, 2010, we have reviewed the summary of the proposed project. Based on the location map included in the project summary, it has been determined that the area is currently clear of utility gas facilities.

Thank you for the opportunity to comment on the proposed project. Should there be any questions or if additional information is desired, please feel free to contact Karen Lung at 594-5008.

Sincerely,

The Gas Company, LLC

Charles E. Calvet, P.E.
Manager, Engineering

CEC:krs
10-163

cc: Mr. John Katahira, The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

10-15-10 P02:42 IN

KIRK W. CALDWELL, Acting Mayor

RANDALL Y. S. CHUNG, Chairman
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

JEOFFREY S. CUDIAMAT, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

October 7, 2010

Mr. Charles E. Calvet, P.E., Manager
The Gas Company
Engineering Department
P. O. Box 3000
Honolulu, Hawaii 96802

Dear Mr. Calvet:

Subject: Your Letter of August 30, 2010 Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-08:05, Kahuku, Oahu

Thank you for your letter regarding the pre-assessment consultation phase for the proposed Kahuku Wells Unit No. 3 project.

We acknowledge that the proposed project area is currently clear of gas utilities.

If you have any questions, please contact Scot Muraoka at 748-5942.

Me ka mahalo pumehana,

Wayne M. Hashiro

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: Jason Nakata, The Limtiaco Consulting Group

CONTINENTAL PACIFIC, LLC

850.278.1000 | office
850.278.1004 | fax

August 31, 2010

Mr. John Katahira
Project Manager
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, HI 96817

RE: Pre-Assessment Consultation, Draft EA, Kahuku Wells, Unit No. 3.

Dear Mr. Katahira:

In response to your letter dated August 13, 2010, Continental Pacific, LLC does not have any concerns regarding cultural or archaeological impacts that relate to the City and County of Honolulu Board of Water Supply's drilling of an additional well at its existing Kahuku Wells Station.

Continental Pacific, LLC does have a concern regarding the impact that drilling Well 3 might have on the aquifer. Continental Pacific operates a well in the area and the drilling of Well 3 may have an impact on the Company's ability to continue to draw water at the current rate of approximately 300,000 gallons per day.

Well Identification and Location.
State Well Number 4158-12.
Address: 56-1030 Kamehameha Hwy., Kahuku, HI 96731
TMK: 8-6-005:016.

It would be appreciated if this issue were addressed as part of the EA process.

Please contact David Rietow at 808 885-4666 (office) or 808 896-9418 (cell) or via e-mail at david@agroresources.com if you have questions or require additional information. Thank you for your time and attention to this matter.

Sincerely,

CONTINENTAL PACIFIC, LLC.

J. Barron Strother

www.cplandco.com

249 Mack Bayou Loop | Suite 301 | Santa Rosa Beach, FL 32459
Post Office Box 1350 | Santa Rosa Beach, FL 32459

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
ANTHONY R. GUERRERO, JR.
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

GEORGE "KEOKI" MIYAMOTO, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

October 28, 2010

Mr. J. Barron Strother
Continental Pacific, LLC
P. O. Box 1350
Santa Rosa Beach, Florida 32459

Dear Mr. Strother:

Subject: Your Letter of August 31, 2010 Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-008:005, Kahuku, Oáhu

Thank you for your letter regarding the pre-assessment consultation phase for the proposed Kahuku Wells Unit No. 3 project.

We have the following responses to your comments:

1. We note that Continental Pacific does not have any concerns regarding cultural or archaeological impacts related to the proposed project.

2. We acknowledge that Continental Pacific's well (State Well Number 4158-12) is located in the vicinity of the proposed project, approximately one and one-half miles away, and draws water at approximately 300,000 gallons per day. Well construction and pump installation for the Kahuku Wells Unit No. 3 project will comply with applicable Federal, State, and local standards. Test pumping, as required by the State of Hawaii, Commission on Water Resource Management, will be performed prior to commissioning the new well to ensure that its operation does not have detrimental effects on the groundwater aquifer.

3. The Draft Environmental Assessment for the Kahuku Wells Unit No. 3 project will provide a detailed discussion of possible impacts on the groundwater aquifer resulting from construction activities and operational changes associated with the proposed improvements, including mitigation measures.

If you have any questions, please contact Scot Muraoka at (808) 748-5942.

Me ka mahalo pumehana,

Wayne M. Hashiro

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: John Katahira, The Limtiaco Consulting Group

Kahuku Community Association

P.O. Box 333 Kahuku, HI. 96731

September 20, 2010

Wayne M. Hashiro, P.E., Manager and Chief Engineer
Attn: Scot Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96843

Subject: Pre-Assessment Consultation, Draft Environmental Assessment
Kahuku Wells, Unit No. 3
Kahuku, Oahu, Hawaii
Tax Map Key: 5-6-008:005

Dear Mr. Muraoka,

My name is Ralph K. Makaiau Jr., President Kahuku Community Association (KCA), writing you in behalf of its Board of Directors in support of the proposed construction improvements to the existing Kahuku Wells.

As host community association we would like to submit the following concerns:

- It is understood that this projects purpose is to increase system well source reliability?
- It is understood that this projects purpose is to provide emergency electricity to well pumps?
- It is understood that this projects purpose will not increase available existing water allotments?
- It is understood that this projects purpose will not create new water distribution outside of Kahuku Watershed?
- It is understood that in meeting the 100% redundancy for water reliability, Kahuku Medical Center may reconsider application for Dialysis Treatment within current allotment of water use?

We appreciate the opportunity to share the community's concerns regarding its water supply and look forward to future responses regard the progress of this project.

Mahalo,

Ralph K. Makaiau Jr.

Cc: Mr. John Kithara, Project Manager, The Limtiaco Consulting Group
Directors, Kahuku Community Association

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
ANTHONY R. GUERRERO, JR.
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

GEORGE "KEOKI" MIYAMOTO, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

November 5, 2010

11-12-10 P03:02 IN

Mr. Ralph K. Makaiau, Jr., President
Kahuku Community Association
56-137 Pualalea Street
Kahuku, Hawaii 96731

Dear Mr. Makaiau:

Subject: Your Letter of September 20, 2010 Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-008: 003, Kahuku, Oahu

Thank you for your letter regarding the subject project.

We have the following responses to your comments:

1. The proposed third well will increase the pumping capacity and reliability of the well station to serve Kahuku.

2. The proposed project will include the installation of an emergency generator to provide emergency power supply for the well station in the event of a power outage.

3. The proposed project will not affect the well station's existing water use permit allocation of 0.60 million gallons per day (mgd). Average pumpage is approximately 0.40 mgd.

4. The proposed well project will not extend the Kahuku area water distribution system.

5. The Kahuku Medical Center should submit a water availability request for the Dialysis Treatment Center.

If you have any questions, please contact Scot Muraoka at 748-5942.

Me ka mahalo pumehana,

Wayne M. Hashiro

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: John Katahira, The Limtiaco Consulting Group

Brooke Webber

From: Jason Nakata
Sent: Wednesday, August 25, 2010 4:56 AM
To: 'mattoonc001@hawaii.rr.com'
Subject: RE: BWS Kahuku Well Unit 3 - Cultural Assessment

Mr. Mattoon,

Thank you for your timely response. As per your recommendation, we will be contacting Ms. Dawn Wasson regarding any knowledge she may have of cultural practices or archaeological resources that may be affected by the Kahuku Wells, Unit No. 3 project.

The quality of environmental documentation in Hawai'i is enhanced by dedicated individuals such as you. On behalf of The Limtiaco Consulting Group and the Honolulu Board of Water Supply, I would like to thank your for your participation in the environmental review process.

Jason Nakata
The Limtiaco Consulting Group
(808) 596-7790 ext. 31
jason.n@tlcghawaii.com

-----Original Message-----
From: mattoonc001@hawaii.rr.com [mailto:mattoonc001@hawaii.rr.com]
Sent: Tuesday, August 24, 2010 2:01 PM
To: Jason Nakata
Subject: Re: BWS Kahuku Well Unit 3 - Cultural Assessment

Mr. Nakata,

Thank you for your request for consultation regarding cultural practices and assets within the Ko`olauloa moku. The Kahuku Well No. 3 project lies in an ahupua`a where the more appropriate consultation should be provided by Ms Dawn Wasson who is very knowledgeable about the area. Her email address is [redacted].

Aloha,

Creighton Mattoon

---- Jason Nakata <jason.n@tlcghawaii.com> wrote:
> Mr. Mattoon,
>
>
>
> On behalf of the City and County of Honolulu's Board of Water Supply,
> The Limtiaco Consulting Group is preparing a Draft Environmental
> Assessment (EA) for the proposed Kahuku Wells, Unit No. 3 project.
> Pursuant to Chapter 343, Hawai'i Revised Statutes (HRS) and Title 11,
> Chapter 200, Hawai'i Administrative Rules of the Department of Health,
> we are soliciting comments for the pre-assessment consultation phase
> of the Draft EA. Chapter 343, HRS, states that the EA should disclose
> any impacts the proposed project may incur on archaeological resources
> or cultural practices of the community and State.
>
>
>
> The Office of Environmental Quality Control, Department of Health,
> State of Hawai'i, through the Cultural Assessment Provider List-OAHU,
> has indicated that you have special knowledge regarding cultural
> practices and assets within the Ko'olauloa Ahupua'a. We would greatly
> appreciate any information that you could provide regarding

> traditional and cultural practices or beliefs that may be impacted by
> the proposed project, and should be considered in the EA.
>
>
>
> A summary of the proposed project is attached for your review. We
> would appreciate the submission of any comments by September 20th, 2010.
>
>
>
> Please send your original comments to:
>
> Wayne M. Hashiro, P.E., Manager and Chief Engineer
>
> Attn: Scot Muraoka, Project Engineer
>
> City and County of Honolulu
> Board of Water Supply
>
> 630 S. Beretania Street
>
> Honolulu, Hawai'i 96843
>
>
>
> Please provide a copy of your comments to:
>
> John Katahira, Project Manager
>
> The Limtiaco Consulting Group
>
> 680 Iwilei Road, Suite 430
>
> Honolulu, Hawai'i 96817
>
> Fax: 596-7361
>
>
>
> Thank you for your participation in the environmental review process.
> Should you have any questions please contact John Katahira or myself
> at 596-7790.
>
>
>
> Sincerely,
>
>
>
> Jason S. Nakata
>
> Staff Engineer
>
>
>
> The Limtiaco Consulting Group
>
> 680 Iwilei Road, Suite 430
>
> Honolulu, Hawaii 96817
>
> Phone: (808) 596-7790 ext. 31
>
> jason.n@tlcghawaii.com
>
>

LINDA LINGLE
Governor

COPY

SANDRA LEE KUNIMOTO
Chairperson, Board of Agriculture

DUANE K. OKAMOTO
Deputy to the Chairperson

09-13-10 A10:01 IN

State of Hawaii
DEPARTMENT OF AGRICULTURE
1428 South King Street
Honolulu, Hawaii 96814-2512
Phone: (808) 973-9600 Fax: (808) 973-9613

September 9, 2010

HOH 10 130

Mr. Wayne M. Hashiro, P.E.
Manager and Chief Engineer
City and County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, HI 96843

Attn: Scot Muraoka, Project Engineer

Gentlemen:

Thank for the opportunity to provide comments on the pre-assessment consultation phase of the Draft Environmental Assessment (EA) for the proposed Kahuku Wells Unit No. 3 Project.

As you are aware, the Department of Agriculture (DOA) operates and manages the Kahuku Agricultural Park pursuant to Chapter 166, Hawaii Revised Statutes and Governor's Executive Order No. 3867. Two farm lot parcels, TMK (1) 5-6-006:036 and 037 abut the project site and a third farm lot parcel 46 is impacted by overflow drainage from the reservoir site.

In November 2001, we were contacted by Akinaka & Associates, Ltd. regarding the Board of Water Supply's (BWS) Facilities Repair: Drainage Improvements Study for Kahuku 228' Reservoir. On May 16, 2002, Mr. Barry K. Muranaka of Akinaka & Associates, Ltd. presented three alternatives to address DOA's concerns regarding the drainage of reservoir overflow and washout water from the subject site. DOA responded on May 21, 2002, selecting Alternative #2 as the preferred method to resolve our concerns. On August 16, 2002, BWS requested DOA's preliminary written agreement regarding the drainage easements described in Alternative #2. DOA responded on August 22, 2002 agreeing to issue the appropriate drainage easements to BWS to accommodate the proposed project. On October 19, 2006, DOA was asked to reaffirm its previous agreement to issue the appropriate drainage easements to BWS, to which we responded on October 26, 2006 in the affirmative.

Our file correspondence ends in October 2006 with no further correspondence or information regarding the progress of this project. During the past 3 years, BWS had installed a 6-inch corrugated HDPE drain pipe on existing grade with the discharge sheet flowing onto the ag park Road "A". DOA would appreciate the completion of the Alternative #2 to address the drainage issues identified in the Akinaka & Associates drainage study to be included in the current project.

Should you have any questions regarding this matter, please do not hesitate to contact me at (808) 973-9478 or e-mail: randy.y.teruya@hawaii.gov.

Sincerely,

Randolph Y. Teruya

Randolph Y. Teruya
Agricultural Asset Manager
Agricultural Asset Management Branch

c: John Katahira, Project Manager
Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
ANTHONY R. GUERRERO, JR.
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

GEORGE "KEOKI" MIYAMOTO, Ex-Officio
MICHAEL D. FORMBY, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

October 28, 2010

Mr. Randolph Y. Teruya
Agricultural Asset Manager
Agricultural Asset Management Branch
Agricultural Resource Management Division
Department of Agriculture
State of Hawaii
1428 South King Street
Honolulu, Hawaii 96814

Dear Mr. Teruya:

Subject: Your Letter of September 9, 2010, Regarding the Pre-Assessment Consultation for the Draft Environmental Assessment for Kahuku Wells Unit No. 3, TMK: 5-6-008:005, Kahuku, Oahu

Thank you for your letter regarding the pre-assessment consultation phase for the proposed Kahuku Wells Unit No. 3 project.

We acknowledge your comment that the project site may affect portions of the State of Hawaii Kahuku Agricultural Park. Drainage improvements for the project site as identified as alternative #2 in our Facilities Repair: Drainage Improvements Study for Kunia 665' Reservoir and Kahuku 228' Reservoir by Akinaka & Associates is currently budgeted for construction in FY 2011.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

Wayne M. Hashiro

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

cc: John Katahira, The Limtiaco Consulting Group

APPENDIX C
KAHUKU WELLS STATION- UNIT NO. 3 PROJECT INFORMATION FACT SHEET AND NEIGHBORHOOD BOARD NO. 28, KOOLAU LOA MAY 12, 2011 MEETING AGENDA & MINUTES

Kahuku Wells, Unit No. 3

City and County of Honolulu
Board of Water Supply

Kahuku, Oahu, Hawaii

Introduction

A Draft Environmental Assessment (EA) has been prepared pursuant to the State of Hawaii environmental review process. Copies will be available for public review at the Kahuku Public Library and Hawaii State Library.

Background & Existing Conditions

The Kahuku Wells Station currently hosts:

- A 0.5 million gallon reservoir;
- Two deep wells, each with a pump and aboveground motor rated at 1 million gallons per day pumping capacity;
- A single-story control building, including ancillary equipment; and
- A portion of the 12-inch transmission main that conveys the potable water to the Kahuku area.

Project Need & Objectives

The proposed project seeks to achieve the following:

- Improve reliability of the stand-alone Kahuku potable water system, and
- Increase pumping capacity of the Kahuku Wells Station to supply domestic demand and improve fire protection requirements to Kahuku Town.

Proposed Project Activities

Overall, the proposed project will entail:

- Drilling, casing, and testing of Well No. 3, including converting the well into a production well based on favorable test results ;
- Installing and housing an on-site emergency generator; and
- Constructing and installing ancillary improvements, such as associated underground piping and appurtenances, aboveground fuel storage tank for the generator, electrical and control upgrades, and possible extension of the existing control building in order to support the latter.

Proposed Schedule

Drilling, casing, and testing of Well No. 3 is planned for Fiscal Year 2012. Design of the production well and other facility improvements (including emergency generator) is anticipated to begin in Fiscal Year 2013, followed by construction activities to begin as early as Fiscal Year 2015.

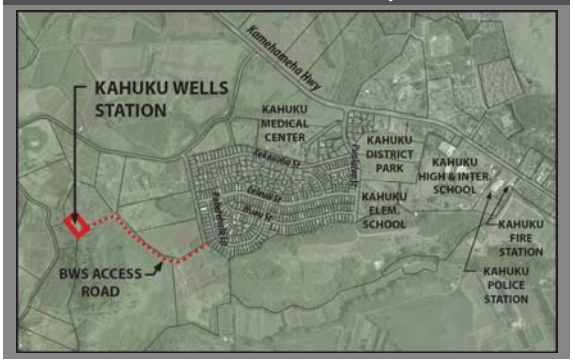
Cost

The project will be fully funded by the BWS. Funding for this project is currently proposed in the BWS' 6-year Capital Program for Fiscal Years 2010-2015 with an estimated capital cost of $1,560,000.

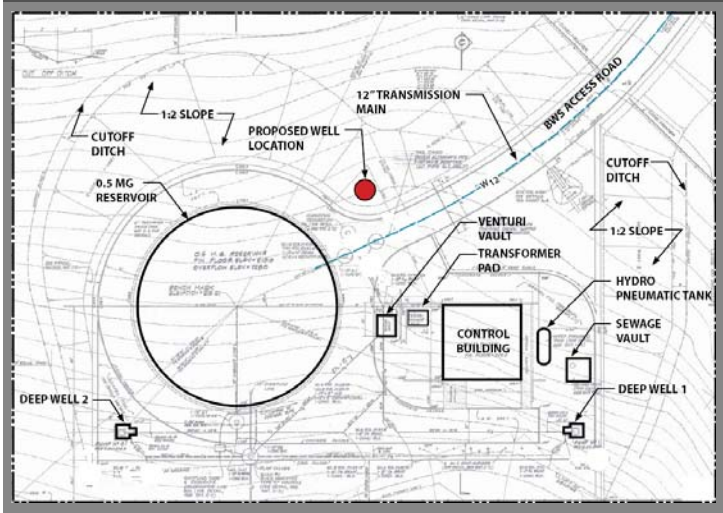
Potential Impacts/Benefits

The proposed project is not anticipated to result in significant short-term or long-term impacts to existing agricultural activities, residences, institutions, and traffic adjacent to the project site and within the surrounding Kahuku Town area. Temporary short-term impacts to air and water quality, ambient noise levels, traffic operations, and groundwater resources may occur during construction activities; any such temporary impacts will be mitigated with the use of appropriate construction techniques and best management practices. Operation of the completed project is not expected to have significant adverse long-term impacts on environmental, cultural, social, or economic resources. A Finding of No Significant Impact determination is anticipated.

Location Map



Site Layout



Contact Information:

Honolulu Board of Water Supply
Contact: Barry Usagawa
Phone: 748-5900
Email: busagawa@hbws.org

The Limtiaco Consulting Group
Contact: John Katahira
Phone: 596-7790
Email: john@tlcghawaii.com

KOOLAULOA NEIGHBORHOOD BOARD NO. 28

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 • HONOLULU, HAWAII, 96813
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: http://www.honolulu.gov

REGULAR MEETING AGENDA
Thursday, May 12, 2011
Hau'ula Community Center
54-010 Kukuna Road
6:00 p.m. to 8:00 p.m.

Rules of Speaking: Anyone wishing to speak is asked to raise their hand, and when recognized by the Chair, to address comments to the Chair. Speakers are encouraged to keep their comments under 3 minutes, and those giving reports are urged to keep their reports less than 3 minutes. Please silence all electronic devices.

Note: The Board may take action on any agenda item. As required by the State Sunshine Law (HRS 92), specific issues not noted on this agenda cannot be voted on, unless added to the agenda.

I. CALL TO ORDER: Chair Richard Fale

II. CITY MONTHLY REPORTS (Limited to 3 minutes each)
   a. Honolulu Fire Department
   b. Honolulu Police Department
   c. Mayor's Representative
   d. Councilmember Ernie Martin/Staff Representative
   e. Board of Water Supply

III. APPROVAL OF APRIL 14, 2011 REGULAR MINUTES

IV. BOARD BUSINESS
   a. Kahuku Wells Environmental Assessment (EA)
   b. Hawaiian Electric Company (HECO) Renewable Energy

V. RESIDENTS'/COMMUNITY CONCERNS (Limited to 3 minutes each)

VI. REPORTS (Limited to 3 minutes each)
   a. Treasurer's Report
   b. Elected Officials
      i. Congresswoman Mazie Hirono
      ii. Governor's Representative
      iii. State Legislators
   c. Committee Chair Reports
      i. Housing- John Elkington
      ii. Cultural Affairs- Norman Kaluhiokalani
      iii. CIP/Public Works- Creighton Mattoon
      iv. Parks & Recreation- Junior Primacio
      v. Planning and Land Use- Les Steward
      vi. Public Information- Kela Miller
      vii. Health & Welfare- Dotty Kelly-Paddock
      viii. Public Safety/Transportation- Moana Kalua'u
      ix. Water- Dee Dee Letts
      x. Education- Harry Brown
      xi. Agriculture- Junior Primacio
   d. Department of Education
   e. Kahuku Community/School Library
   f. Marine Corps/U.S. Army
   g. Correspondence
   h. Community Reports

VII. ANNOUNCEMENTS

Next meeting on Thursday, June 9, 2011 from 6:00 p.m. to 8:00 p.m. at the Hauula Community Center (current location).

VIII. ADJOURNMENT

A mailing list is maintained for interested persons and agencies to receive this Board's agenda and minutes. Additions, corrections, and deletions to the mailing list may be directed to the Neighborhood Commission Office (NCO), Honolulu Hale, 530 South King Street, Room 406, Honolulu, Hawaii 96813; Telephone (808) 768-3710 or Fax (808) 768-3711; or call Neighborhood Assistant Leland Ribac at 768-3790. Agendas and minutes are also available on the internet at www.honolulu.gov/nco.

Any individual wishing to attend a Neighborhood Board meeting who has questions about accommodations for a physical disability or a special physical need should call the NCO at 768-3710 between 8:00 a.m. and 4:00 p.m., at least 24-hours before the scheduled meeting.

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DRAFT REGULAR MEETING MINUTES
THURSDAY, MAY 12, 2011
HAU'ULA COMMUNITY CENTER

CALL TO ORDER: Chair Richard Fale called the meeting to order at 6:03 p.m. **with a quorum of eight (8) members present.** Note- This 11 member Board requires six (6) members for a quorum and to take official Board action. Chair Fale read the rules of speaking.

Board Members Present: John Elkington, Richard Fale, Norman Kaluhiokalani, Moana Kalua'u, Dotty Kelly-Paddock, Dee Dee Letts, Creighton Mattoon and Junior Primacio.

Board Members Absent: Harry Brown, Kela Miller, Les Steward.

Vacancies: None.

Guests: Jason Nakata and John Katahira (The Limtiaco Consulting Group), Captain Robert Thurston (Honolulu Fire Department), Major Ken Sosa and Major Elizabeth Powers (United States Army), Michael Johanson (Brigham Young University Hawaii; Thomas Griffiths, Kimo Ahhoy, Carlos Loez and Ra Pule Elkington (Boy Scouts Troop 382 La'ie); Lieutenant John Vines (Honolulu Police Department), Barbara Kahana and Kathryn Heath (Hau'ula Community Association), Fran Corcoran (Kahuku School/Public Library), Bryan Mick (Mayor's Representative and Neighborhood Commission Office), Bobby Akoi, Kent Fonoimoana (Kahuku Community Association), Raynae Fonoimoana, Barry Usagawa (Board of Water Supply), KC Connors, Trina Ishoi (Representative Gill Riviere's Office), Choon James, Marvin Iseki , Lealani Kinikini-Kauvaka, Derrick Crawford, Mike Sakata (Councilmember Ernie Martin's Office), Leland S.M. Ribac (Neighborhood Commission Office staff).

CITY MONTHLY REPORTS:

Honolulu Fire Department (HFD): Captain Robert Thurston reported;

- Fire Statistics for April 2011: Included the Kahuku Fire Station: 5 fires, 10 emergency service calls, 2 hazardous conditions, 1 call for service, 2 good intent calls and 1 miscellaneous; the Hau'ula Fire Station: 4 fires, 18 emergency service calls, 1 hazardous condition, 1 call for service and 4 good intent calls; the Ka'a'awa Fire Station: 3 fires, 9 emergency service calls, 3 hazardous condition 2 calls for service and 2 good intent calls.

- Fire Safety Tip: HFD investigates reports of smoke to determine if a fire exists. While some fires are authorized through City and State regulations, most are unauthorized. If unauthorized, the Fire Captain will request the fire be extinguished. Examples of unauthorized and authorized fires were provided. Residents should call the Fire Communication Center at 523-4411 prior to igniting an imu.

- Follow-up Responses: Following-up from questions raised last month; Unites States Building Code notes that no more than five (5) unrelated individuals may occupy a home. Regarding 'speeding up the process' of obtaining more fire hydrants, the Board of Water Supply handles these concerns. Regarding how many residents are affected by lack of fire hydrants, there are multiple factors that would need to be considered.

Questions, comments and concerns followed:

1. Punalu'u Residential Fire: It was questioned and clarified that the water tanker truck was present at the Punalu'u residential fire in April. It was also noted that the developer was asked to put in fire hydrants in 1999; however no steps were taken from then.

2. First Wind Inverter Fire: It was questioned and clarified that a ladder truck and hazardous material (hazmat) team was present at the most recent First Wind incident. It was explained that fire stations are designated cover areas, should there have been a second emergency.

3. Relocation of Hau'ula Station: A community member questioned the status of the relocation of the Hau'ula Fire Station; Captain Thurston noted that questions regarding the relocation may be directed to Administrative Services Assistant Chief Thomas Perkins at 723-7104.

4. Boy Scouts Visitation: The Boy Scouts of Troop 382 of La'ie were recognized in the audience. Captain Thurston welcomed the troop to tour the Hau'ula Fire Station at any time.

Honolulu Police Department (HPD): Lieutenant John Vines reported;

- Crime Statistics for April 2011: Included 6 assaults, 2 auto/motorcycle thefts, 10 burglaries, 3 narcotics, 1 robbery, 22 thefts and 9 unauthorized entries to a motor vehicle (UEMV) for a total of 56 community calls.

- Crime Safety Tip: Residents were reminded that graduation season approaches and to please drive safely. Speed was a factor in the double fatality crash in April. Residents were reminded not to drink and drive.

Questions, comments and concerns followed:

1. Crime Wave in Ka'a'awa: A Board member questioned if there has been a crime wave in Ka'a'awa as the statistics are higher than normal; Lieutenant Vines explained that he does not have the complete breakdown of the statistics; however, residents may view the complete data at www.honolulupd.org.

2. Highway Diversion Signs: Concerns were raised with residents and visitors being caught in traffic for three to four hours due to a car accident. It was noted that HPD does not have the appropriate signage; the State Department of Transportation (DOT) may have the appropriate signage.

3. Burglary vs. Thefts: It was questioned and clarified that burglaries are break-ins from residential or business locations; as thefts do not involve entry to an area. It was also noted that robberies involve taking or stealing an item by force.

4. Sex Offenders Distances: A Board member questioned if there are certain laws that prohibit sex offenders from living too close to a school; Lieutenant Vines noted he is unsure of the specific laws; however, there may be one already in existence.

Mayor's Peter Carlisle's Representative: Bryan Mick reported;

- Neighborhood Commission Office (NCO): Following the City Council Budget hearings it seems that majority the NCO budget will remain in tact. J. Thomas Heinrich has been confirmed by the City Council and is now the Executive Secretary. Heinrich has served previously in the Neighborhood Board system.

- Neighborhood Board Elections: Residents were reminded that the final day to vote in the Neighborhood Board Elections is Friday, May 20, 2011. Ko'olauloa has shown the highest participation rate thus far. Residents were reminded that computers are available at the Kahuku Public Library.

- Acreage Behind Brigham Young University Hawaii (BYUH): According to the Department of Planning and Permitting (DPP), there is no zoning explicitly for a tech park in La'ie or the Ko'olauloa area. The area behind BYU Hawaii is designated as Institutional, Rural Residential and Technology Park; however, is still zoned Agricultural-2 and does not permit film or television studios.

- Envision La'ie and BYU: According to Envision La'ie and BYU, growth of the student population and related support facilities are necessary to enable the long-term sustainability of the college. Mauka lands of the campus are proposed to accommodate the future growth of BYUH. Concerns have been expressed that the cost of extending infrastructure to the back of La'ie makes is difficult to deliver affordable housing there.

- Possible Closure of BYUH and the Polynesian Cultural Center (PCC): DPP noted that it may be more appropriate for Envision La'ie to respond to the question regarding the closure of BYUH and PCC if Envision La'ie is not approved. DPP understands that the current student population is at a size where the church subsidy per student is making operations financially difficult.

- Cleaning of Streams: When cleaning streams, if the waste can fit in the trash bins without protruding, the City refuse truck may remove them; any larger debris should be taken to the nearest transfer station for disposal. Residents may contact Road Maintenance at 768-3600 for possible assistance.

- Real Property Tax (RPT) Collections by Zip Code: According to the Department of Budget and Fiscal Service (BFS), they do not have the ability to produce RPT collections by zip code. It may be possible to generate a report of RPT collections by zones, but would require a specific request and a charge.

Questions, comments and concerns followed:

1. Highway Diversion Signs: A Board member reiterated his request for possible electronic signage that may be utilized during accidents or traffic concerns; Mick to follow-up.

2. DPP's Responses: A Board member raised concerns with DPP's responses regarding Envision La'ie and BYUH, noting that is the college intends to place housing in the back, they would first need to implement infrastructure; it was requested further clarification be sought on this subject.

3. Kahuku Village Association (KVA): A community member raised concerns that KVA has been dismissed by Continental Pacific, which has left 71 families with month-to-month leases; and may lead the families into homelessness; it was noted that the Mayor should be made aware of this.

4. Traffic Advisory Methods: A community member noted that the Nixle application on cellular phones may be useful in notifying motorists of emergency traffic concerns. A Board member also noted that residents may call the Kaneohe Police Station for up-to-date traffic accidents and road closures.

5. Mayor Support for Film Industry: A community member thanked Mick for his responses and questioned if the Mayor would support the television and film industry's ideas of working with India and Bombay; Mick noted that the Mayor does support the sister-city programs and to contact Executive Director Ann Chung of the Office of Economic Development (OED).

6. Widening of Kamehameha Highway: Concerns were raised with a previously made statement, noting that Kamehameha Highway would need to be widened if the Turtle Bay Resort and Envision La'ie projects come to fruition. It was noted that Kamehameha Highway is the State's jurisdiction and the wording in the Sustainable Communities Plan is 'highway safety mediation' which could mean a variety of things.

7. Hau'ula Fire Station Costs: A community member reiterated her request from last month, questioning the difference in approximate costs of the Hau'ula Fire Station. It was noted that the projected numbers differ between an $8 million difference; Mick to follow-up.

8. Sustainable Communities Plan (SCP) Responses: A community member noted that once the Ko'olauloa Sustainable Communities Plan was completed, copies were provided to several 'possibly affected' agencies for comment; it was questioned if the State Department of Transportation (DOT) provided any feedback; Mick to follow-up.

Councilmember Ernie Martin's Representative: Mike Sakata provided the Councilmember's monthly newsletter;

- City Council Budget: A Special Budget Meeting will be held next Tuesday, May 17, 2011 at Honolulu Hale. The City Operating, Capital Improvement Projects (CIP) and Legislative budgets will be discussed. Councilmember Martin is in opposition to the proposed fuel tax increase.

- Real Property Tax (RPT): Sakata provided a handout explaining the percentage change in taxable gross valuations for 2011 for residential properties by zone. It was noted that providing the break down by zip code may be very difficult to do.

Questions, comments and concerns followed:

1. Correction in Newsletter: A Board member noted that La'ie is not spelt correctly in the Councilmember's newsletter, noting that the correct spelling includes the Hawaiian okina (apostrophe).

2. Zoning Committee Requests: A community member noted that the City Council Zoning Committee requires only six days notice to the public; it was requested that if the committee is to hear issues such as the La'ie Marriot Project to let the community know in advanced and possibly hold the meeting at night.

3. Honolulu Rail Project: Concerns were raised with the financing of the Honolulu Rail Project; a community member noted that the project will cost nearly $5.5 billion with only $1.5 billion funded by the Federal Government, leaving the remaining cost to the taxpayers.

Board of Water Supply (BWS): Barry Usagawa reported;

- Water Main Breaks/Pumpage: No water main breaks reported in the month of April. Oahu potable water consumption week ending April 30, 2011 was approximately 136 million gallons per day (mgd).

- General Water Announcement: Source pumps, booster pumps, and reservoirs play a crucial role in water delivery to the BWS. The BWS has a total of nearly of 400 source and booster pumping units as well as 170 potable reservoirs. The regular maintenance of these resources is essential. For more information visit www.boardofwatersupply.com. A handout was provided illustrating how water gets to the source taps.

Questions, comments and concerns followed:

1. Water Levels/Heavy Rains: It was noted that with the recent heavy rains island-wide water tables have remained high through the beginning summer months. Historically water tables drop due to hot weather; however, the recent rains have kept the water tables stable.

2. Water Consumption in Past: It was requested that water consumption reports of the past be provided. It was noted if the plantation years could be provided; it was noted that the Sugar Mill Plantations closed in 1971, which may be difficult to obtain.

3. Water Taken Out of Community: A community member questioned how much water is being taken out of the area; Usagawa noted that this concern was addressed in the Sustainable Waster Shed Management Plan, and noted that approximately eight million gallons of water is diverted each day.

APPROVAL OF APRIL 14, 2011 REGULAR MEETING MINUTES: **Kaluhiokalani moved and Mattoon seconded to approve the April 14, 2011 regular meeting minutes as amended** (corrections below). **The motion was ADOPTED UNANIMOUSLY, 8-0-0 (Aye:** Elkington, Fale, Kaluhiokalani, Kalua'u, Kelly-Paddock, Letts, Mattoon and Primacio**.)**

- **Page 4:** U.S. Army: Replace 'Sergeant First Class Wheeler' with 'Major Elizabeth Powers'.
- **Page 5:** Approval of March 10, 2011 Regular Meeting Minutes: Include: Ka'a'awa Elementary School was not one of these.' (Pertaining to schools suffering from low enrollment).

BOARD BUSINESS: Kahuku Wells Environmental Assessment (EA): Jason Nakata and John Katahira of the Limtiaco Consulting Group provided handouts and diagrams noting that a Draft EA has been prepared and copies will be available at the Kahuku Public Library and the Hawaii State Library. Comments will be accepted through June 6, 2011.

- Background and Existing Conditions: There are currently two existing wells at the Kahuku Well Station. It was noted that the entire Kahuku water system is independent of its neighboring water systems. Each of the existing wells pumps nearly 1 million gallons of water per day.

- Projected Objectives: The project intends to include a third well, first beginning with an exploratory well and ultimately a permanent well. The project aims to increase reliability and increase pumping capacity to the overall Kahuku system. The project also includes an emergency generator to be placed at the station.

- Funding and Proposed Schedule: The project will include drilling, casing and testing of the third well, and is planned for Fiscal Year (FY) 2012. The project will be funded by the BWS and is currently proposed in the BWS's 6-year Capital Program for FY 2010-2015 and is estimated to cost $1,560,000.

Questions, comments and concerns followed:

1. Depth of Existing/Proposed Wells: It was questioned and clarified that the existing wells are approximately 30-feet below sea level or approximately 300 feet underground. The exploratory well will be at the same elevation of the other wells; however, the depth will have to be determined through exploration.

2. Emergency Use/Rotation: It was clarified that although the third well, if found successful, could increase the pumpage to 3 million gallons per day, that is not the intention. Together the three wells would be rotated and if needed, the third well may be used in an emergency situation. It was also clarified that the emergency generator will be able to provide energy for the entire site.

3. Water Committee: Water Committee Chair Letts was very pleased that an emergency generator is being added. Letts noted that the next regular Board meeting is after the comment deadline; however, comments may be made before then, and formal Board positions would be accepted after the June 6, 2011 deadline.

4. Adverse Impacts: It was questioned and clarified that if the exploratory well is found to adversely impact the two existing wells, or the immediate area, the well will be capped.

5. Alternative Energy Sources: It was questioned and clarified that this project's intent did not specifically involve alternative energy resources; it was noted that diesel will be used and BWS may look into the use of bio-diesel in the future.

6. Construction Timeline: It was explained that the project is currently in the Draft EA phase, and is accepting comments through June 6, 2011. The exploratory well is expected to be funded in FY 2012, if the exploratory well is successful construction would commence in 2013.

7. Malaekahana and La'ie Water System: Several concerns were raised with the possibility of the water from Kahuku to be connected to Malaekahana or La'ie; Usagawa reassured residents that there is no intention to connect the Kahuku water system to any other community at this time.

8. Complete the Turtle Bay Improvements: Concerns were raised with the third well being able to pump enough water which may then be used to complete the northern end of the Turtle Bay Resort. It was noted that the Turtle Bay Resort utilizes a separate water system; the Kawela Water System.

9. Water Use Permits and Public: It was questioned and clarified that this project is not looking to change the maximum allowable pumpage rate; as that change or any change involving piping of any sort would require a water use permit and would need to go through public comment periods.

10. Best Possibility for Kahuku: A Board member commented on the project, noting that he is presuming this plan is the best and fastest project to provide reliable water resources to Kahuku.

Hawaiian Electric Company (HECO) Renewable Energy: Chair Fale noted that HECO was unable to attend tonight's meeting; however, would like to add them to the agenda on a monthly basis. A Board member noted that monthly reports would be unnecessary; however, the Board would like to hear a specific presentation regarding renewable energy. Chair Fale will include HECO on the June regular meeting agenda.

RESIDENTS'/COMMUNITY CONCERNS: Several concerns were raised at this time;

Take Back the Community: A community member voiced concerns regarding teenage drug use and homelessness in the district. It was noted that homeless residents have taken refuge in City park restrooms and have begun to block residents or charge them a fee from using them. Residents were encouraged to stand together and take back the community for the greater good. It was noted HPD was called on several occasions but provided no assistance.

Hau'ula Candidates Forum: Several community member raised issue with the lack of participation and or responses from several Hau'ula Neighborhood Board candidates at last weeks Hau'ula Community Association (HCA) hosted candidate's forum. Chair Fale was asked why he did, along with other members of his family did not attend; Chair Fale noted he has been on-call with the military and his family members were prepping for graduation. It was also questioned and clarified that Chair Fale's wife is recognized through her maiden name.

Neighborhood Security Watch (NSW): Several Board members thanked the community member for his concerns regarding homelessness and drug use amongst the youth. It was noted that HCA and its members are attempting to establish an NSW with HPD. The community will be informed of any breaking news regarding the NSW.

La'ie/Hawaii Reserves Inc. Publication: Several concerns were raised regarding an email publication distributed by Hawaii Reserves Inc. (HRI) and the La'ie community which noted that several Hau'ula Neighborhood Board candidates have withdrawn their candidacy. Also on the publication endorsed other candidates in the Hau'ula race.

Hau'ula Street Vendors: A community member raised concerns with the recent opposition to street vendors along the coastline and in Hau'ula. It was noted that the residents of Hau'ula enjoys the street vendors.

HPD's Unresponsiveness: A Board member raised issue with the lack of HPD's help in regards to the homeless in the parks restrooms. The Board member requested Chair Fale converse with HPD on this matter prior to the next Board meeting, and suggest a solution be provided then.

Candidates on the Ballot: It was questioned and clarified that Neighborhood Board candidates in Hau'ula have withdrawn from the Board race; however, due to stipulations were not able to remove their names from the online ballot in time. Bryan Mick of the NCO also noted that there have not been formal resignations thus far, as the resignation would have to be in writing.

Outside Community Influence: Several community members voiced concerns with the outside influence of other communities, such as La'ie, becoming involved with the race in Hau'ula. It was noted that although community members may dislike this influence, it is not prohibited and may be viewed as campaigning.

Positive Youth Outlets: A community member voiced support for alternative youth group programs such as a new film club at Kahuku Hugh School and the Olelo Youth Exchange Trials. It was noted that through youth programs the children would have a positive outlet, and not turn to drugs in the community.

Hau'ula Fire Station Accusations: A community member noted that the influences of outside communities have been done in the past, noting that La'ie residents tried to influence residents in Hau'ula in regards to the proposed Hau'ula Fire Station. Several comments were made accusing outside residents of lying on several occasions.

Due to improper conduct and heated conversations, Chair Fale called a recess at 8:13 p.m. The meeting reconvened briefly at 8:20 p.m.; however, accusations and verbally abusive statements continued and a short recess was again called at 8:21 p.m. The meeting reconvened at 8:22 p.m.

Community Voiced Opinions: Several concerns were raised, noting that the community is entitled to voice their concerns during this portion of the agenda. It was explained that the Board welcomes any and all concerns from the community; however, name calling and accusations should not be voiced at any time during the meeting.

La'ie Bothering With Hau'ula: Several community members reiterated concerns with residents from the La'ie community and members of HRI interfering with the Hau'ula race, it was noted that honesty and fairness should be priority in the community.

Sacred Falls Site: A community member reiterated his suggestion previously made at a past Board meeting, to utilize the areas commonly known as 'Sacred Falls' for the proposed Hau'ula Fire Station. Concerns were raised with the fact that the current site selection is inundated with community concerns and issues.

Recognize the Ways of the People: A community member noted that the Board and community should recognize the way of the people and to be pono in conducting Board meetings. A comment was made that it was disrespectful for candidates to not show up at the Hau'ula forum; and that residents should not be influenced by outside interests or monies. It was noted that the Ha (breathe/life) runs deeper in the community than anything else.

REPORTS: **Kaluhiokalani moved and Mattoon seconded to continue with the agenda and hear reports from the designated representatives that are present tonight. The motion was ADOPTED UNANIMOUSLY, 8-0-0, (Aye:** Elkington, Fale, Kaluhiokalani, Kalua'u, Kelly-Paddock, Letts, Mattoon and Primacio**.)**

Elected Officials: No reports provided from Congresswoman Mazie Hirono, the Governor's Representative or State Representative Jessica Wooley's office.

State Legislators: Representative Gil Riviere: Trina Ishoi apologized as the Representative was unable to attend tonight's meeting as he will be on Public Broadcasting Service (PBS) tonight. Representative Riviere did note that session was very interesting and he enjoyed his time. Residents were invited to the Laniakea Realignment Traffic meeting on Wednesday, May 25, 2011 ay 6:30 p.m. at Haleiwa Elementary School.

Questions, comments and concerns followed: Mahalo for Farmer's Meeting: A Board member thanked the Representative for his presence at the Talk Story: Farmer's Issues at the Kahuku Public Library. It was requested that Ishoi follow-up on the proposed co-op wholesale distribution center.

Kahuku Community/School Library: Fran Corcoran thanked Board member Primacio and Representative Riviere for their talk story event held at the library. Residents were encouraged to utilize the library's computer to vote in this year's Neighborhood Board elections. Copies of the June 2011 calendar were provided, highlighting several free summer programs for the family including; 'Balance and Falls' and 'Read to Succeed Magic Show'.

Marine Corps Base Hawaii (MCBH): No report or representative present at this time.

U.S. Army: Major Elizabeth Powers reported;

- Increased Security on Base: Due to heightened security awareness, the Army has increased precautions at its installations by raising the Force Protection Condition to 'Bravo'. Visitors should allow extra time, especially during morning hours.

- Memorial Day Remembrance Ceremony: U.S. Army Garrison Hawaii will hold its annual Installation memorial Day Remembrance Ceremony on Monday, May 30, 2011 at the Schofield Barracks Post Cemetery beginning at 9:00 a.m. Visitors may enter Schofield via Lyman Gate.

- Hawaii Military Appreciation Month: The U.S. Army Museum of Hawaii at Fort DeRussy in Waikiki will host a Military History Day on Saturday, May 21, 2011 from 9:00 a.m. to 3:00 p.m. Residents are welcome to attend a Combined Military Band Concert at the Hawaii Theater on Saturday, May 21, 2011.

- Oahu Army Natural Resource Program: The Oahu Army Natural Resources staff leads volunteer service trips each month to help protect rare and endangered plant and animals on Army land. This month's service trips include Kahanahaiki, Pahipahialua and Kalua'a. For more information contact 656-7641.

- Current Deployments: Deployments include approximately 600 soldiers from the 25th Infantry Division Headquarters; 25th Infantry Division, 3rd Brigade; 25th Infantry Division, 2nd Stryker Brigade Combat Team and the 8th Theater Sustainment Command.

- Next Month Representation: Major Powers recognized Major Ken Sosa in the audience and explained that the Army may or may not have a representative present next month due to deployments. Powers thanked the community, noting that she feels very welcomed and a part of the family. Applause followed.

Correspondence: Due to a previous motion, no correspondences were shared.

Kaluhiokalani moved and Mattoon seconded that this meeting adjourn at this time. Board member Kelly-Paddock requested that the Hau'ula Community Report be included in the Board minutes. **The motion to adjourn was ADOPTED UNANIMOUSLY, 8-0-0, (Aye:** Elkington, Fale, Kaluhiokalani, Kalua'u, Kelly-Paddock, Letts, Mattoon and Primacio**.)**

Community Reports: Hau'ula: Per Board member Kelly-Paddock's request, the below report was inserted;

Hau'ula Coastal Community Resilience Plan Presentation by University of Hawaii. Dept. of Urban Development. A slide presentation was provided on the final report for Hau'ula's Community Resilience Plan. We also participated in an activity to prioritize what community members felt were the highest priorities to make our community more resilient. This plan will be integrated with the HELP plan in Hau'ula.
Candidates for Neighborhood Board Forum. Four candidates showed up at the meeting to share their commitment with the Hau'ula community through service and leadership. These were Dotty Kelly-Paddock, Barbara Kahana, Jerome Uluave and Kathryn Heath. All ten of the candidates running for seats to represent Hau'ula on the KNB were invited. The elections are being held May 2-20; voting is through internet or by phone. Hau'ula residents

who want to vote online can use computers at Worklinks Monday through Wednesdays during work hours. This forum helped HCA know who the candidates were and what they stand for, the election process, and also raised some other very important, interesting discussions.

Hau'ula Strategic Plan - HCA/ Hui o Hau'ula members met on April 26th with Lehua Lopez - revisions were made on the Hau'ula Strategic Plan. Another meeting will be planned for June 2011 to finalize the Hui O Hau'ula Strategic Plan.

Eagle Scout Proposals - Sonny Ah Puck – asked for projects that the scouts can do – HCA will give him a list. BSA doesn't pay for materials but basically provides the service. All projects need to be approved by BSA. QUESTIONS: What is timeframe? Certain projects may be too much. For example, Jerome's son wants to clear the park but he cannot use heavy equipment without a permit. Some project examples are: bus stops, bike racks for parking bikes, school clean up, put fresh drinking water on field for football kids and replacing a sign for the Hau'ula Trailhead. There needs to be a match with the boy and project and the process e.g.

Hau'ula Elem. School Monday May 9th special event 4- 5- 6th grade students – QLCC and Hawaiian Hope Organization – getting free computers for home use. Parents will go to a class on Monday – if parent comes they can take home computer for child to use – students have own computer for their use for education. Educational software and word processing programs and Kid Biz reading program will be loaded up. May Day. Staff and faculty will do a surprise number Fri May 13th 9 am (unfortunately same May Day as Kahuku Elem). Final round of H.S.A testing on line computer based – some challenges – lst to second scores increased and hoping from second to third will also increase. Hopefully students will keep improving with each try. Next school year - allocations are lower and there will be cuts. Sam says that they are not where they want to be academically but are making progress.

Hau'ula Civic Center. Hopefully HCA will get keys sometime during May so we can use the rooms for HCA community activities. We appreciate Ernie Martin's support!

HELP Committee. Burt said that there are 462 homes in the tsunami inundation zone in Hau'ula – not having a designated shelter to go to is a problem – 200 – 300 people went to mauka LDS chapel, 200 plus at Keoho's and some at Dotty's. Elaine Chang Foundation and Winberg Fdn. (Hauula Shopping Ctr) do not want to cooperate due to liability. Burt is continuing to meet with faith-based organizations in our community. We still hope to get radios, water, trailers and bathrooms. Three sirens will be working soon.

Meeting/Group on Steam Flooding Issues - June 2 a meeting will be held to discuss stream flooding issues and solutions. Location to be announced. See the HCA website for more details. Amy Madsen will lead this initiative on stream flooding in Hau'ula.

Park Coalition Master Plan - A HCA meeting is coming up with DPR on all Hau'ula park issues (relating to letter and resolutions). Date is May 25th at 5:30 PM. Location to be announced. Watch the HCA website for details.

Hau'ula Kuleana Awareness Day planning meeting was held May 5th at Rainbow Castle building. Help us to plan this event. Next meeting is June 1 at 6 PM at the Hau'ula Kai Shopping Cent4er in the KCHWC Board Room in the center of the shopping Center.

Reschedule Laie Inn Public Hearing Meeting will be posted 6 days before the actual meeting, usually on a Thursday. Mike Sakata will send this to Dotty to send out to HCA members. Watch the HCA website for more details.

Hauula Community Park-$140,000 in replace money is promised for baseball field backstop. We discussed the possibility of asking to adopt all the parks in Hau'ula to collaborate on running the parks . Dotty talked to Clint at DPR. We also discussed how business representatives are partnering with parks on the mainland and perhaps this can this be done here.

Cancer Relay for Life May 27 – 28 Fri 6 pm til Sat 6 am food entertainment, Hauula Community Park.

Other Community Concerns: Hau'ula Street Vendors have expressed concern that some people are trying to shut them down. They are asking for community support and may form their own association. Vending across from Hau'ula Beach Park is a way that local vendors from our community can sell their products to build community economic ventures and provide opportunities for community members to have a wider range of products for less money. A meeting will be held on May 26 for vendors to dialog with the community to problem-solve issues. Location of meeting is to be announced on the HCA website.

ANNOUNCEMENTS: Due to the motion to adjourn, no announcements were made.

ADJOURNMENT: The meeting adjourned at 8:55 p.m.

Submitted By: Leland S.M. Ribac, Neighborhood Assistant

Reviewed By: Richard Lee Fale, Chair

APPENDIX D
DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS AND RESPONSES

NEIL ABERCROMBIE
GOVERNOR

KATHRYN S. MATAYOSHI
SUPERINTENDENT

05-18-11P

STATE OF HAWAI'I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI'I 96804

05-13-11P05:17 RCVD

OFFICE OF THE SUPERINTENDENT

May 17, 2011

Mr. Dean A. Nakano, Deputy Manager
Attn: Scot Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 South Beretania Street
Honolulu, Hawai'i 96813

Dear Mr. Nakano:

Subject: Draft Environmental Assessment for Kahuku Wells, Unit No. 3
TMK 5-6-008:005, Kahuku, Oahu, Hawaii

The Department of Education (DOE) has reviewed the Draft Environmental Assessment for Kahuku Wells, Unit No. 3 project.

The DOE has no comment to offer.

If you have any questions, please call Jeremy Kwock of the Facilities Development Branch at 377-8301.

Very truly yours,

Kathryn S. Matayoshi
Superintendent

KSM:jmb

c: Randolph Moore, Assistant Superintendent, OSFSS
Lea Albert, CAS, Castle/Kahuku Complex Areas
√John Katahira, Project Manager, The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

June 2, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
ANTHONY R. GUERRERO, JR.
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

Ms. Kathryn S. Matayoshi, Superintendent
Office of the Superintendent
Department of Education
State of Hawaii
P. O. Box 2360
Honolulu, Hawaii 96804

Attn: Jeremy Kwock, Facilities Development Branch

Dear Ms. Matayoshi:

Subject: Your Letter of May 17, 2011 Regarding the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-008: 005, Kahuku, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment for the Kahuku Wells Unit No. 3 project.

We acknowledge that you have no comments to the proposed project.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group

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:
SDWB

May 10, 2011

Mr. Dean A. Nakano, Deputy Manager
Attention: Scot Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Nakano:

SUBJECT: KAHUKU WELLS, UNIT NO. 3
DRAFT ENVIRONMENTAL ASSESSMENT
TMK: 5-6-008:005, KAHUKU, OAHU, HAWAII

The Safe Drinking Water Branch (SDWB) has reviewed the subject document and has no comments.

If there are any questions, please call Jennifer Nikaido at 586-4258.

Sincerely,

for JOANNA L. SETO, P.E, CHIEF
Safe Drinking Water Branch
Environmental Management Division

JN:cb

c: Mr. John Katahira, Project Manager
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, Hawaii 96817

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

June 2, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
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ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

Ms. Joanna L. Seto, P.E., Chief
Safe Drinking Water Branch
Environmental Management Division
Department of Health
State of Hawaii
P. O. Box 3378
Honolulu, Hawaii 96801-3378

Dear Ms. Seto:

Subject: Your Letter of May 10, 2011 Regarding the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-008: 005, Kahuku, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment for the Kahuku Wells Unit No. 3 project.

We acknowledge that you have no comments to the proposed document.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

June 6, 2011

06-09-11P05:03 RCVD

City and County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96843

Attention: Mr. Scot Muraoka, Project Engineer

Ladies and Gentlemen:

Subject: Draft Environmental Assessment for Kahuku Wells, Unit No. 3

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR), Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comment.

Other than the comments from Engineering Division, Division of Forestry & Wildlife, the Department of Land and Natural Resources has no other comments to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0414. Thank you.

Sincerely,

for Russell Y. Tsuji
Administrator

Cc: The Limtiaco Consulting Group

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

→ FYR. Section

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

May 9, 2011

MEMORANDUM

TO: **DLNR Agencies:**
x Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
x Engineering Division
x Div. of Forestry & Wildlife
__Div. of State Parks
x Commission on Water Resource Management
__Office of Conservation & Coastal Lands
__Land Division –
x Historic Preservation

FROM: Charlene Unoki, Assistant Administrator Charlene
SUBJECT: Draft Environmental Assessment for Kahuku Wells, Unit No. 3
LOCATION: Island of Oahu
APPLICANT: The Limtiaco Consulting Group on behalf of Board of Water Supply

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by June 4, 2011.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: Paul J Conry
Date: 5/27/11

RECEIVED
LAND DIVISION
2011 MAY 31 P 2:51
DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

May 9, 2011

MEMORANDUM

TO: **DLNR Agencies:**
x Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
x Engineering Division
x Div. of Forestry & Wildlife
__Div. of State Parks
x Commission on Water Resource Management
__Office of Conservation & Coastal Lands
__Land Division –
x Historic Preservation

FROM: Charlene Unoki, Assistant Administrator Charlene
SUBJECT: Draft Environmental Assessment for Kahuku Wells, Unit No. 3
LOCATION: Island of Oahu
APPLICANT: The Limtiaco Consulting Group on behalf of Board of Water Supply

Transmitted for your review and comment on the above referenced document. We would appreciate your comments on this document. Please submit any comments by June 4, 2011.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact my office at 587-0433. Thank you.

'11 MAY 10 AM 11:00 ENGINEERING

Attachments

( ) We have no objections.
( ) We have no comments.
(x) Comments are attached.

Signed: _____
Date: 5/20/11

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/CharleneUnoki
REF.:DEAKahukuWells3
Oahu.834

COMMENTS

(X) **We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone D. The Flood Insurance Program does not have any regulations for developments within Zone D.**

( ) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone____.

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

( ) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

( ) Mr. Robert Sumitomo at (808) 768-8097 or Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting..

( ) Mr. Carter Romero at (808) 961-8943 of the County of Hawaii, Department of Public Works.

( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.

( ) Ms. Wynne Ushigome at (808) 241-4890 of the County of Kauai, Department of Public Works.

( ) The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands requiring water service from the Honolulu Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update

( ) Additional Comments: _____

( ) Other: _____

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 5/20/1

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

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WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

July 15, 2011

07-20-11P01:34 RCVD

Mr. Russell Y. Tsuji, Administrator
Land Division
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Tsuji:

Subject: Your Letter of June 6, 2011 Regarding the Draft Environmental Assessment for Kahuku Wells, Unit No. 3, TMK: 5-6-008:005, Kahuku, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment (EA) for the Kahuku Wells Unit No. 3 project.

We have the following responses to the Department of Land and Natural Resources comments:

1. We acknowledge that the Division of Forestry & Wildlife has no comments.

2. We acknowledge the Engineering Division's confirmation that the project site is within flood Zone D and that the Flood Insurance Program does not have any regulations for developments within this zone as indicated in the subject EA.

If you have any questions, please contact Iris Oda at 748-5946.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group

NEIL ABERCROMBIE
GOVERNOR

GLENN M. OKIMOTO
DIRECTOR

Deputy Directors
FORD N. FUCHIGAMI
JAN S. GOUVEIA
RANDY GRUNE
JADINE URASAKI

06-22-11P02:26 RCVD

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

IN REPLY REFER TO:

STP 8.0457

June15, 2011

Mr. Dean A. Nakano, Deputy Manager
Board of Water Supply
City and County of Honolulu
630 S. Beretania Street
Honolulu, Hawaii 96843

Attn: Scot Muraoka

Dear Mr. Nakano:

Subject: Kahuku Wells, Unit No. 2 Project
Draft Environmental Assessment (DEA)

Thank you for requesting the State Department of Transportation's (DOT) review of the subject project. DOT understands the City and County of Honolulu, Board of Water Supply (BWS) proposes to install a third well and an emergency generator at its existing Kahuku Wells Station located in Kahuku, Oahu and that direct access to the subject project site is from the Kahuku Wells Access Road.

Given the project's location, DOT does not anticipate any significant, adverse impacts to the nearby State transportation facilities, Kamehameha Highway. However, the BWS should also coordinate with DOT Highways Division, Oahu District Office, regarding a permit to transport any oversized or overweight equipment/loads within State highway facilities.

DOT appreciates the opportunity to provide comment. If there are any questions or the need to meet with DOT staff, please contact Mr. David Shimokawa of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Very truly yours,

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

c: John Katahira, The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
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GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

July 15, 2011

07-20-11P01:34 RCVD

Glenn M. Okimoto, Ph.D., Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Dr. Okimoto:

Subject: Your Letter of June 15, 2011 Regarding the Draft Environmental Assessment for Kahuku Wells, Unit No. 3, TMK: 5-6-008:005, Kahuku, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment (EA) for the Kahuku Wells Unit No. 3 project.

We acknowledge that significant adverse impacts in association with the proposed project given the project site's location and access is not anticipated to the nearby State transportation facilities, Kamehameha Highway. As indicated in the EA, the required permit to operate or transport any oversized and/or overweight vehicles and loads within State highways will be obtained and coordinated with the State Department of Transportation - Highways Division, Oahu District Office, if one is required.

If you have any questions, please contact Iris Oda at 748-5946.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group

PHONE (808) 594-1888

FAX (808) 594-1865

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

HRD11/5192B

May 24, 2011

06-05-11 P02:11 RCVD

Scott Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawai'i 96843

RE: Draft Environmental Assessment
Kahuku Well Station, Unit 3
Kahuku, Island of O'ahu

Aloha e Scott Muraoka,

The Office of Hawaiian Affairs (OHA) is in receipt of your May 3, 2011 letter seeking comments on a draft environmental assessment (DEA) prepared for the Board of Water Supply (BWS) to support the proposed construction, installation and operation of a third well and emergency generator at the Kahuku Well Station (station) in Kahuku on the Island of Oa'hu. Originally constructed in 1979, the station current consists of two operating wells which each have a capacity to draw approximately 1 million gallons of water per day from the Ko'olau Loa Aquifer System. The station provides the only source of potable water for the Kahuku BWS service area. If this test pumping determines that this third well can operate as a production well, the capacity and reliability of BWS service to the Kahuku community will be improved.

The *Koolau Loa Watershed Management Plan: O'ahu Water Management Plan* (August 2009) , which was adopted by the Honolulu City Council and signed into law by the Mayor in 2010 established the sustainable yield of the Ko'olau Loa Aquifer System at 36 million gallons of water per day (mgd). Sustainable yields are meant to guide future planning and define the maximum rate at which water may be drawn from an aquifer system without impacting the utility and quality of the source as defined by the Commission on Water Resources Management (CWRM). OHA sees this guidance from the CWRM as they work to fulfill their mandates to protect our precious water resources for future generations as absolutely critical. To date, CWRM has issued Water Use Permits totaling 18.628 mgd to all sources within the Ko'olau Loa Aquifer System, with the BWS allocated approximately 8.915 mgd which distributed among 16 wells. With this in mind, OHA recognizes that if the third well is outfitted as a production well with a 1 million mgd maximum capacity, the total draw from the Ko'olau Loa Aquifer System will still be below the maximum defined by the CWRM.

We have no objections to the anticipated "finding of no significant impact" determination in the DEA and look forward to seeing this project completed so BWS service to the Kahuku community is improved. Thank you for the opportunity to provide comments. Please send an electronic copy of the final environmental assessment to us for our records. Should you have any questions, please contact Keola Lindsey at 594-0244 or keolal@oha.org.

'O wau iho nō me ka 'oia'i'o,

Clyde W. Nāmu'o
Chief Executive Officer

C: John Katahira, The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, Hawai'i 96817

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

July 15, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
ANTHONY R. GUERRERO, JR.
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

07-20-11P01:34 RCVD

Mr. Clyde W. Nāmuʻo, Chief Executive Officer
Office of Hawaiian Affairs
State of Hawaii
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

Dear Mr. Nāmuʻo:

Subject: Your Letter of May 24, 2011 Regarding the Draft Environmental Assessment for Kahuku Wells, Unit No. 3, TMK: 5-6-008:005, Kahuku, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment (EA) for the Kahuku Wells Unit No. 3 project.

We acknowledge that the Office of Hawaiian Affairs (OHA) has no objections to the anticipated "finding of no significant impact" determination for the proposed project and looks forward to the project's completion. Per your request, an electronic copy of the forthcoming Final EA will be provided for OHA's records.

If you have any questions, please contact Iris Oda at 748-5946.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group

FAX TRANSMITTAL SHEET

ENVIRONMENTAL CENTER
University of Hawaii
2500 Dole Street, Krauss Annex 19, Honolulu, HI 96822
Telephone: (808) 956-7361 Fax: (808) 956-3980

DATE: 06/08/2011

FROM: Philip Moravcik
Water Resources Research Center
956-3097

TO: Honolulu Board of Water Supply (Scot Muraoka)
748-

Limtiaco Consulting (John Katahira)
596-7361

OEQC
586-4186

SUBJECT: **Draft Environmental Assessment**
Kahuku Wells, Unit No. 3

No. of Pages: including cover sheet: 3

Water Resources Research Center
Environmental Center

UNIVERSITY of HAWAI'I
MĀNOA

June 08, 2011

EA: 00326

Dean A. Nakano, P.E, Deputy Manager
Attn: Scot Muraoka, Project Engineer
City and County of Honolulu, Board of Water Supply
630 S. Beretania Street
Honolulu, HI 96843

Dear Mr. Nakano,

Draft Environmental Assessment

Kahuku Wells Unit No. 3, Kahuku, Oahu

The City and County of Honolulu, Honolulu Board of Water Supply (HBWS) proposes to construct a water well to increase capacity and reliability of the Kahuku Wells Station. This station is the sole municipal source of potable water to the Kahuku area since it is an isolated well group with no connection to other HBWS water sources. The installation of an additional well is needed to provide additional water capacity for planned developments and to provide redundancy in case of a failure of one of the two existing wells.

This review of HBWS's Draft Environmental Assessment (Draft EA) is a service activity of the Environmental Center to help determine and maintain the optimum quality of the environment. It is not intended to represent the official views of the University of Hawaii. The objectives of our review process are to enhance environmental consciousness, encourage cooperation and coordination, and facilitate public participation. These comments were drafted with the assistance of Robert Whittier, Geology & Geophysics, UH-Manoa.

General Comments

Our review focused on the hydrogeologic description and the contamination risk analysis. The Draft EA was well done, met all requirements, and provided much valuable information. In addition to our general comments, we have a few specific comments regarding potential water quality impacts and site specific hydrogeology.

1. We plotted the well location in relation to that of potentially contaminating activities contained in the Source Water Assessment Program database for the island of Oahu. Consistent with the Draft EA, we found few listed potentially contaminating activities within the two and ten year capture zones. Those

2500 Dole Street, Krauss Annex 19 Honolulu, Hawai'i 96822
Telephone: (808) 956-7361 Fax: (808) 956-3980
An Equal Opportunity/Affirmative Action Institution

listed include a septic system, utility substation, some residential parcels, and a small amount of agricultural land.

2. During the well drilling process an open conduit will exist between the ground surface and the water table providing a potential pathway for contamination. Although this risk is addressed in general terms on page 3-19, the emphasis placed on this serious pathway for contamination should be comparable to that placed on erosion during well testing. We would recommend a more detailed plan to deal with groundwater contamination risk posed by the accidental introduction of contaminants, such as hydraulic fluid from the drilling, while the bore hole is open.

3. On page 3-11, the EA lists the aquifer as being basal in a dike intruded area. According to *Aquifer Identification and Classification for Oahu: Groundwater Protection Strategy for Hawaii, Mink, J.F., and Lau, L.S.*, the aquifer is in flank lavas rather than dike intruded lavas.

Thank you for the opportunity to comment on this Draft Environmental Assessment (DEA). When the Final EA is distributed, please send one printed copy to the Environmental Center.

Sincerely,

Philip Moravcik
Water Resources Research Center

cc: State of Hawaii Office of Environmental Quality Control (OEQC)
Chittaranjan Ray, Interim Director, Water Resources Research Center, UH Manoa
John Katahira, The Limtiaco Consulting Group
Robert Whittier

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
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DUANE R. MIYASHIRO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

DEAN A. NAKANO
Acting Manager

August 29, 2011

09-30-11P01:10

Mr. Philip Moravcik
Water Resources Research Center
Environmental Center
University of Hawaii
2500 Dole Street, Krauss Annex 19
Honolulu, Hawaii 96822

09-30-11P01:11 RCVD

Dear Mr. Moravcik:

Subject: Your Letter of June 8, 2011 Regarding the Draft Environmental Assessment for the Kahuku Wells, Unit No. 3, TMK: 5-6-008: 005, Kahuku, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment (EA) for the Kahuku Wells, Unit No. 3 project.

We have the following responses to your comments:

1. We acknowledge that the Source Water Assessment Program database lists few potentially contaminating activities within the site's two- and ten- year capture zones and those activities include a septic system, utility substation, some residential parcels, and a small amount of agricultural land.

2. The well construction contract will require Best Management Practices to address the risk of potential groundwater contamination through the open borehole.

3. We acknowledge that the aquifer is in flank lavas instead of dike-intruded lavas. The correction will be reflected in the Final EA.

As requested, a printed copy of the Final EA will be provided for the Water Resources Research Center's records.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group

DEPARTMENT OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU
715 SOUTH KING STREET, SUITE 311 • HONOLULU, HAWAII 96813 • AREA CODE 808 • PHONE: 768-7762 • FAX: 768-7792

PETER B. CARLISLE
MAYOR

SAMUEL E. H. MOKU
DIRECTOR

BRIDGET HOLTHUS
DEPUTY DIRECTOR

May 10, 2011

05-17-11P03:34 RCVD

Mr. John Katahira
Project Manager
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, Hawaii 96817

Dear Mr. Katahira:

Subject: Draft Environmental Assessment
Kahuku Wells, Unit No. 3
TMK: 5-6-008: 005
Kahuku, Oahu, Hawaii

We have reviewed your letter dated May 4, 2011 and the Draft Environmental Assessment (DEA) regarding the subject project, and wish to thank you for providing us the opportunity to comment.

Our review of the information provided, indicates that the proposed project will have no adverse impacts on any Department of Community Services' activities or projects in the area at this time. Thank you again for providing this opportunity to comment on this matter.

Sincerely,

Samuel E. H. Moku
Director

SEHM:sk

cc Scot Muraoka, Project Engineer
Board of Water Supply

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

June 2, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
ANTHONY R. GUERRERO, JR.
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

TO: SAMUEL E. H. MOKU, DIRECTOR
DEPARTMENT OF COMMUNITY SERVICES

FROM: DEAN A. NAKANO, ACTING MANAGER

SUBJECT: YOUR LETTER OF MAY 10, 2011 TO THE LIMTIACO CONSULTING GROUP REGARDING THE BOARD OF WATER SUPPLY'S DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS UNIT NO. 3, TMK: 5-6-008: 005, KAHUKU, OAHU, HAWAII

Thank you for reviewing the Board of Water Supply's Draft Environmental Assessment for the Kahuku Wells Unit No. 3 project.

We acknowledge the project should have no adverse impact on any Department of Community Services' activities or projects in the area.

If you have any questions, please contact Scot Muraoka at 748-5942.

cc: John Katahira, The Limtiaco Consulting Group

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

PETER B. CARLISLE
MAYOR

COLLINS D. LAM, P.E.
DIRECTOR

LORI M. K. KAHIKINA, P.E.
DEPUTY DIRECTOR

05-25-11P03:00 RCVD

May 24, 2011

Mr. John Katahira
Project Manager
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, Hawaii 96817

Dear Mr. Katahira:

Draft Environmental Assessment
Kahuku Wells, Unit No. 3

The Department of Design and Construction has no comments on this project.

Thank you for the opportunity to review and comment. Should there be any questions, please contact me at 768-8480.

Sincerely,

Collins D. Lam, P.E.
Director

CDL:lm (415371)

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

July 15, 2011

07-20-11P01:33 RCVD

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
ANTHONY R. GUERRERO, JR.
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

TO: COLLINS D. LAM, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

FROM: DEAN A. NAKANO, ACTING MANAGER

SUBJECT: YOUR LETTER OF MAY 24, 2011 TO THE LIMTIACO CONSULTING GROUP REGARDING THE BOARD OF WATER SUPPLY'S DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS, UNIT NO. 3, TMK: 5-6-008:005, KAHUKU, OAHU, HAWAII

Thank you for reviewing the Board of Water Supply's Draft Environmental Assessment for the Kahuku Wells Unit No. 3 project.

We acknowledge that the Department of Design and Construction has no comments on this project.

If you have any questions, please contact Iris Oda at 748-5946.

cc: John Katahira, The Limtiaco Consulting Group

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

PETER B. CARLISLE
MAYOR

DAVID K. TANOUE
DIRECTOR

JIRO A. SUMADA
DEPUTY DIRECTOR

06-02-11P07:35 RCVD

2011/ELOG-1035(sn)

May 31, 2011

MEMORANDUM

TO: DEAN A. NAKANO, DEPUTY MANAGER
BOARD OF WATER SUPPLY

ATTN: SCOT MURAOKA, PROJECT ENGINEER

FROM: DAVID K. TANOUE, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
KAHUKU WELLS, UNIT NO. 3, KAHUKU, O'AHU
TAX MAP KEY 5-6-8: 5

The Department of Planning and Permitting (DPP) has reviewed the subject Draft Environmental Assessment (DEA) and offer the following comments:

1. Revise Section 4.4 of the DEA relating to the five-year review of the Ko'olau Loa Sustainable Communities Plan (SCP) to indicate that the revised Public Review Draft, dated October 2010, was circulated for public review and comment, and a proposed revised SCP is being prepared.

2. Page 4-9 of the DEA includes a brief discussion of the City's Public Infrastructure Maps (PIM). However, the PIM is not part of Section 4.8.1 of the Ko'olau Loa SCP. Constructing a new potable water well is required to be shown on the PIM in accordance with Section 4-8.3(17), Revised Ordinances of Honolulu. Therefore, the Final Environmental Assessment (FEA) should be revised to include a discussion of the PIM that is separate from the discussion of the Ko'olau Loa SCP.

   We recommend that after the FEA has been accepted, and before the Board of Water Supply is ready to budget construction funds for the new well, an application be submitted to the DPP to revise the Ko'olau Loa PIM by adding a potable water well symbol for the proposed well. This process takes

approximately three to four months to complete and is approved by the City Council by resolution.

3. The DEA discussion on Page 4-9 should be revised since the Primary Urban Center also has a PIM.

4. The FEA should indicate adoption of the Ko'olau Loa Watershed Management Plan by the Commission on Water Resource Management.

Thank you for the opportunity to comment on this matter.

Should you have any questions, please contact Sharon Nishiura of our staff at 768-8031.

DKT:bkg
852849

cc: Mr. John Katahira, Project Manager
The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

July 15, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
ANTHONY R. GUERRERO, JR.
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

07-20-11P01:34 RCVD

TO: DAVID K. TANOUE, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

FROM: DEAN A. NAKANO, ACTING MANAGER

SUBJECT: YOUR LETTER OF MAY 31, 2011 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS, UNIT NO. 3, TMK: 5-6-008: 005, KAHUKU, OAHU, HAWAII

Thank you for reviewing the Draft Environmental Assessment (EA) for the Kahuku Wells Unit No. 3 project.

We have the following responses to the Department of Planning and Permitting's (DPP) comments:

1. Section 4.4 of the EA has been updated to indicate that the Public Review Draft revised version of the Koolau Loa Sustainable Communities Plan (SCP), dated October 2010, was circulated for public review and comment, and a proposed revised plan is being prepared.

2. The EA has been revised to include a section discussing the Koolau Loa Public Infrastructure Map (PIM) that is separate from the discussion of the Koolau Loa SCP. This new section indicates that constructing a new potable production water well is required to be shown on the PIM in accordance with Section 4-8.3(17), Revised Ordinances of Honolulu. An application will be submitted to DPP to revise the Koolau Loa PIM by adding a potable water well symbol for the proposed new Well No. 3. We acknowledge that this process will take approximately three to four months to be completed and approved by the City Council by resolution.

3. The EA has been revised to reflect the Primary Urban Center has a PIM.

4. We acknowledge the Commission on Water Resource Management's recent adoption of the Koolau Loa Watershed Management Plan: Oahu Water Management Plan (dated August 2009) at its March 2011 meeting. This will be stated in the Final EA.

If you have any questions, please contact Iris Oda at 748-5946.

cc: John Katahira, The Limtiaco Consulting Group

DEPARTMENT OF TRANSPORTATION SERVICES

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

PETER B. CARLISLE
MAYOR

WAYNE Y. YOSHIOKA
DIRECTOR

KAI NANI KRAUT, P.E.
DEPUTY DIRECTOR

KENNETH TORU HAMAYASU, P.E.
DEPUTY DIRECTOR

06-03-11 PM 3:54 RCVD

TP5/11-415361R

June 1, 2011

Mr. Dean A. Nakano, Deputy Manager
City and County of Honolulu
Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96843

Attn: Mr. Scott Muraoka, Project Engineer

Dear Mr. Nakano:

Subject: Draft Environmental Assessment for Kahuku Wells, Unit No. 3
Tax Map Key (TMK): 5-6-008:005; Kahuku, Oahu, Hawaii

This responds to The Limtiaco Consulting Group's letter of May 4, 2011, requesting our comments concerning this proposed project.

We have no comments to offer at this time.

Thank you for the opportunity to review this matter. Should you have any further questions, please contact Michael Murphy of my staff at 768-8359.

Very truly yours,

WAYNE Y. YOSHIOKA
Director

cc: Mr. John Katahira, Project Manager
The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

July 15, 2011

07-20-11P01:33 RCV

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
ANTHONY R. GUERRERO, JR.
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

TO: WAYNE Y. YOSHIOKA, DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES

FROM: DEAN A. NAKANO, ACTING MANAGER

SUBJECT: YOUR LETTER OF JUNE 1, 2011 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS, UNIT NO. 3, TMK: 5-6-008:005, KAHUKU, OAHU, HAWAII

Thank you for reviewing the Draft Environmental Assessment for the Kahuku Wells Unit No. 3 project.

We acknowledge that the Department of Transportation Services does not have any comments to offer at this time.

If you have any questions, please contact Iris Oda at 748-5946.

cc: John Katahira, The Limtiaco Consulting Group

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

PETER B. CARLISLE
MAYOR

KENNETH G. SILVA
FIRE CHIEF

ROLLAND J. HARVEST
DEPUTY FIRE CHIEF

May 31, 2011

06-03-11P03:54 RCVD

TO: WAYNE HASHIRO, P.E., MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

ATTN: SCOT MURAOKA, PROJECT ENGINEER

FROM: KENNETH G. SILVA, FIRE CHIEF

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
KAHUKU WELLS, UNIT NO. 3
KAHUKU, OAHU, HAWAII
TAX MAP KEY: 5-6-008: 005

In response to a letter from John Kitahira of The Limtiaco Consulting Group dated May 4, 2011, the Honolulu Fire Department reviewed the material provided and has no comments regarding the above-mentioned project.

Should you have any questions, please call Acting Battalion Chief Gary Lum of our Fire Prevention Bureau at 723-7152.

KENNETH G. SILVA
Fire Chief

KGS/SY:bh

cc: John Kitahira, The Limtiaco Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

July 15, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
ANTHONY R. GUERRERO, JR.
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

07-20-11P01:34 RCVD

TO: KENNETH G. SILVA, FIRE CHIEF
HONOLULU FIRE DEPARTMENT

ATTN: GARY LUM, ACTING BATTALION CHIEF
FIRE PREVENTION BUREAU

FROM: DEAN A. NAKANO, ACTING MANAGER

SUBJECT: YOUR LETTER OF MAY 31, 2011 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS, UNIT NO. 3, TMK: 5-6-008:005, KAHUKU, OAHU, HAWAII

Thank you for reviewing the Draft Environmental Assessment for the Kahuku Wells Unit No. 3 project.

We acknowledge that the Honolulu Fire Department has no comments regarding the proposed project.

If you have any questions, please contact Iris Oda at 748-5946.

cc: John Katahira, The Limtiaco Consulting Group

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

PETER B. CARLISLE
MAYOR

LOUIS M. KEALOHA
CHIEF

DELBERT T. TATSUYAMA
RANDAL K. MACADANGDANG
DEPUTY CHIEFS

15-06-11 P03:07 IN

OUR REFERENCE BSW-LS

May 12, 2011

TO: DEAN A. NAKANO, DEPUTY MANAGER
BOARD OF WATER SUPPLY

ATTN: SCOT MURAOKA, PROJECT ENGINEER

FROM: LOUIS M. KEALOHA, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT, KAHUKU WELLS, UNIT NO. 3
TAX MAP KEY: 5-6-008: 005, KAHUKU, OAHU, HAWAII

This is in response to a letter from The Limtiaco Consulting Group, dated May 4, 2011, regarding the subject above.

This project should have no significant impact on the facilities and services of the Honolulu Police Department.

If there are any questions, please have a member of your staff contact Major Susan Ballard of District 4 (Kaneohe) at 235-7621.

LOUIS M. KEALOHA
Chief of Police

By
BRYAN S. WAUKE
Assistant Chief of Police
Support Services Bureau

cc: Mr. John Katahira, The Limtiaco
Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

June 2, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
ANTHONY R. GUERRERO, JR.
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

TO: LOUIS M. KEALOHA, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

ATTN: BRYAN S. WAUKE, ASSISTANT CHIEF OF POLICE
SUPPORT SERVICES BUREAU

FROM: DEAN A. NAKANO, ACTING MANAGER

SUBJECT: YOUR LETTER OF MAY 12, 2011 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT FOR KAHUKU WELLS, UNIT NO. 3 - TMK: 5-6-008: 005, KAHUKU, OAHU, HAWAII

Thank you for reviewing the Draft Environmental Assessment for the Kahuku Wells, Unit No. 3 project.

We acknowledge the project should have no significant impact on the facilities and services of the Honolulu Police Department.

If you have any questions, please contact Scot Muraoka at 748-5942.

cc: John Katahira, The Limtiaco Consulting Group

06-06-11P02:11 RCVD

June 3, 2011

To: Mr. Dean A. Nakano, Deputy Manager
C&C Honolulu, Board of Water Supply
630 S. Beretania Street
Honolulu, HI 96843
Attn: Mr. Scot Muraoka, Project Engineer (748-5942)

Fr: Ko'olauloa Neighborhood Board #28 - Water Committee, Dee Dee Letts
Committee Chair

Re: **KAHUKU WELLS, UNIT NO. 3 – Draft Environmental Assessment**

The Ko'olauloa Neighborhood Board #28 would like to receive a copy of the "Final EA" in both hardcopy and electronic format.

The Ko'olauloa Neighborhood Board #28 has been asked to review and comment on the **KAHUKU WELLS, UNIT NO. 3 – Draft Environmental Assessment.** Since the DEIS was circulated to the Board at its last meeting in May and comments are due prior to the Board's June meeting the Board is unable to take a formal position regarding the DEIS. The Chair of the Water Committee however is authorized to ask questions on the Board's behalf and you will find these below.

The Board understands from the presentation made at their May meeting that this is a stand alone project and that any action to connect these wells to the existing BWS island wide distribution system would require a different process which would include the Water Commission and several public hearings. The Board also understands that the project is for redundancy of the existing pumpage and that no increase in amount of water pumped from the wells is intended. This also would take an action from the Water Commission. If either of these understandings is not correct please let us know.

The questions have been organized with a notation of page number the question is addressing to assist with the review and answers. We look forward to your prompt responses to our questions and mahalo for the opportunity to raise these questions.

Ko'olauloa Neighborhood Board #28 – questions on the
KAHUKU WELLS, UNIT NO. 3 – Draft Environmental Assessment

	Pg. #	Question / Comment
1.		The report consists of many sections where the same information is repeated. Consideration should be given to eliminate this redundancy thereby reducing the overall size of the document. It is especially difficult to assess if there are variances in the repeated information either by design or by accident. Is it possible to reduce this redundancy in the final document?
2.	vii	What is history of outages/downtime for the current wells, time and duration?
3.	vii	What is your understanding as to the time line for the development of Kahuku Villages IV and V?
4.	viii	Is the new well designed to equal production/capacity of one of the existing wells or is the new well designed to equal the production/capacity of the combined total of both existing wells?
5.	2-1	With regard to the statement on existing and proposed capacity of the wells, what is the total expected need/usage for pending developments for the Ko`olauloa WMP?
6.	2-3	What is the current status of inventory for replacement parts for current wells?
7.	2-3	What is the current contingency plan when an outage or downtime occurs?
8.	2-4	Does this document allow you to change the pump capacity to satisfy development needs outside the Kahuku area in the greater Ko`olauoa area without going through the Water Commission and a public process? The reference is to the 1999 SCP for area so conformance is with this document and not the pending SCP?
9.	2-11	What is expected or in place to provide water to the Kahuku Ag Park?
10.	2-11	What are current/future plans to prevent vandalism at the site?
11.	2-15	What is status of the proposed drainage system project targeted for FY11? If this drainage project is not finished on time what impact, if any will that have the current project and its timeline?
12.	2-16, 18	Why can't potable water be captured from pump priming activities? Is it possible to recapture the water discharge due to testing?
13.	2-16	We do not see a clear discussion as to what is the design capacity and current operating capacity of the 2 existing wells?
14.	2-16	What is the method of "instantaneous" water level reading?

Ko'olauloa Neighborhood Board #28 – questions on the
KAHUKU WELLS, UNIT NO. 3 – Draft Environmental Assessment

	Pg. #	Question / Comment
15.	2-17	Have there been any anomalies or non-normal reports from the quality readings within the past 3 years? Past 5 years?
16.	2-21	What is the contingency plan if there are problems during the test pumping?
17.	2-26/27	What is the list of expected permits and approvals? What is the expected timeline to acquire permits and approvals? How can the overall timeline be expedited?
18.	2-27	What assumptions are used for the budget and what changes are anticipated?
19.	3-12	What is the total of non-BWS WUP entities within the Ko'olauloa WMA?
20.	3-17	What is the method for local input if testing for the 3rd well does have problems with upconing and drawdown?
21.	3-19	Is producing required regulatory reports factored into the current project budget? If "no" what is the expected cost of preparing those reports and will funding be an issue or will it slow down the timeline of this project?
22.	3-39	What additional attempts will be made to ensure those who did not respond to the pre-assessment survey will have their input considered? Specifically, please ensure the Kahuku Medical Center's comments and questions are sought.
23.	3-45	Regarding traffic control and other permits, when will determination be made if they are needed and if needed, are all related costs included in the project budget?
24.	3-49	What assurances are there that this project will not cause adverse impact to water services to the area during testing?
25.	3-57	3.13.4 Wastewater System – Have you considered green alternatives to waste disposal issues such as composting toilets etc?
26.	3-58	Please give consideration to solar or other environmentally safe green options for power at the site?
27.	3-64	What is the current 'fire-flow' requirement for service to the Kahuku Medical Center?
28.	3-65	Please be clear as to the extent of this project. Again our understanding is that it does not seek to support further development in Kahuku town or the broader WMA other then Kahuku housing projects IV and V, is that correct?
29.	4-3/7	Regarding reference to the Ko'olauloa SCP currently under review, confirm that this project is consistent with the 1999 SCP for the area and not the pending draft.
30.	4-4	Identify and describe specifics of the referenced "affordable housing developments" initiated by the City – is this reference to Kahuku IV and V only?

Ko'olauloa Neighborhood Board #28 – questions on the
KAHUKU WELLS, UNIT NO. 3 – Draft Environmental Assessment

	Pg. #	Question / Comment
31.	4-8	With the expectation that a FONSI will be granted for this project, what possible change orders or other changes are anticipated, if any if the SCP currently under review is adopted?
32.	4-12	This section seems to state again that this project does not seek to increase the Kahuku Wells existing WUP – please confirm?
33.	5-1	We concur in concept that this project is the best option to satisfy the 2 stated objectives of the project: 1. improve reliability of stand-alone system 2. provide redundancy in pumping capacity to supply domestic demand and fire protection.
34.	A-1	Because the need is great for better reliability, please advise us what can be done to expedite the project?

cc: The Limtiaco Consulting Group
680 Iwilei Rd, St 430
Honolulu, HI 96817
Mr. John Katahira, Project Manager – FAX 596-7361

Ko'olauloa Neighborhood Board #28

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

September 27, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA, Vice Chair
THERESIA C. McMURDO
DUANE R. MIYASHIRO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

DEAN A. NAKANO
Acting Manager

Ms. Dee Dee Letts
Ko'olauloa Neighborhood Board #28
c/o Neighborhood Board Commission Office
530 South King Street, Room 406
Honolulu, Hawaii 96813

Dear Ms. Letts:

Subject: Your Letter of June 3, 2011 Regarding the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-008:005, Kahuku, Oahu, Hawaii

Thank you for your letter regarding the Draft Environmental Assessment (EA) for the Kahuku Wells Unit No. 3 project.

The proposed project will add a third well to the existing Kahuku Wells pump station for system reliability and additional source capacity. The Kahuku system will remain a stand-alone water system. BWS currently holds water commitments for the Kahuku Villages Phases IV and V subdivisions that will be served by the Kahuku Wells Station. The existing Kahuku Wells Water Use Permit (WUP), No. 322 is permitted for 0.6 million gallons per day (mgd).

We have the following specific responses to the Ko'olauloa Neighborhood Board's itemized questions:

1. **The report consists of many sections where the same information is repeated. Consideration should be given to eliminate this redundancy thereby reducing the overall size of the document. It is especially difficult to assess if there are variances in the repeated information either by design or by accident. Is it possible to reduce this redundancy in the final document?**

   Specific information was repeated through the document because many reviewers of the EA have specific concerns and will not read the entire document. We will ensure that there are no discrepancies in the Final EA.

2. **What is the history of outages/downtime for the current wells, time and duration?**

   The existing two wells have recently been out of service as follows:

   a. Well No. 1 was out of service during planned maintenance for a five-month period from October 2010 to March 2011. Well No. 2 was operational during this period.

b. Well No. 2 was out of service during planned maintenance for a seven-month period from September 2009 to April 2010. Well No. 1 was operational during this period.

3. **What is your understanding as to the time line for the development of Kahuku Villages IV and V?**

   We have not received an updated development schedule for Kahuku Villages Phases IV and V. Any questions regarding the schedule for these developments should be directed to the developer.

4. **Is the new well designed to equal production/capacity of one of the existing wells or is the new well designed to equal the production/capacity of the combined total of both existing wells?**

   The anticipated design size of Well No. 3 is 700 gallons per minute (gpm) which is the same as each of the two existing wells.

5. **With regard to the statement on existing and proposed capacity of the wells, what is the expected need/usage for pending developments for the Ko'olauloa Watershed Management Plan (WMP)?**

   The Kahuku Wells Station supplies a stand-alone system that only serves the Kahuku area. The Kahuku Wells Station is not connected to other water systems in the greater Ko'olauloa District. The average day demand for Kahuku is approximately 0.4 mgd. Projected demand in Kahuku is not expected to exceed the existing permitted use of 0.6 mgd within the 2030 planning horizon. If additional permitted use is needed in the future, a WUP would have to be submitted to the State Commission on Water Resource Management (CWRM).

6. **What is the current status of inventory for replacement parts for current wells?**

   In general, smaller parts and equipment are stocked or are readily available through local vendors. Some larger parts are not practical to stock due to cost. These parts are ordered as needed, and generally have lead times measured in months.

7. **What is the current contingency plan when an outage or downtime occurs?**

   Section 2.3.1 of the EA discusses the contingency plan in case of a power outage. During power outages, a portable generator is transported to the Kahuku Wells Station. The closest of these portable generators is housed at our Manana Corporation Yard in Pearl City. If one of the pumps requires maintenance, the second well is capable of supplying water to the Kahuku system. The Unit No. 3 project will include a permanent emergency generator to eliminate the need to transport a portable generator to the station.

8. **Does this document allow you to change the pump capacity to satisfy development needs outside the Kahuku area in the greater Ko'olauloa area without going through the Water Commission and a public process? The reference is to the 1999 Sustainable Communities Plan (SCP) for area so conformance is with this document and not the pending SCP?**

   Pump capacity is determined by hydro-geologic conditions and test pumping of the exploratory well. A Pump Installation Permit is required and must be re-approved for any change in pump size. The Kahuku Wells Station is used solely in the Kahuku area as it is not connected to any other BWS water system. Therefore, the three 1.0 mgd source pumps will meet forecasted demand conditions and BWS water system standards for stand-by, max day and peak hour demand, fire protection and system reliability.

   This EA is in conformance with the adopted Ko'olauloa SCP (October 1999).

9. **What is expected or in place to provide water to the Kahuku Agricultural Park?**

   The Kahuku Agricultural Park is served by a separate water system that is owned and operated by the State of Hawaii, Department of Agriculture (DOA).

10. **What are current/future plans to prevent vandalism at the site?**

    The gate to the facility has a lock and the buildings are equipped with door alarms, however, vandalism is still a problem. A security camera system is planned for installation this current fiscal year (FY). BWS is evaluating improved fencing systems for all BWS facilities to reduce vandalism at sites.

11. **What is the status of the proposed drainage system project targeted for FY11? If this drainage project is not finished on time, what impact, if any will that have on the current project and its timeline?**

    The construction contract for the proposed drainage system modification has been awarded. A delay in the drainage system modification will not result in a delay to the development of Unit No.3. A disposal plan for the discharge of groundwater effluent will be developed and coordinated with the DOA if construction of Well No. 3 occurs prior to completion of the drainage system modification.

12. **Why can't potable water be captured from pump priming activities? Is it possible to recapture the water discharge due to testing?**

    There is no infrastructure in place to capture pump priming or test pumping discharges for reuse. Pump priming discharges are too small to warrant installation of the necessary infrastructure (e.g., holding tank and distribution pipes). Test pumping also does not warrant the installation of necessary infrastructure for capture and distribution of effluent as discharges will occur for only a few days during the exploratory well construction phase.

13. **We do not see a clear discussion as to what is the design capacity and current operating capacity of the 2 existing wells?**

    Each pump will be operated at least once per week to ensure pump operational reliability. The pump operating times are solely dependent on the actual water demand of the Kahuku water system.

    The current design capacity of the Kahuku Wells Station is 0.43 mgd. BWS water system standards require the Kahuku Wells Station to meet all system demand conditions with the largest pump on standby to fulfill existing pump capacity requirements. The current average daily water withdrawals are near the design capacity of the Kahuku Wells Station. The proposed third well will satisfy the need for a standby pump and meet BWS design standards for pump capacity.

14. **What is the method of "instantaneous" water level reading?**

    An airline bubbler system is used to take water level readings. This system uses air pressure to determine the depth to the groundwater table at the location of the well. Water levels are regularly monitored especially during drought to determine low-groundwater conditions and to evaluate source sustainability metrics.

15. **Have there been any anomalies or non-normal reports from the quality readings within the past 3 years? 5 years?**

    There have been no water quality issues from the Kahuku Wells Station within the past three or five years.

16. **What is the contingency plan if there are problems during the test pumping?**

    The well driller will be required to develop contingency plans prior to beginning construction. If there are significant problems during the test pumping, work will be halted and a solution developed before construction is allowed to resume.

    As indicated in the EA, the new well will be capped and abandoned or turned into a monitoring well if the standards for drinking water wells are not met during the test pumping and/or the well will have detrimental effects on the groundwater aquifer.

17. **What is the list of expected permits and approvals? What is the expected timeline to acquire permits and approvals? How can the overall timeline be expedited?**

    Section 6 of the EA contains a list of possible compliance and permitting requirements. The schedule for obtaining these permits fits into the planning and design schedule for the overall project. The BWS will coordinate with the applicable City and State agencies to ensure that permitting processes do not cause delays.

18. What assumptions are used for the budget and what changes are expected?

No changes are anticipated in the project budget. A 10 percent contingency is already included for variations in project cost.

19. What is the total of non-BWS WUP entities within the Ko'olauloa Water Management Area (WMA)?

Current State Commission on Water Resource Management (CWRM) records indicate WUP's totaling 18.628 mgd for all sources within the Ko'olauloa WMA. The adopted sustainable yield of the Ko`olauloa WMA is 36 mgd. The BWS currently has permitted uses of 8.915 mgd; therefore, approximately 9.7 mgd in WUP allocations are issued to non-BWS entities.

20. What is the method for local input if testing for the 3rd well does have problems with upconing and drawdown?

The BWS will submit an aquifer pump test report to the CWRM as a condition of the Well Construction/Pump Installation Permit. The CWRM can limit the withdrawal from the proposed well if it determines that pumping results in unacceptable levels of upconing and drawdown. CWRM has a standard public comment process related to the permit.

21. Is producing required regulatory reports factored into the current project budget? If "no" what is the expected cost of preparing those reports and will funding be an issue or will it slow down the timeline of this project?

Regulatory reports are considered part of the design process. Costs for such reports are included within the project's design budget.

22. What additional attempts will be made to ensure those who did not respond to the pre-assessment survey will have their input considered? Specifically, please ensure the Kahuku Medical Center's comments and questions are sought.

Section 8 of the EA describes the consultation process used in preparation and distribution of the document.

In addition to the legal obligation of providing public notice and availability of the EA, the Kahuku Medical Center was contacted twice regarding the proposed project as follows:

- A letter dated August 13, 2010 was sent to the Kahuku Medical Center from our consultant (The Limtiaco Consulting Group) prior to preparation of the EA. The letter included a description and map of the proposed project, and solicited any comments that could be incorporated into the EA.

- A letter dated May 4, 2011 was sent to the Kahuku Medical Center from our consultant after completion of the EA. The letter included a digital copy of the EA and solicited any comments that could be incorporated into the Final EA.

No response was received in either case.

23. **Regarding traffic control and other permits, when will a determination be made if they are needed and if needed, are the related costs included in the project budget?**

    Exact permitting requirements will be determined during the design and construction phases, depending on the type of permit. Permit costs are included within the project budget.

24. **What assurances are there that this project will not cause adverse impact to water services to the area during testing?**

    The Kahuku Wells Station can accommodate two pumps operating simultaneously during drilling of the third well. Each well will be closely monitored during test pumping. Testing procedures will be modified if it becomes apparent that test pumping has an adverse impact on the existing wells.

25. **3.13.4 Wastewater System – Have you considered green alternatives to waste disposal issues such as composting toilets, etc?**

    There are currently no plans to upgrade or replace the existing wastewater system at the Kahuku Wells Station. The scope of this project does not include the analysis of compostable toilets or other waste handling methods.

26. **Please give consideration to solar or other environmentally safe green options for power at the site?**

    Photovoltaic systems will not be able to provide sufficient power to the Kahuku Wells Station, however, it could supplement lighting and non-essential power needs. The feasibility of using biofuels for the on-site emergency generator will be considered during design.

27. **What is the current "fire-flow" requirement for service to the Kahuku Medical Center?**

    Our BWS standards require a fire-flow of 4,000 gpm for a duration of 3 hours to a medical facility such as Kahuku Medical Center.

28. **Please be clear as to the extent of this project. Again our understanding is that it does not seek to support further development in Kahuku town or the broader WMA other then Kahuku housing projects IV and V, is that correct?**

    The Kahuku system is a stand-alone water system. As such, the proposed project cannot support further development outside of the Kahuku water service area.

    The proposed project will add a third well to the existing Kahuku Wells pump station for system reliability and additional source capacity to remove the partial building moratorium within the Kahuku service area. Excluding the existing water commitments for the Kahuku Villages Phases IV and V subdivisions, there were a number of proposed developments in Kahuku that have been denied due to the limitations on pump capacity. New developments within the Kahuku water service area must comply with the Ko`olauloa SCP and obtain land use approvals from the City Department of Planning and Permitting before BWS will approve new water service connections.

    The availability of water for proposed developments will be determined when the building permit applications are submitted for our review and approval. When water is made available, the developer will be required to pay the applicable Water System Facilities Charges.

29. **Regarding reference to the Ko'olauloa SCP currently under review, confirm that this project is consistent with the 1999 SCP for the area and not the pending draft.**

    The EA is in conformance with the adopted Ko'olauloa SCP, dated October 1999.

30. **Identify and describe specifics of the referenced "affordable housing developments" initiated by the City – is this reference to Kahuku IV and V only?**

    The section in question references current water commitments for the Kahuku Villages Phases IV and V subdivisions. These subdivisions are included in the Ko'olauloa SCP.

31. **With the expectation that a FONSI will be granted for this project, what possible change orders or other changes are anticipated, if any if the SCP currently under review is adopted?**

    No changes will result to the proposed project if the Ko'olauloa SCP currently under review is adopted.

32. **This section seems to state again that this project does not seek to increase the Kahuku Wells WUP – please confirm?**

    Based on the water demand projections in the Ko`olauloa Watershed Management Plan, no additional water allocation is anticipated for the Kahuku Wells Station.

33. **We concur in concept that this project is the best option to satisfy the 2 stated objectives of the project: 1. Improve reliability of stand-alone system, 2. Provide redundancy in pumping capacity to supply domestic demand and fire protection.**

    The proposed project will improve the reliability of the Kahuku system and provide additional source capacity to remove the partial building moratorium within the Kahuku service area. No additional water allocation is anticipated beyond the 0.6 mgd permitted use.

34 **Because the need is great for better reliability, please advise us what can be done to expedite the project?**

    Continued community support and advocacy will help to ensure the proposed project is not unnecessarily delayed.

Per your request, one hardcopy and one electronic copy of the forthcoming Final EA will be provided for the Ko'olauloa Neighborhood Board's records.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group

Hawaiian Telcom

15-05-11 P03:08 IN

May 12, 2011

Dean A. Nakano, Deputy Manager
Attention: Scot Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 South Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Muraoka:

Subject: **Draft Environmental Assessment**
Kahuku Wells, Unit No. 3
Tax Map Key: 5-6-008:005
Kahuku, Oahu, Hawaii

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (EA) for the subject project.

Hawaiian Telcom does not have any comments to offer at this time and would prefer to receive an electronic copy of the Final EA.

If you have any questions or require assistance in the future on this project, please call me at 546-7761.

Sincerely,

Les Loo
Network Engineer – OSP Engineering
Network Engineering & Planning

cc: J. Katahira – The Limtiaco Consulting Group
File [Laie]

PO Box 2200 • Honolulu • Hi 96841

THE LIMTIACO CONSULTING GROUP
CIVIL ENGINEERING AND ENVIRONMENTAL CONSULTANTS

MAY 5 2011

May 4, 2011

Ms. Lynette Yoshida, Senior Manager - OSP Engineer
Hawaiian Telcom
Network Engineering and Planning, Floor A4
P.O. Box 2200
Honolulu, HI 96841

Dear Ms. Yoshida:

Subject: Draft Environmental Assessment
Kahuku Wells, Unit No. 3
Tax Map Key: 5-6-008:005
Kahuku, Oahu, Hawaii

Enclosed for your review is the Draft Environmental Assessment (EA) for the proposed Kahuku Wells, Unit No. 3 project. The Draft EA was prepared pursuant to the Hawaii environmental review process as defined in Chapter 343, Hawaii Revised Statutes and Title 11, Chapter 200, Hawaii Administrative Rules of the Department of Health.

We are currently soliciting comments on the Draft EA, and comments must be received or postmarked by June 6, 2011.

Please send your original comments to:
Dean A. Nakano, Deputy Manager
Attn: Scot Muraoka, Project Engineer
City and County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96843

Please provide copies of your comments to:
John Katahira, Project Manager
The Limtiaco Consulting Group
680 Iwilei Road, Suite 430
Honolulu, Hawaii 96817
Fax: 596-7361

In the interest of saving resources and reducing waste, please inform or contact us if you wish to receive a copy of the proposed project's impending Final EA. If so, please also inform us if you would prefer to receive a hardcopy or electronic copy of the Final EA.

Thank you for your participation in the environmental review process. Should you have any questions, please contact me at 596-7790 or Mr. Scot Muraoka of the Board of Water Supply at 748-5942.

Sincerely,

John Katahira
Project Manager

cc: Mr. Scot Muraoka, Project Engineer, Board of Water Supply

680 IWILEI ROAD, SUITE 430 · HONOLULU, HAWAII 96817
TEL (808) 596-7790 · FAX (808) 596-7361
tlcghawaii.com

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

June 2, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
ANTHONY R. GUERRERO, JR.
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

Mr. Les Loo
Network Engineer – OSP Engineering
Network Engineering & Planning
Hawaiian Telcom
P. O. Box 2200
Honolulu, Hawaii 96841

Dear Mr. Loo:

Subject: Your Letter of May 12, 2011 Regarding the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-008: 005, Kahuku, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment (EA) for the Kahuku Wells Unit No. 3 project.

We acknowledge that Hawaiian Telcom does not have any comments to offer at this time and an electronic copy of the Final EA will be provided to you.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group

THE GAS COMPANY

P.O. Box 3000
Honolulu, Hawaii 96802-3000
www.hawaiigas.com

15-05-11 P03:07 IN

May 11, 2011

Mr. Dean A. Nakano
Deputy Manager
City and County of Honolulu
Board of Water Supply
630 S. Beretania Street
Honolulu, Hawaii 96843

Attention: Mr. Scot Muraoka
Project Engineer

Gentlemen:

Subject: Draft Environmental Assessment
Kahuku Wells, Unit No. 3
Tax Map Key: 5-6-008:005
Kahuku, Oahu, Hawaii

Per your letter on May 4, 2011, The Gas Company, LLC has no objections to the proposed Draft Environmental Assessment. It has been determined that the area is currently clear of utility gas facilities.

Thank you for the opportunity to comment on the Draft Environmental Assessment. Should there be any questions, or if additional information is desired, please call Chris Hall at 594-5553.

Sincerely,

The Gas Company, LLC

Charles E. Calvet, P.E.
Manager, Engineering

CEC:krs
11-151

cc: Mr. John Katahira, The Limtiaco Consulting Group

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
ANTHONY R. GUERRERO, JR.
THERESIA C. McMURDO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

June 2, 2011

Mr. Charles E. Calvet, P.E., Manager
Engineering Department
The Gas Company
P. O. Box 3000
Honolulu, Hawaii 96802

Dear Mr. Calvet:

Subject: Your Letter of May 11, 2011 Regarding the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-008: 005, Kahuku, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment (DEA) for the Kahuku Wells Unit No. 3 project.

We acknowledge that The Gas Company, LLC has no objections to the proposed DEA and it has been determined that the Kahuku Wells Unit No. 3 project area is currently clear of utility gas facilities.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group

Jason Nakata

From: BARRY USAGAWA <BUSAGAWA@hbws.org>
Sent: Thursday, June 23, 2011 1:46 PM
To: Ralph Makaiau
Cc: primacioj002@hawaii.rr.com; Kahea; kent@trisland.com; Loma Olevao ; stibbardm003 @hawaii.rr.com; kuilimaeast@hawaii.rr.com; Randy_Y_Teruya@exec.state.hi.us; rmatsuura@honolulu.gov; svaioleti@hhsc.org; John Katahira; Jason Nakata; SCOT MURAOKA
Subject: RE: BWS Kahuku Wells Project EA Comments

Ralph,

Thank you for your comments. We will provide you a written response.

Barry

From: Ralph Makaiau [mailto:RMakaiau@tbrdevelopment.com]
Sent: Thursday, June 23, 2011 11:34 AM
To: BARRY USAGAWA
Cc: Jr Primacio (primacioj002@hawaii.rr.com); Kahea; kent@trisland.com; Loma Olevao ; stibbardm003@hawaii.rr.com; kuilimaeast@hawaii.rr.com; Ralph Makaiau; Randy_Y_Teruya@exec.state.hi.us; Reed Matsuura (rmatsuura@honolulu.gov); Stephany Vaioleti (svaioleti@hhsc.org)
Subject: KCA: BWS Kahuku Wells Project EA Comments

Barry,

As President of Kahuku Community Association, I am writing in behalf of its Board of Directors, full support of approval for the above project with comments:

- No wind generators within 1500 feet of Kahuku Wells and Kahuku Storage Tank;
- BWS Kahuku Wells discharge water easement designed with upgrades across Kahuku State Agriculture Park land (DLNR Department of Agriculture), where discharge water run-off should be contained, without causing flooding of roadways or farm lands.
- Strongly support development of 3rd well to lift partial moratorium for new building in the present service area, i.e. Phase IV & V.

Thank you for your ongoing support of Kahuku town.

Respectfully submitted,

Ralph K. Makaiau Jr.
President Kahuku Community Association

This e-mail may contain information that is privileged, confidential and/or exempt from disclosure. No waiver whatsoever is intended by sending this e-mail which is intended only for the named recipient(s). Unauthorized use, dissemination or copying of this email is prohibited. If you receive this email in error, please notify the sender and destroy all copies of this e-mail.

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

August 29, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA
THERESIA C. McMURDO
DUANE R. MIYASHIRO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

DEAN A. NAKANO
Acting Manager

08-30-11P01:10 RCVD

Mr. Ralph Makaiau, President
Kahuku Community Association
56-134 Pualalea Street
Kahuku, Hawaii 96731

Dear Mr. Makaiau:

Subject: Your E-mail of June 23, 2011 Regarding the Draft Environmental Assessment for the Kahuku Wells, Unit No. 3, TMK: 5-6-008: 005, Kahuku, Oahu, Hawaii

Thank you for reviewing the Draft Environmental Assessment (EA) for the Kahuku Wells, Unit No. 3 project.

We have the following responses to the Kahuku Community Association's (KCA) comments:

1. Wind generators are not part of the proposed project.

2. The drainage system modifications, as described in Section 3.13.3 of the EA, will address discharge water from the Board of Water Supply's Kahuku Wells site onto the State Department of Agriculture land.

3. We acknowledge KCA's support of the proposed project.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group

Brooke Webber

From: Jason Nakata **Sent:** Wed 5/11/2011 11:47 AM
To: brooke@tlcghawaii.com
Cc:
Subject: FW: BWS Kahuku Wells, Unit No.
Attachments:

Jason Nakata

The Limtiaco Consulting Group

(808) 596-7790 ext. 31

jason.n@tlcghawaii.com

From: Kepa Maly, Kumu Pono [mailto:kepa@kumupono.com]
Sent: Tuesday, May 10, 2011 5:30 AM
To: Jason Nakata
Subject: RE: BWS Kahuku Wells, Unit No.

Aloha Mr. Nakata,

Thank you for your email and notice.

As I am not involved in the Kahuku area at this time (spending the majority of our time working on the Lana'i museum project), I will not be reviewing the DEA.

Sincerely,

Kepa

<>--<>--<>--<>--<>--<>--<>--<>--<>--<>--<>

Kepa Maly

Cultural Historian & Resource Specialist

Kumu Pono Associates LLC

46-241 Ha'iku Rd. Unit B

Kane'ohe, Hawai'i 96744

(808) 744-8806

Visit www.kumupono.com and the Hawaiian Digital Library (HDL) at www.ulukau.org to view selected articles and cultural studies prepared by Kumu Pono Associates LLC

A'ohe hana nui ke alu 'ia!

(It is no great task when done together by all!)

From: Jason Nakata [mailto:jason.n@tlcghawaii.com]
Sent: Monday, May 09, 2011 10:00 AM
To: kepa@kumupono.com
Subject: BWS Kahuku Wells, Unit No.

Mr. Maly,

Please find attached a letter regarding the Draft Environmental Assessment for the Honolulu Board of Water Supply's Kahuku Wells, Unit No. 3 project.

Mahalo,

Jason S. Nakata

Staff Engineer

The Limtiaco Consulting Group

680 Iwilei Road, Suite 430

Honolulu, Hawaii 96817

Phone: (808) 596-7790 ext. 31

jason.n@tlcghawaii.com

Jason Nakata

From: Maria Orr <kaimi@lava.net>
Sent: Monday, May 09, 2011 6:31 PM
To: Jason Nakata
Subject: Re: BWS Kahuku Wells, Unit No. 3 Draft Environmental Assessment

Mahalo! I will do my best to find a copy and review.

On Mon, May 9, 2011 at 10:00 AM, Jason Nakata <jason.n@tlcghawaii.com> wrote:

Ms. Orr,

Please find attached a letter regarding the Draft Environmental Assessment for the Honolulu Board of Water Supply's Kahuku Wells, Unit No. 3 project.

Mahalo,

Jason S. Nakata

Staff Engineer

The Limtiaco Consulting Group

680 Iwilei Road, Suite 430

Honolulu, Hawaii 96817

Phone: (808) 596-7790 ext. 31

jason.n@tlcghawaii.com

Jason Nakata

From: Choon James <choonjameshawaii@gmail.com>
Sent: Sunday, September 18, 2011 5:46 PM
To: Jason Nakata
Cc: smuraoka@hbws.org; ioda@hbws.org; choonJamesHawaii
Subject: Re: Kahuku Wells Station #3 PUBLIC COMMENTS (Jame Choon)

Aloha Jason,

Sorry for the delay. Here is the attachment that you are referring to. The attachment records Continental Pacific forcing customers into owners of the newly-formed Kahuku Water Company. If kuleana owners and others refuse to agree by June 30, 2011, the water was slated to be shut off July 1, 2011.

At the May 25, 2011 meeting, Continental Pacfic principals, Jeremy Hendersen and Barry Strother, abruptly left the meeting early on amidst affected water customers' objections on this threat.

Please let me know if there is any thing else we could assist you with.

Mahalo,

Choon James [redacted]

On Thu, Sep 15, 2011 at 9:51 AM, Jason Nakata <jason.n@tlcghawaii.com> wrote:

Choon,

I would greatly appreciate it if you could resend us a copy of the Continental Pacific letters referenced in your email below. We would like to include them as a part of the public record. I'm sorry for any inconvenience that this may cause you.

Mahalo,

Jason S. Nakata

The Limtiaco Consulting Group

Phone: (808) 596-7790 ext. 31

jason.n@tlcghawaii.com

From: Jason Nakata
Sent: Wednesday, September 07, 2011 8:51 AM

To: choonjameshawaii@gmail.com
Cc: Scot Muraoka (smuraoka@hbws.org); Iris Oda (ioda@hbws.org)

Subject: RE: Kahuku Wells Station #3 PUBLIC COMMENTS (Jame Choon)

Choon,

I'm sorry for the inconvenience, but please send us a copy of the Continental Pacific letters referenced in your email below. The email that we received did not have any attachment. The letters will be included in the record.

Mahalo,

Jason S. Nakata

The Limtiaco Consulting Group

Phone: (808) 596-7790 ext. 31

jason.n@tlcghawaii.com

From: SCOT MURAOKA [mailto:SMURAOKA@hbws.org]
Sent: Tuesday, September 06, 2011 10:45 AM
To: IRIS ODA
Cc: Jason Nakata
Subject: RE: Kahuku Wells Station #3 PUBLIC COMMENTS (Jame Choon)

Jason and Iris,

We have one more response letter to James Choon. Can you please prepare a response asap for review.

Thanks, Scot

-----Original Message-----
From: BARRY USAGAWA
Sent: Tuesday, September 06, 2011 9:34 AM
To: Choon James

Cc: SCOT MURAOKA; Jason Nakata; John Katahira (john@tlcghawaii.com)
Subject: RE: Kahuku Wells Station #3 PUBLIC COMMENTS

Hi Choon,

Thanks for sending your comments. After the August Koolauloa NHB meeting, we checked but couldn't find your comments, so thanks for resending.

We will draft a reply for inclusion in the final EA. We hope to have your response before the end of Sept. The Koolauloa NHB response to the DEA should be completed shortly. I already informed Dee Dee Letts.

Aloha,

Barry

From: Choon James [mailto:choonjameshawaii@gmail.com]
Sent: Sunday, September 04, 2011 5:38 PM
To: BARRY USAGAWA
Cc: choonJamesHawaii
Subject: Fwd: Kahuku Wells Station #3 PUBLIC COMMENTS

Aloha Barry,

These are the comments that I submitted to BWS EA consultants. I have not heard from any one.

Would you kindly let us know what is going on?

I would appreciate information on this process.

Mahalo,

Choon James

---------- Forwarded message ----------
From: **Choon James** <choonjameshawaii@gmail.com>
Date: Mon, Jun 6, 2011 at 9:14 PM

Subject: Kahuku Wells Station #3 PUBLIC COMMENTS
To: jason.n@tlcghawaii.com
Cc: choonJamesHawaii <choonJamesHawaii@gmail.com>, mipatricks <Mipatricks@comcast.net>

June 5, 2011

Mr. Jason Nakata, Project Manager
Mr John Katahira
Limtiaco Consulting Group

Wayne Hashiro, PE, Manager and Chief Engineer
Mr. Scott Muraoka, Project Manager
Board of Water Supply

PUBLIC COMMENTS

The Kahuku Wells Station #3, (Tax Map Key 5-6-008:005) owned by the BWS, Kahuku, Oahu, Hawaii 96731
http://gen.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2010s/2011-05-08-OA-DEA-Kahuku-Wells.pd

Aloha Jason Nakata:

Thank you for giving me your email address to day and for agreeing to convey this also to Scott Muraoka of the Board of Water Supply and all other pertinent participants.

We wish to bring to your attention recent developments in Kahuku that greatly warrant your attention and inclusion of water service into this proposed plan.

You may not aware but Continental Pacific, owner of State Well # 4158-12 at 56-1030 Kamehameha Highway, Kahuku, 96731 TMK: 1-5-6-005:016 recently tried to force long-time kuleana owners to become owners of their newly-formed Kahuku Water Company corporation. Should Kahuku long-standing water customers refuse to sign up to become owners of the Kahuku Water Company, officers of Continent Pacific, LLC Jere Hendersen and Barry Strothers will cut off water supply to these domestic water customers by July 1, 2011.

We are attaching these threat letters for the file. Various long-time customers including TMK: 1/5/6/2-25, 27, 47 object to this threat. When Continental Pacific acquired the hundreds of acres of land from the Estate of James Campbell, it also purchased the existing aging well station #4158-12. It was publicly known that Continent Pacific bought these properties at a good prices to turn around and sell the properties at a profit. However, the economy did not cooperate with Continental Pacific's efforts to sell.

It appears Continental Pacific LLC now looks to find avenues to raise money for its operating costs of this aging and decrepit water station. Mr. Jere Hendersen stated that 'they (the Estate of James Campbell) should have paid them to take this water system." As stated in CP's letters to its water

customers, the intention of forcing customers to become owners was to help defray the costs of maintenance, operations, and also capital improvements that could run into the hundreds of thousands of dollars that local water customers cannot afford.

There was a so-called "Membership Meeting" at Romy's Shrimp on May 25, 2011. Mr. Jere Hendersen and Barry Strothers were present but left the meeting abruptly when residents objected to the threat of their water being cut off by July 1, 2011 if they refused to join the Kahuku Water Company by June 30, 2011. Water customers also asked why they were suddenly "owners" instead of water customers.

As stated in the Environment Assessment Repo*rt,*

2.1.2. Project Objectives
The proposed project seeks to achieve the following objectives:
• Improve reliability of the stand-alone Kahuku potable water system, and
• Increase pumping capacity of the Kahuku Wells Station to supply ***domestic demand*** *and improve fire protection requirements to Kahuku Town.*

We submit to you that this is a compelling domestic demand that needs immediate addressing in this proposed Kahuku well #3 project. The domestic users in Kahuku/Marconi area need the Board of Water to supply city water to their residential homes. some of which have been in existence since the 1920s. They have paid municipal taxes but have not partaken of this city water service.

Please set these domestic water needs as top precedence to other proposed future developments water demands in Kahuku. These property owners have not been served by the city municipal water services. The recent threat of Continental Pacific will jeopardize the safety, health and well-being of these properties. There is a need for a long-term solution.

We desire to continue a dialogue with the Board of Water Supply and other related entities in this matter. You may contact Friends of Marconi at 808 293 9111, Choon James at ChoonJamesHawaii@gmail.com

Kahuku/Marconi Area Water Customers
56-1081 Kamehameha Highway
Kahuku 96831

Other questions that we would appreciate clarifications on:

1. Will this Board of Water Supply project create new water distribution outside of Kahuku?
2. What are the existing allocation of water uses in Kahuku?
3. What existing ordinances require the board of water to provide domestic water needs to Oahu's residents?
4. Have you explored the alternative analysis of placing this proposed new well station at another site that will serve Kahuku residents in the Marconi area more equitably and readily?
5. Have you explored the alternative analysis of taking over decrepit State Well # 4158-12 at 56-1030 Kamehameha Highway, Kahuku, 96731 TMK: 1-5-6-005:016. There are concerns about the health safety of this water station.
6. Have you explored the alternative analysis in terms of costs in implementing #5 that will allow BWS to broaden its scope to supply domestic water needs to long-term Kahuku residents?

--
Choon James, Realtor
55-052 Naupaka Street
Laie,Hawaii, USA 96762
[redacted]
ChoonJamesHawaii@gmail.com

http://www.CJRealEstateHawaii.com

http://www.CountryTalkStory.com
Saturdays 5:00 pm Olelo TV 52

-

KAHUKU WATER ASSOCIATION, INC.

c/o SECOND CITY PROPERTY MANAGEMENT, INC.
P O BOX 700489
KAPOLEI, HI 96709
(808) 674-9996

May 4, 2011

Dear Kahuku Water Association Member/Water User:

As you know, the Kahuku Water Association (KWA) was formed last year to own and operate the old Kahuku Air Base Water system from which you draw water and/or are a member. The water system was previously owned and operated by Diversified Ag Promotions, LLC which subsidized a large part of the operating costs of the system.

On April 1, 2011 we hired Second City Property Management to run the water system and their affiliated company, AG Management, Ltd to manage the fiscal affairs of KWA. Second City and AG Management have experience running large and small agricultural and domestic water systems.

AG Management has created a budget for KWA, including the anticipated expenses for operating the system, and the expected water use based on this past year's average (copy attached). You should have already received (and paid) an annual member dues billing of $100 per unit. These Member dues will offset operating costs.

We find that to cover the operating costs, we must now raise the annual member dues and the water usage rate billed to users on a monthly basis.

We have separated the expected costs into two components, Administrative, which consists of the fiscal management, insurance, tax filings, and applying to the IRS for non-profit status (this last expense will apply only to this year). These Administrative charges will be covered by the annual member dues, $100 of which was billed on April 1, and another $100 which will be billed on July 1, 2011, for an anticipated total of $200 for 2011.

The second component of the expenses is related to actual water use, and our budget calculations indicate we must begin to charge **$3.25 per 1,000 gallons of water used** by each user/member. These charges will be billed monthly, **beginning June 1, 2011**. We will no longer differentiate between Residential and agricultural water used in the rates we charge.

Please keep in mind that our system or Association does not make a profit. You are simply charged what it costs to deliver water to you. If the annual billings for the system exceed the operating costs, that excess will be refunded to users or carried over to offset costs for the next year. If billings are insufficient to cover costs, the shortfall will be billed to users and/or members.

The rates mentioned above are not inconsistent with small water systems. There are small private water systems that pay much more than this. You should also know that the rate we will charge is not out of line with the Honolulu Board of Water Supply rates (copy of BWS rates attached):

Domestic $2.79-$5.01 depending on quantity used (more expensive the more you use per month)
Agricultural $2.79/1,000 for first 13,000 gpm (gallons per month) going down to $1.19/1,000 over 13,000 gpm
And non-residential $3.13/1,000

Our system has relatively low usage which of course requires higher costs to cover the operating expenses.

Continued on reverse

If you have non-member users drawing water from your allocation, please let them know immediately about this rate change.

In the coming months Second City Property Management will closely review the water system infrastructure, and create a plan for capital improvements/replacement of aging infrastructure. This plan will likely be phased in over several years.

We understand that some members still have questions, and some were not able to make the prior member meeting on March 10, 2011. As such, **we will hold another Meeting of members on Wednesday, May 25, 2011 at 6 pm (location to be announced).** At that meeting we hope to be able to answer questions you may have about the By-laws, rules and Units assigned each member. There is the possibility that if you want more or less units assigned to your membership, that the board can consider your request. Some members have asked if they MUST be a member of the Association. We would like to remind everyone that any member can decide to opt out of the Association and no longer receive water from this system. **We will also hold an additional meeting, via conference call on June 1, 2011 at 3 p.m. HST.** This meeting will allow members who do not live on Oahu to participate, but Oahu members are also welcome to call in as well. This additonal meeting will also give us an opportunity to research any questions which might come up at the May 25th meeting. **The call-in number for this meeting will be 1-800-444-2801, and the participant code number is 1397797.** Simply call in (toll-free) from any location or cell phone at the designated time.

In the meantime, if you have any questions, please do not hesitate to contact Alan Gottlieb, our system contractor at (808) 674-9996.

Finally, it will be much easier for our contractor to communicate with all members on a timely basis, if they have your e-mail address. If you have access to e-mail, please e-mail Alan Gottlieb at gottlieb@hawaii.rr.com and give him your name, which member you represent, and your email address.

Sincerely,

For

Barron Strother
Treasurer, Kahuku Water Association, Inc.

Kahuku Water Association - Member Charges.

4-May-11

Actual Current Usage	Per meters
April & May 2010	2,490
June & July 2010	6,544
Aug & Sep 2010	6,192
Oct & Nov 2010	4,852
Dec 2010 & Jan 2011	4,580
Feb & Mar 2011	6,115
	30,773
Avg Monthly Use	2,564
Annual Use	30,773 x 1,000 gallons

Annual Operating Budget			Administrative	Water Use
Hawaiian Electric	$ 21,000	15% higher than past 12 months		$ 21,000
Second City Prop Mgt, Inc	$ 66,000	Water Operations		$ 66,000
AG Management, Inc.	$ 30,000	Administration	$ 30,000	
Insurance (G/L $8,500 and D&O $1,500)	$ 10,000		$ 10,000	
Annual Tax Return	$ 2,500		$ 2,500	
IRS Non profit filing 501 (c) 12	$ 10,000		$ 10,000	
Misc & contingency	$ 18,000	minor repairs, legal, etc.	$ 7,500	$ 10,500
	$ 157,500		$ 60,000	$ 97,500

Paid by Annual Member Fees	$ 60,000	300 units @ $200/unit
Total Member units	300	
Annual Member Fee per member unit	$ 200	
Net Expenses after member fees		$ 97,500
Annual Use - Projected		30,000 x 1,000 gallons
Water billing rate/1,000 gal used		3.25

continued on reverse

Rates for the Honolulu Board of Water Supply – For comparative purposes only!

REVISED RATE SCHEDULE

BILLING CHARGE There is a billing charge each time a bill is rendered effective as follows:

July 1, 2005	October 1, 2006	July 1, 2007	July 1, 2008	July 1, 2009	July 1, 2010
$ 3.70	$ 4.18	$4.68	$5.15	$5.56	$5.84

QUANTITY CHARGE In addition to the billing charge, there is a charge for all water drawn for each 1,000 gallons effective as follows:

SINGLE FAMILY RESIDENTIAL (Monthly Per Unit)	July 1, 2005	October 1, 2006	July 1, 2007	July 1, 2008	July 1, 2009	July 1, 2010
Block 1 (Gallons) First 13,000 or any part thereof	$1.77	$2.00	$2.24	$2.46	$2.66	$2.79
Block 2 (Gallons) 13,001 to 30,000 or any part thereof	$2.12	$2.40	$2.69	$2.96	$3.20	$3.36
Block 3 (Gallons) Over 30,000	$3.18	$3.59	$4.02	$4.42	$4.77	$5.01

MULTI FAMILY RESIDENTIAL (Monthly Per Unit)	July 1, 2005	October 1, 2006	July 1, 2007	July 1, 2008	July 1, 2009	July 1, 2010
Block 1 (Gallons) First 9,000 or any part thereof	$1.77	$2.00	$2.24	$2.46	$2.66	$2.79
Block 2 (Gallons) 9,001 to 22,000 or any part thereof	$2.12	$2.40	$2.69	$2.96	$3.20	$3.36
Block 3 (Gallons) Over 22,000	$3.18	$3.59	$4.02	$4.42	$4.77	$5.01

NON-RESIDENTIAL (All Usage)	July 1, 2005	October 1, 2006	July 1, 2007	July 1, 2008	July 1, 2009	July 1, 2010
	$1.98	$2.24	$2.51	$2.76	$2.98	$3.13

AGRICULTURAL (Monthly Per Account)	July 1, 2005	October 1, 2006	July 1, 2007	July 1, 2008	July 1, 2009	July 1, 2010
Block 1 (Gallons) First 13,000 or any part thereof	$1.77	$2.00	$2.24	$2.46	$2.66	$2.79
Block 2 (Gallons) Over 13,000	$0.75	$0.85	$0.95	$1.05	$1.13	$1.19

NONIPOTABLE (All Usage)	July 1, 2005	October 1, 2006	July 1, 2007	July 1, 2008	July 1, 2009	July 1, 2010
	$0.99	$1.12	$1.25	$1.38	$1.49	$1.56

Board of Water Supply

KAHUKU WATER ASSOCIATION, INC.

c/o SECOND CITY PROPERTY MANAGEMENT, INC.
P O BOX 700489
KAPOLEI, HI 96709
(808) 674-9996

May 18, 2011

SPECIAL MEMBER MEETINGS REMINDER:

Wednesday, May 25, 2011 at 6 p.m. At Romy's Shrimp Stand 56-781 Kamehameha Hwy, Kahuku (Map on reverse side of this page).

And

June 1, 2011 at 3 p.m. HST. via conference call . The call-in number for this meeting will be 1-800-441-2801, and the participant code number is 1397797. Simply call in (toll-free) from any location or cell phone at the designated time.

At these meetings we hope to be able to answer questions you may have about the By-laws, rules and Units assigned. Please keep in mind, there are a total of 300 membership units, so each unit you were assigned is a percentage of those 300 units (for example, 12 units = 4% of the total). This percentage represents your membership percentage in the Association = your voting percentage as a member, and the pro-rata share of the water you are allowed to draw from the water available. Currently, our water allocation, granted by the State of Hawaii, is 300,000 gallons per day, so each membership unit currently approximates 1,000 gallons of water per day. In the future, if our allocation is reduced (for example for rationing or non-use of the full allocation) or if our system capacity is reduced (for example less capacity from our equipment or the well) you membership units will allow you to draw up to your percentage of the water available. While small owners have less membership representation, they also have less responsibility for paying the fixed costs of the system (the Annual Dues and capital improvement assessments per membership Unit).

PROXY:

If you cannot attend either meeting, and want to give your proxy to someone else, please complete and sign the attached PROXY form and either return to me in advance (instructions at the bottom of the form), or have your proxy bring to the meeting. If your units are held as a company, the Proxy must be signed by an officer or partner of that company. If your units are held as an individual, you may sign the proxy as an individual.

MEMBERSHIP INFORMATION FORM:

Also attached is a MEMBERSHIP INFORMATION form. This form allows you to acknowledge that you either:

Confirm that you want to be a member of the Kahuku Water Association, Inc. and want to receive water from this system. It also asks you to acknowledge receipt of the Articles of Incorporation for KWA, the Bylaws and Rules of the Association mailed to you on March 22, 2011. If you did not receive these documents, or have misplaced them and would like another copy, please contact Alan Gottlieb as soon as possible at 808-674-9996.

or

If you do not wish to be a member, please check the box that you do NOT accept membership in the Kahuku Water Association, Inc. If you choose not to be a member, you cannot receive water from this system.

(continued on the back of this page)

This form also allows you to request that the Board of the Kahuku Water Association, Inc., at its sole discretion, consider adjusting up or down, the membership units previously assigned to you.

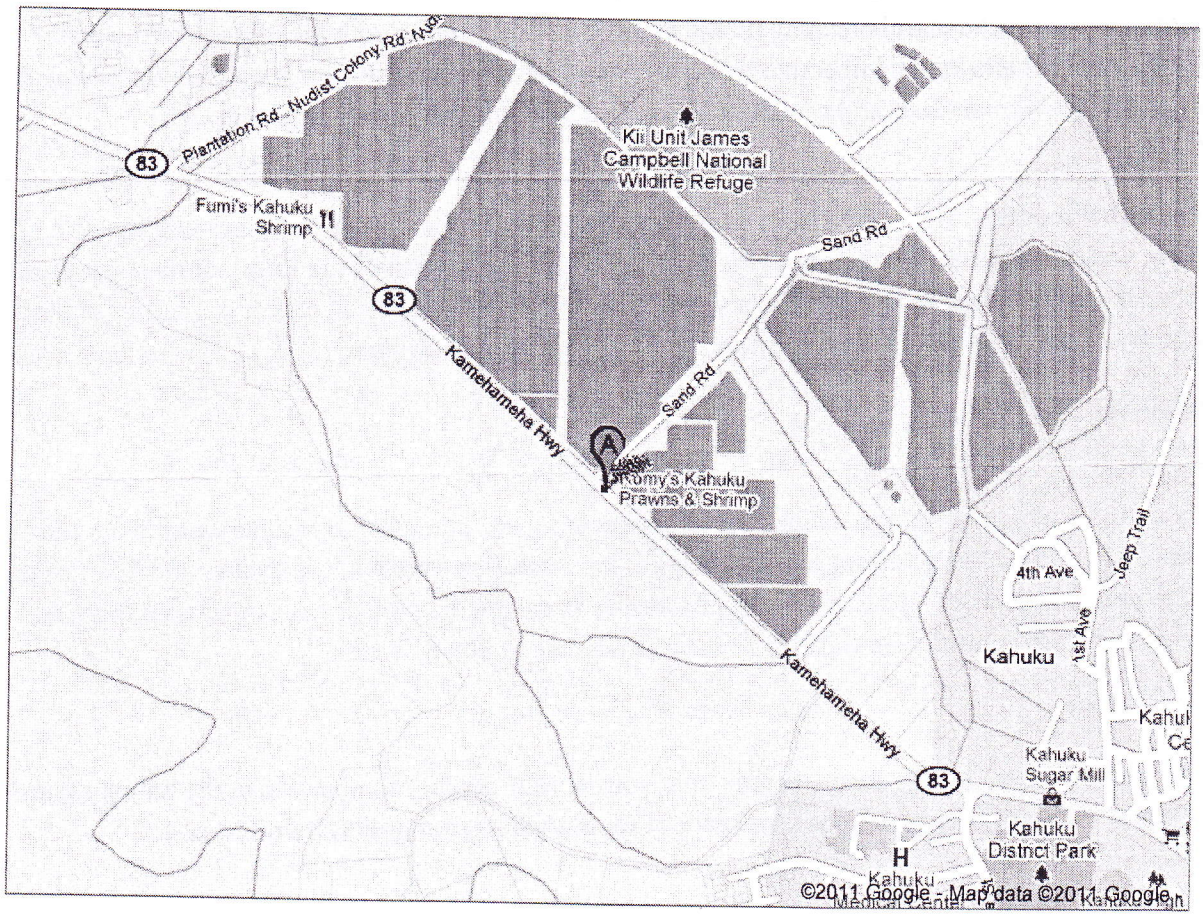
If your Membership Information form is not completed and returned by June 30, 2011, we will assume you DO NOT accept membership in the Kahuku Water Association, Inc. and water service will be terminated on July 1, 2011.

In the meantime, if you have any questions, please do not hesitate to contact me at (808) 674-9996.

Sincerely,

Alan Gottlieb
Second City Property Management/AG Management, Inc.
Contractor for the Kahuku Water Association, Inc.

A. **Romy's** Kahuku Prawns & **Shrimp** Inc
56-781 Kamehameha Highway, Kahuku, HI
(808) 232-2202
225 reviews



PROXY SOLICITATION FOR SPECIAL MEMBER'S MEETING
KAHUKU WATER ASSOCIATION, INC.
TO BE HELD
Wednesday May 25, 2011 at 6 pm (in person)
and Wednesday June 1, 2011 at 3 pm (via conference call)

KNOW ALL MEN BY THESE PRESENTS:

That the undersigned Member of Kahuku Water Association, Inc., a Hawaii non-profit corporation, does hereby constitute and appoint _____ attorney and proxy of the undersigned, with power of substitution, for and in the name of the undersigned to vote at the Special Member's meeting(s) of Kahuku Water Association, Inc., to be held on Wednesday, May 25, 2011 6 p.m. and/or Wednesday June 1, 2011 at 3 pm, including all adjournments thereof, upon all questions and matters which come before such meetings, according to the percentage of units assigned to each member (as set forth in Exhibit "A" of the Bylaws of the Kahuku Water Association, Inc. as adopted February 8, 2010), which the undersigned would be entitled to vote if personally present at such meeting; hereby ratifying and confirming all that said attorney shall lawfully do by virtue hereof, and revoking all former proxies given to vote upon such shares.

The restrictions, if any, on this proxy are:

_____

_____

_____

Dated this _____ day of _____, 2011

By:_____

Title:_____
(for members who are not individuals, must be executed by an officer of the member's company)

Return this proxy in advance of the meeting to:
Kahuku Water Association, Inc.
P O Box 700489
Kapolei HI 96709

Or fax to 808-674-9996
Or e-mail to gottlieb@hawaii.rr.com
Or you may hand deliver this proxy to the Secretary at the meeting, as long as it is filed BEFORE the meeting commences.

KAHUKU WATER ASSOCIATION, INC. (KWA)
MEMBERSHIP INFORMATION

Name:

Property location (Tax Map Key No. and/or address):

No. of Units assigned: _____
(if any of the information filled in above is incorrect, please cross out and supply corrected information)

Check one:

☐ Membership in KWA is hereby confirmed, and receipt of copies of the Bylaws and Rules of KWA is hereby acknowledged.

☐ Membership in KWA is NOT accepted, and the undersigned acknowledges and agrees that **since the undersigned is not a member of KWA, no water will be delivered or provided to the Property through the water system which is owned and operated by KWA.**

OPTIONAL:

The Member also requests that the Board of Directors of KWA consider adjusting the Units assigned to the Property from _____ Units to _____ Units. The Member agrees to provide the Board with information relating to the Member's water usage to support the adjustment and understands and agrees that any such adjustment will be made at the sole discretion of the Board of Directors.

Date: _____, 2011

_____

By _____
Name:
Title:

Mailing Address: _____

Phone No.: (_____) _____ Fax No.: (_____) _____

E-mail: _____

Complete and return form at Membership Meeting on May 25, 2011, or mail to Kahuku Water Association, Inc. C/O Second City Property Mgt, P O Box 700489 Kapolei, HI 96709.

If your form is not completed and returned by June 30, 2011, we will assume you DO NOT accept membership in the Kahuku Water Association, Inc. and water service will be terminated on July 1, 2011.

3371720.1

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
DENISE M. C. DE COSTA, Vice Chair
THERESIA C. McMURDO
DUANE R. MIYASHIRO
ADAM C. WONG

WESTLEY K.C. CHUN, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

DEAN A. NAKANO
Acting Manager

September 28, 2011

09-30-11P02:40 RC

Ms. Choon James
55-052 Naupaka Street
Laie, Hawaii 96762

Dear Ms. James:

Subject: Your E-mail Comments of June 5, 2011 Regarding the Draft Environmental Assessment for the Kahuku Wells Unit No. 3, TMK: 5-6-008:005, Kahuku, Oahu, Hawaii

Thank you for your review and comments on the Draft Environmental Assessment (EA) for the Board of Water Supply's (BWS) Kahuku Wells Unit No. 3 project. We apologize for the delay in our response to your e-mail as it was not received by our consultant.

We have the following responses to your additional questions:

1. Water from the Kahuku Wells Station will not be distributed beyond the Kahuku water system as it is not connected to any other BWS system.

2. The existing permitted use for the Kahuku Wells Station is 0.6 million gallons per day (mgd) with current water use of approximately 0.4 mgd. BWS currently holds water commitments for Kahuku Villages Phases IV and V. Projected demand in Kahuku is not expected to exceed the existing permitted use of 0.6 mgd within the 2030 planning horizon.

3. Pursuant to Chapter 30, Revised Ordinances of Honolulu, the Oahu Water Management Plan (OWMP) guides the plans, policies and projects of the City and County of Honolulu. The OWMP was prepared in accordance with the State Water Code (Chapter 174-C, Hawaii Revised Statutes).

4. Construction of a new well station in the Malaekahana area was considered. However, the proposed Kahuku Wells Unit No. 3 project was determined to be the most cost-effective alternative. A more detailed description of the alternatives can be found in Section 5.2 of the EA.

5. We acknowledge your concern regarding water service within the private Kahuku Water Company system. The Kahuku Water Company system in the Marconi Road area is closer to our Kawela 228 water system rather than the Kahuku water system. As such, Well 4158-12 referred to in your email and its associated distribution system is not part of the EA for this project. However, we are currently reviewing a request to evaluate the aforementioned private water system in the Marconi Road area and provide a connection to the BWS system. We will provide you a copy of our response to the request. For the BWS to take over a private water system, the water system would have to meet BWS standards and specifications to be considered. For a master meter to be provided, water supply must be available from our system to meet the projected water demand.

6. We have not yet explored the cost implications of taking over the private Well 4158-12 system. As indicated in item 5 above, we are currently evaluating the proposal.

If you have any questions, please contact Scot Muraoka at 748-5942.

Sincerely,

DEAN A. NAKANO
Acting Manager

cc: John Katahira, The Limtiaco Consulting Group