Final Environmental Assessment

PROPOSED NAPILI WELL "A" SITE IMPROVEMENTS

Prepared for:

County of Maui,
Department of Water Supply

October 2008

MUNEKIYO HIRAGA, INC.

CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

Executive Summary

Project Name:	Proposed Napili Well "A" Site Improvements
Applicant:	County of Maui Department of Water Supply
Type of Document:	Final Environmental Assessment
Legal Authority:	Chapter 343, Hawai`i Revised Statutes
Agency Determination:	Finding of No Significant Impact
Applicable Environmental Assessment review "trigger":	Use of State and County lands and funds
Location:	Vicinity of Existing Napili Well "A" Site TMK: (2)4-3-001:001(por.) - New Tank Site TMK: (2)4-3-001:006(por.) - Existing Site
Approving Agency:	Department of Water Supply 200 South High Street Wailuku, Hawai`i 96793 **Contact: Larry Winter** Phone: (808) 270-7835
Consultant:	Munekiyo & Hiraga, Inc. 305 High Street, Suite 104 Wailuku, Hawai`i 96793 **Contact: Kyle Ginoza** Phone: (808) 244-2015
Project Summary:	To meet the increasing water system service requirements for the Napili and Lahaina regions of the island of Maui, the County's Department of Water Supply (DWS) proposes the installation of a well storage tank adjacent to the existing Napili Well "A" storage tank site. This new 300,000 gallon storage tank will supplement storage capacity currently provided by the existing 100,000 gallon tank. The new tank will be of reinforced concrete or stainless steel construction, with a diameter of approximately 53 feet and a height of about 17 feet. Related site improvements, such as grading, asphalt paving around the tank, expansion of the control building, and new perimeter fencing, are also proposed. The

project also includes renovation and expansion of the existing pump control building to replace the temporary housing of existing chlorination equipment.

I. PROJECT OVERVIEW

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A. PROJECT LOCATION, EXISTING USE, AND OWNERSHIP

The new water storage tank site and the existing Napili Well "A" and water storage tank site are located in Napili, Maui, Hawai`i to the east (mauka) of Honoapi`ilani Highway and Napili town. See **Figure 1**. Napili Well "A" and water storage tank, which are under the jurisdiction of the Department of Water Supply and are part of Tax Map Key (TMK) No. (2)4-3-001:006(por.), currently exist adjacent to the new water storage tank site, which is located at TMK No. (2)4-3-001:001(por.). See **Figure 2**.

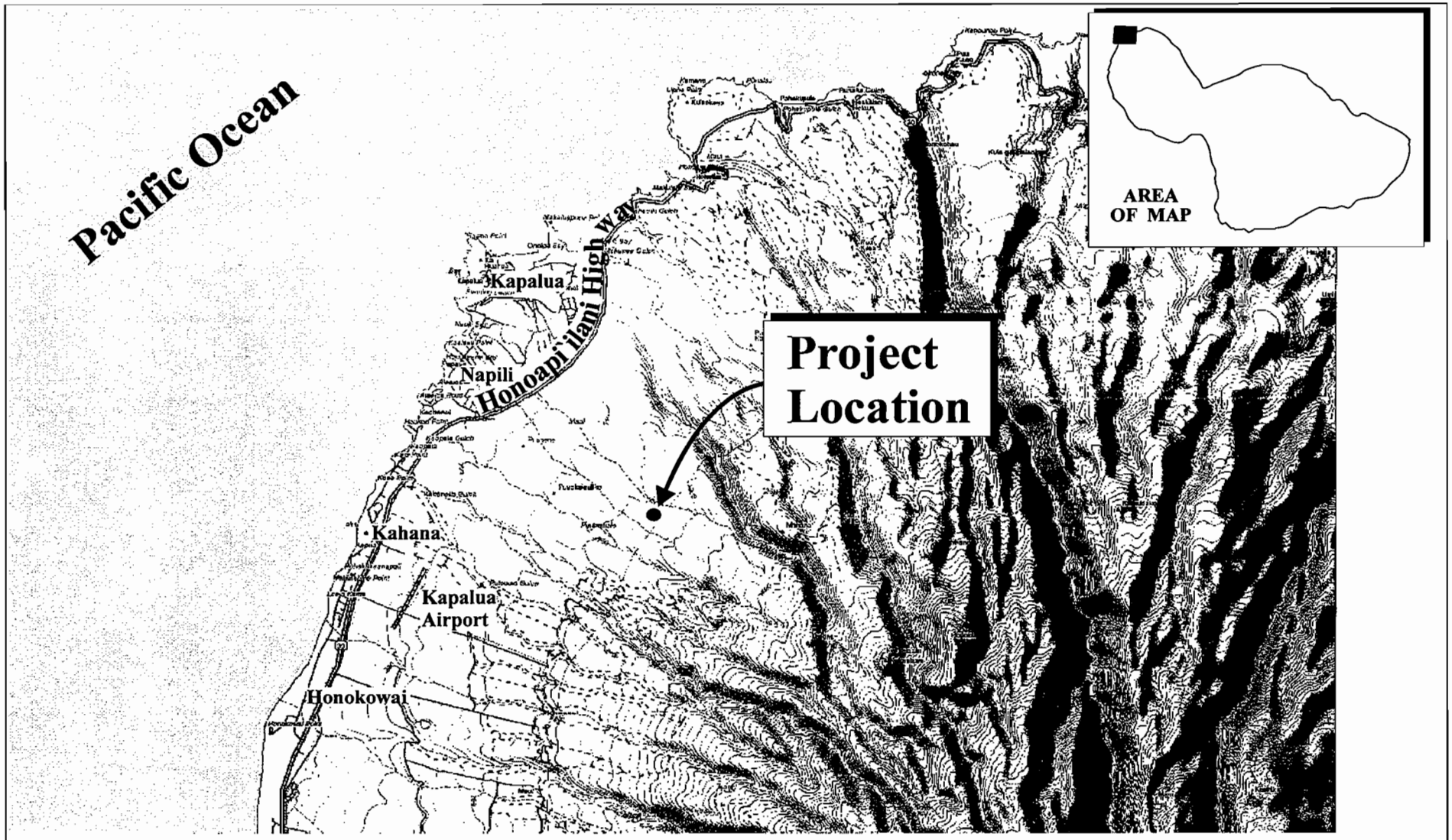
Aside from the small area containing the existing well and storage tank, the surrounding landscape, including the new water storage tank site, contains agricultural fields, which were formerly cultivated in pineapple. At the present time, the new water storage tank site and adjacent property are unplanted. See **Figure 3**.

The new water storage tank site is currently owned by Maui Land & Pineapple Company. The Department of Water Supply is in the process of acquiring the site from Maui Land & Pineapple Company for project implementation. The existing well and storage tank site is currently under the jurisdiction of the County of Maui under an Executive Order from the State of Hawai`i.

B. PROPOSED ACTION

The County of Maui, Department of Water Supply (DWS) proposes to install a well storage tank adjacent to its existing Napili Well "A" and water storage tank and enlarge the control building. The new tank, which will supplement well water storage to the same areas, will have a storage capacity of 300,000 gallons. It will be a circular, cast-in-place, reinforced concrete or stainless steel structure with a 53-foot diameter. See **Figure 4**. The tank height is approximately 17 feet.

Attendant improvements at the site include grading to establish a tank slab elevation of 860 feet, asphalt paving around the tank for maintenance access purposes, installation of a 6-foot high perimeter chain link fence, and increasing the size of the control building by approximately 105 square feet. Related mechanical improvements will also be made onsite to ensure that tank operations and controls are properly integrated with the existing system.



Source: DeLorme 3-D TopoQuads, 2002

Figure 1

Proposed Napili Well "A" Site Improvements

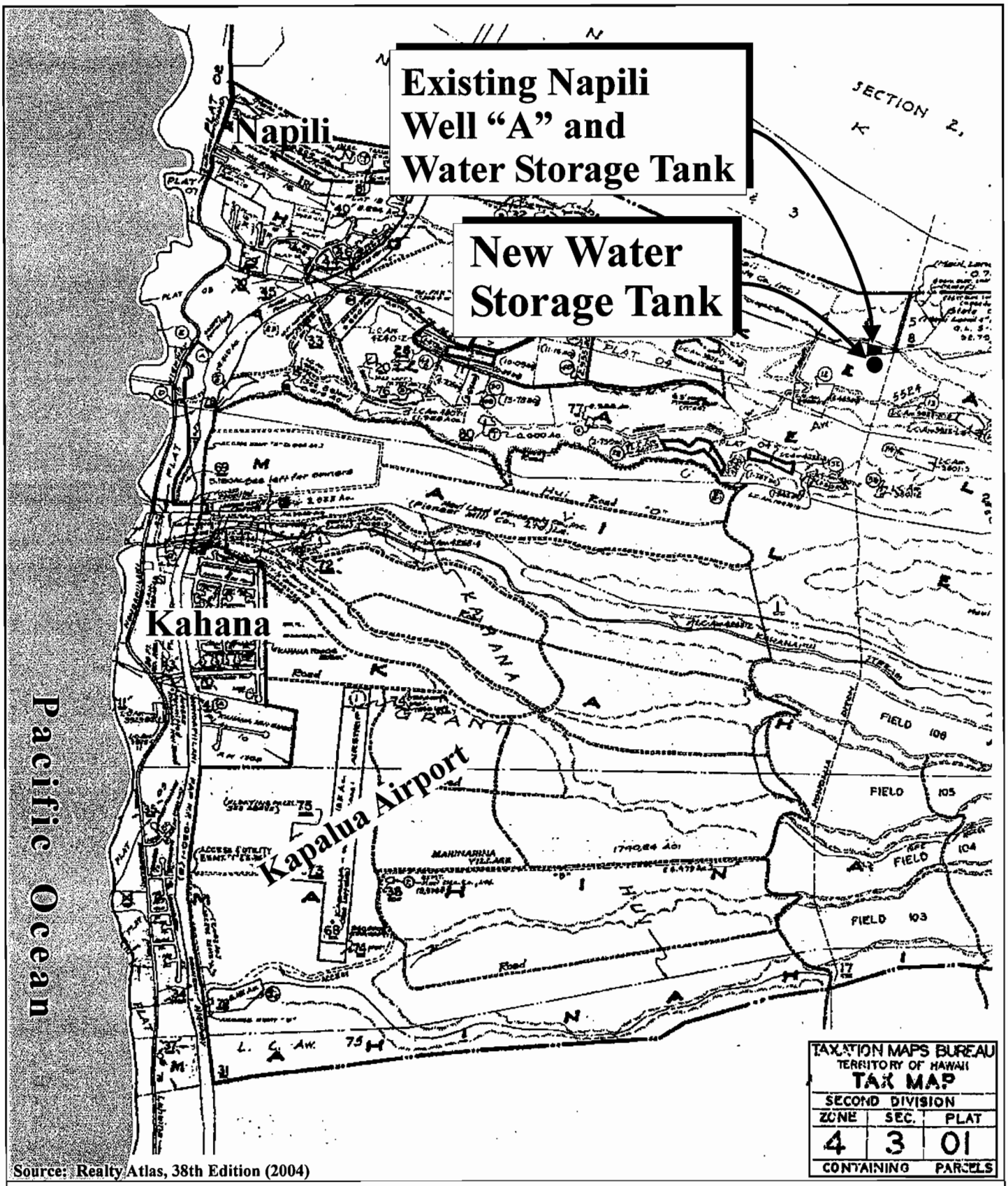
Regional Location Map

NOT TO SCALE

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

KaiHi\NapiliWellA\RegionalLocation



Source: Realty Atlas, 38th Edition (2004)

Figure 2

Proposed Napili Well "A" Site Improvements

Site Location Map

1000 0 Feet 500 2000

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MUNEKIYO & HIRAGA, INC.

KaiHi\NapiliWellA\Siteloca

North View of Existing Well Storage Tank

South View of Proposed New Well Storage Tank Location (Beyond Fence Line)

Source: KAI Hawaii, Inc.

Figure 3

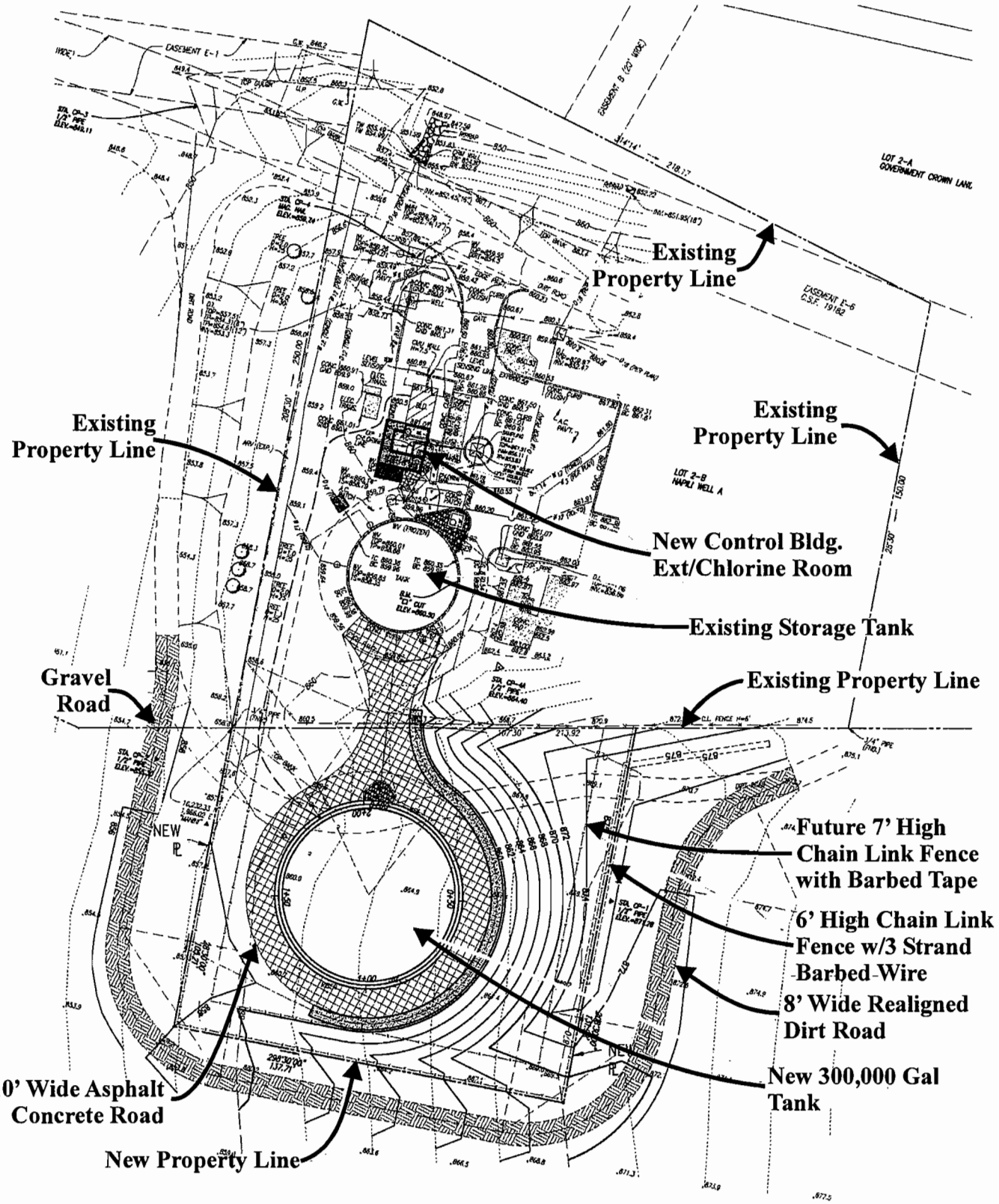
Proposed Napili Well "A" Site Improvements

Site Photographs

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

KAIHi\NapiliWellA\Site Photographs



Source: KAI Hawaii, Inc.

Figure 4

Proposed Napili Well "A" Site Improvements

Preliminary Site Plan

NOT TO SCALE

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

KAIHi\NapiliWellA\Preliminary Site Plan

In addition, the project also includes renovation and expansion of the existing pump control building to replace the temporary housing of existing chlorination equipment.

The project site falls within the State Land Use "Agricultural" District and is designated for "Agricultural" use by the West Maui Community Plan. County zoning for the property is "Agricultural". The proposed action is a permitted use under the foregoing land use classifications.

C. PROJECT NEED

The existing tank site, constructed by the State of Hawai`i in 1979, provides water storage for the Napili and Lahaina areas. The 100,000 gallon capacity of the existing tank is not adequate to meet the storage needs of the service area, as population growth in the region has led to increased demand on the water infrastructure system. Pump and piping systems for the new tank will be designed to integrate with the existing systems.

D. CHAPTER 343, HAWAI`I REVISED STATUTES REQUIREMENT

The proposed improvements will be funded by the County of Maui on lands owned by the State of Hawai`i and Maui Land & Pineapple Company. As previously mentioned, the DWS is in the process of acquiring the new water storage tank site from Maui Land & Pineapple Company for project implementation. The use of State and County lands and funds is a trigger for an environmental impact analysis pursuant to Chapter 343, Hawai`i Revised Statutes (HRS). In particular, the proposed action requires the preparation and processing of an Environmental Assessment.

E. PROJECT COST AND TIME SCHEDULE

The estimated cost of the proposed project is $1.5 million. This project may be funded by Federal funds through the State of Hawai`i's Drinking Water State Revolving Fund (DWSRF) program, which would constitute a Federal action and will require that the project satisfy all of the Hawai`i DWSRF program requirements.

The implementation of the proposed improvements sought by the applicant will commence upon receipt of regulatory permits and approvals. It is estimated that site construction will be initiated in early 2009 and will be completed by early 2010.

II. DESCRIPTION OF THE EXISTING ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

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A. PHYSICAL SETTING

1. Surrounding Land Uses

a. Existing Conditions

The project site is located in the Napili area of West Maui. The subject property is located adjacent to Maui Land & Pineapple Company pineapple fields to the south, east, and west and an existing County of Maui water storage tank to the north. Lands to the distant west of the property, across Honoapi`ilani Highway, are urbanized and characterized by resort and residential condominium, business/commercial, and single-family residential uses.

b. Potential Impacts and Mitigation Measures

The proposed action involves the installation of a well storage tank and related site improvements adjacent to an existing County water storage tank site. The tank site is located in a relatively remote area, with the nearest residential properties located approximately 7,000 feet west of the subject property. Because it is located away from Honoapi`ilani Highway and in a remote agricultural area, the addition of a new water storage tank and related site improvements at this location is not anticipated to have an adverse effect on nearby urban uses.

2. Climate and Topography

a. Existing Conditions

Like most areas of Hawai`i, Napili's climate is relatively uniform year-round. Napili's tropical latitude, its position relative to storm tracts and the Pacific

anticyclone and the surrounding ocean combine to produce this stable climate. Variation in climate among different regions on Maui is largely left to local terrain.

Average temperatures in Napili range between 60 degrees and 88 degrees Fahrenheit. August and September are historically the warmest months, while January and February are the coolest (Maui County Data Book, 2006).

Rainfall in Napili is highly seasonal, with most precipitation occurring between October and April when winter storms hit the area. Situated on the leeward side of the West Maui Mountains, this region receives most of its rainfall in late afternoon and early evening, after seabreezes take moisture upslope during the day. Precipitation data collected at the Kapalua Airport show that on average, March is the wettest month, with 6.39 inches of precipitation, while December is the driest, with just 0.45 inch (Maui County Data Book, 2006).

Wind patterns in the Napili area are also seasonal. The northeasterly tradewind occurs 90 percent of the time during the summer, and just 50 percent of the time during the winter. Wind patterns also vary on a daily basis, with tradewinds generally being stronger in the afternoon. During the day, winds blow onshore toward the warmer land mass. In the evening, the reverse occurs, as breezes blow toward the relatively warm ocean.

Elevation at the project site is approximately 800 feet above mean sea level. The property generally slopes upward at nine (9) percent in a northwest to southeast direction.

b. <u>Potential Impacts and Mitigation Measures</u>

The proposed project will not have an adverse effect on microclimates.

Grading work outside of the existing fence line, required to establish the finished slab elevation of 860 feet, will involve cut quantities of approximately 1,409 cubic yards of soil and approximately 531 cubic yards of fill. The topographic character of the site will not be substantially altered as a result, nor would soil composition be changed considerably.

3. Soils and Agricultural Productivity Characteristics

a. Existing Conditions

Underlying the project site are the soils from the Honolua-Olelo association. The Soil Survey of the Islands of Kaua`i, O`ahu, Maui, Moloka`i, and Lana`i, State of Hawai`i characterizes the soils of this association as deep, gently sloping to moderately steep, well-drained soils that have fine-textured subsoil. The soils developed in material weathered from basic igneous rock. See **Figure 5**.

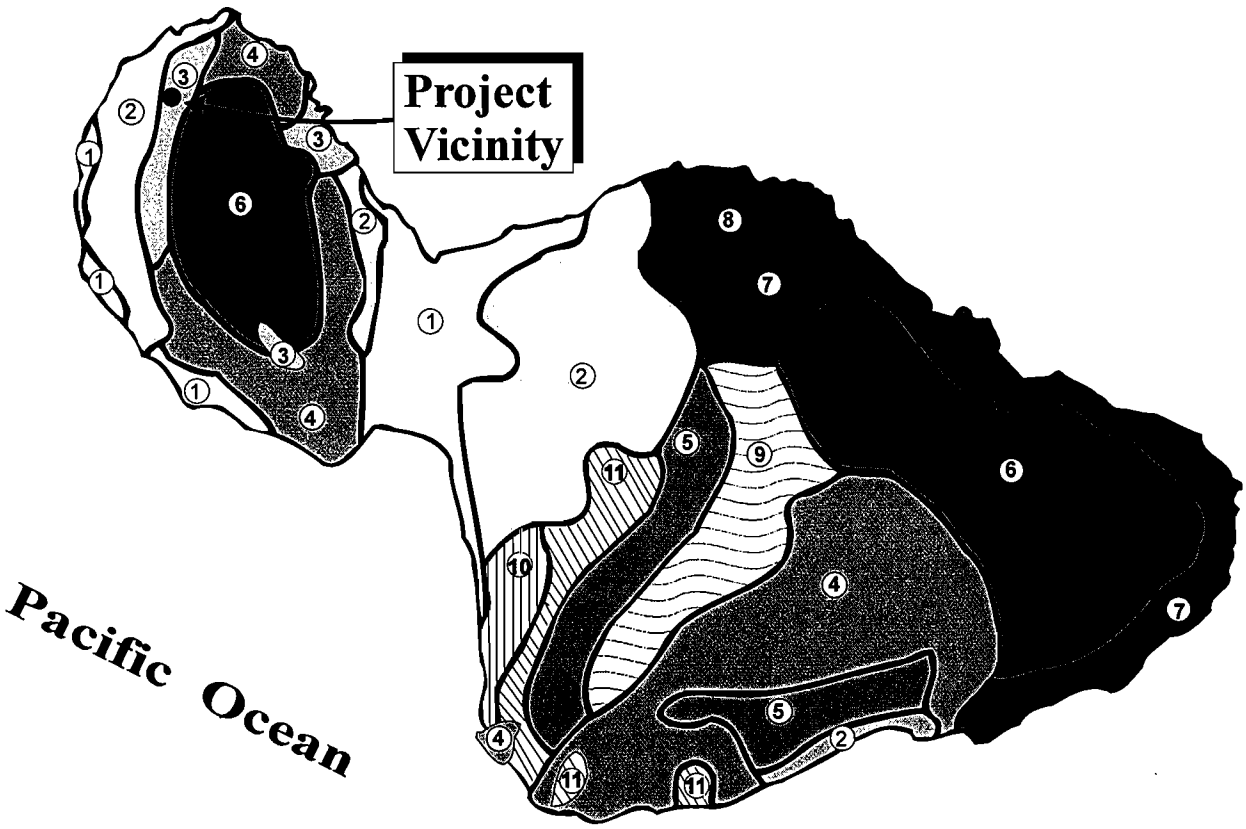
Moreover, soils underlying the project site are of the Alaeloa Series, specifically Alaeloa silty clay, 7 to 15 percent slopes (AeC). The soil has slow to medium runoff and the erosion hazard is slight to moderate. Workability of the soil is slightly difficult at times. This soil is often used for pineapple cultivation. See **Figure 6**.

The University of Hawai`i Land Study Bureau classifies productivity characteristics on a scale of "A" to "E" with lands designated as "A" reflecting the highest productivity and "E" representing lands ranked lowest. The letters are followed by numbers which further classify the soil types conveying information such as texture, drainage, and stoniness. Land underlying the project site is classified as C2, which reflects moderate suitability for machine tillability. The typical use of this land type is pineapple cultivation.

In 1977, the State Department of Agriculture developed a classification system to identify Agricultural Lands of Importance to the State of Hawai`i (ALISH), based primarily, though not exclusively, on their soil characteristics. The three (3) classes of ALISH lands are: "Prime", "Unique", and "Other Important" agricultural lands, with the remaining non-classified lands termed "Unclassified". When utilized with modern farming methods, "Prime" agricultural lands have a soil quality, growing season, and moisture supply needed to produce sustained crop yields economically; while "Unique" agricultural lands possess a combination of soil quality, growing season, and moisture supply to produce sustained high yields of a specific crop. "Other Important" agricultural lands include those that have not been rated as "Prime" or "Unique".

LEGEND

- ① Pulehu-Ewa-Jaucas association
- ② Waiakoa-Keahua-Molokai association
- ③ Honolua-Olelo association
- ④ Rock land-Rough mountainous land association
- ⑤ Puu Pa-Kula-Pane association
- ⑥ Hydrandepts-Tropaquods association
- ⑦ Hana-Makaalae-Kailua association
- ⑧ Pauwela-Haiku association
- ⑨ Laumaia-Kaipoipoi-Olinda association
- ⑩ Keawakapu-Makena association
- ⑪ Kamaole-Oanapuka association



Map Source: U.S. Department of Agriculture, Soil Conservation Service

Figure 5

Proposed Napili Well "A" Site Improvements

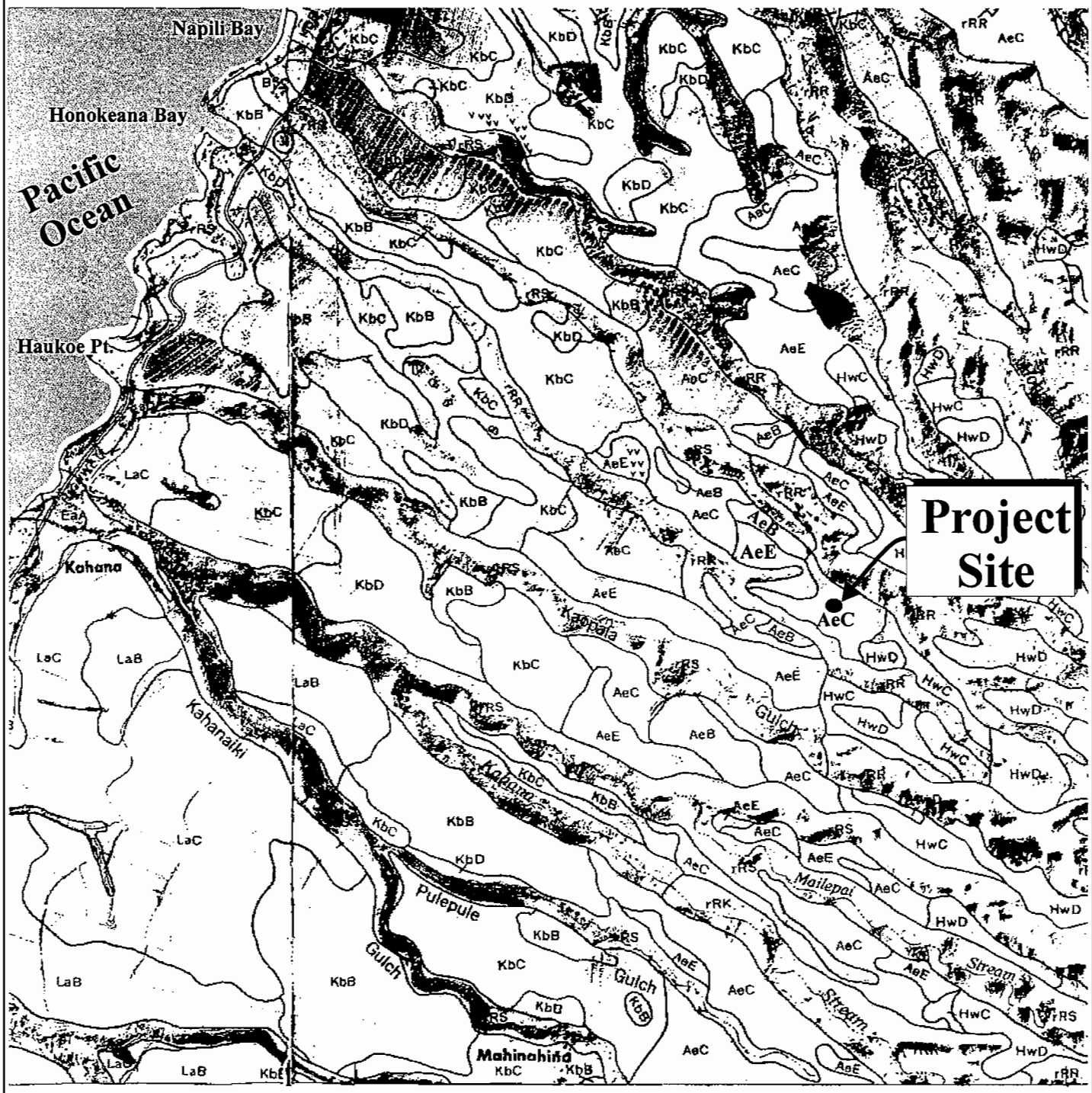
Soil Association Map

NOT TO SCALE

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

Kaihi\napiliwella\soils



Source: U.S. Department of Agriculture, Soil Conservation Service

Figure 6

Proposed Napili Well "A"
Site Improvements
Soil Classification Map

0 1000 Feet
500 2000

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

KaiHi\NapiliWell\SoilClass

As reflected by the ALISH map for the Honolua region, the proposed project is comprised of lands that have been defined as "Prime" agricultural lands. See **Figure 7**.

b. Potential Impacts and Mitigation Measures

Although the project site is located in lands classified as "Prime" agricultural lands, it occupies only a small portion of TMK (2)4-3-001:001. Further, when the water storage tank is evaluated in the context of its future community benefit, its impact on agricultural productivity parameters is considered slight.

4. Flood and Tsunami Hazards

a. Existing Conditions

The property is located in an area of the Flood Insurance Rate Map (FIRM) designated as Zone "C", an area of minimal flooding. See **Figure 8**. As noted in **Figure 8**, since the region where the project site is located is entirely within Zone "C", a FIRM panel was not produced. In addition, according to the State Civil Defense Tsunami Evacuation Map for the area, the property is located outside of the tsunami evacuation area boundaries and is, therefore, considered to be safe from wave action.

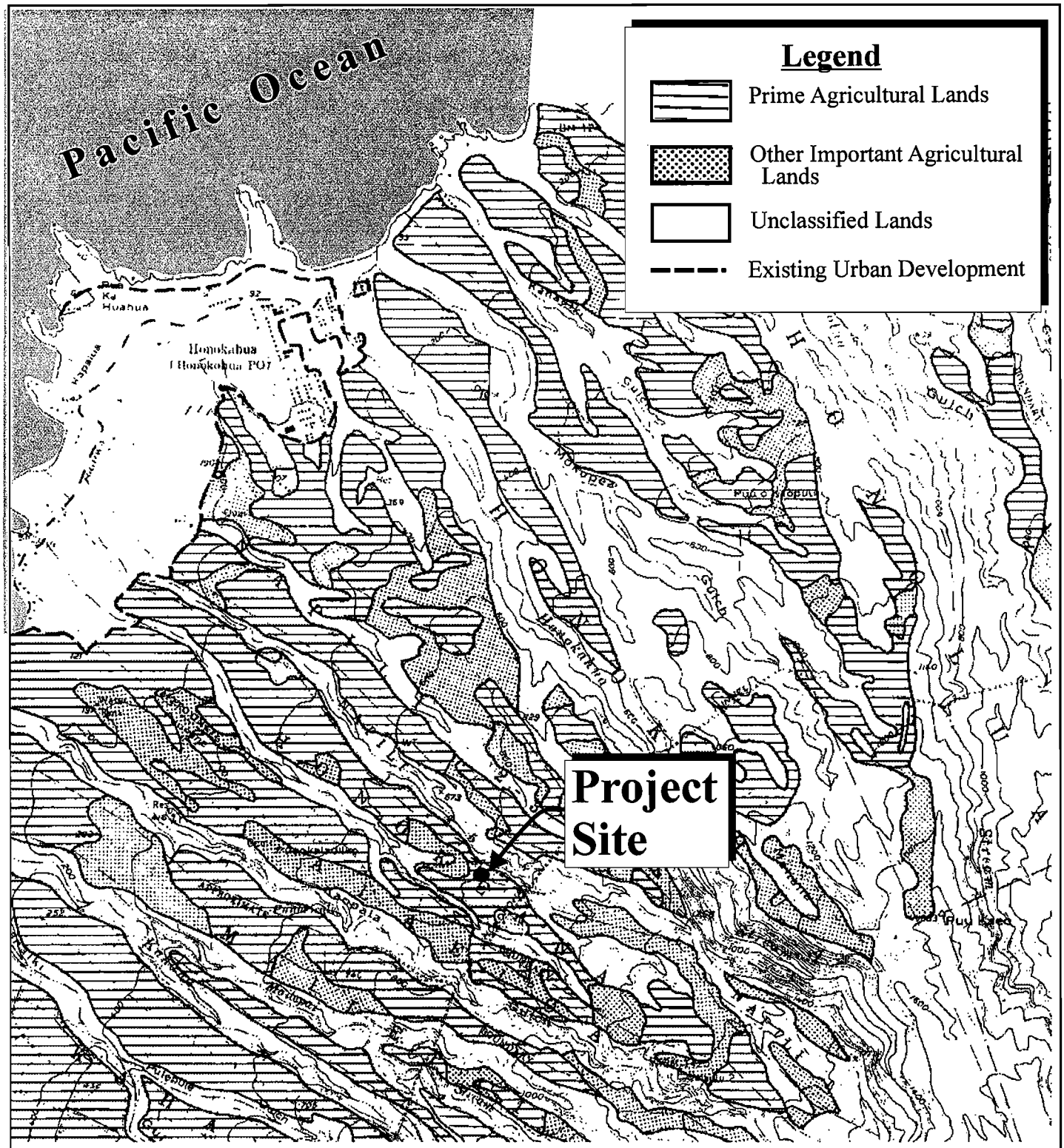
b. Potential Impacts and Mitigation Measures

The proposed action involves the installation of a well storage tank within Zone "C". Appropriate drainage mitigation measures will be implemented as further discussed in Section II.D.5., of this chapter. No adverse impact to flood conditions is anticipated as a result of this project.

5. Flora and Fauna

a. Existing Conditions

Due to the agricultural uses surrounding the project site, there are no known rare, endangered, or threatened species of plant life in the vicinity of the proposed project. Vegetation in the project area is dominated by introduced



Source: ALISH, Honolua Quadrangle

Figure 7

Proposed Napili Well "A" Site Improvements

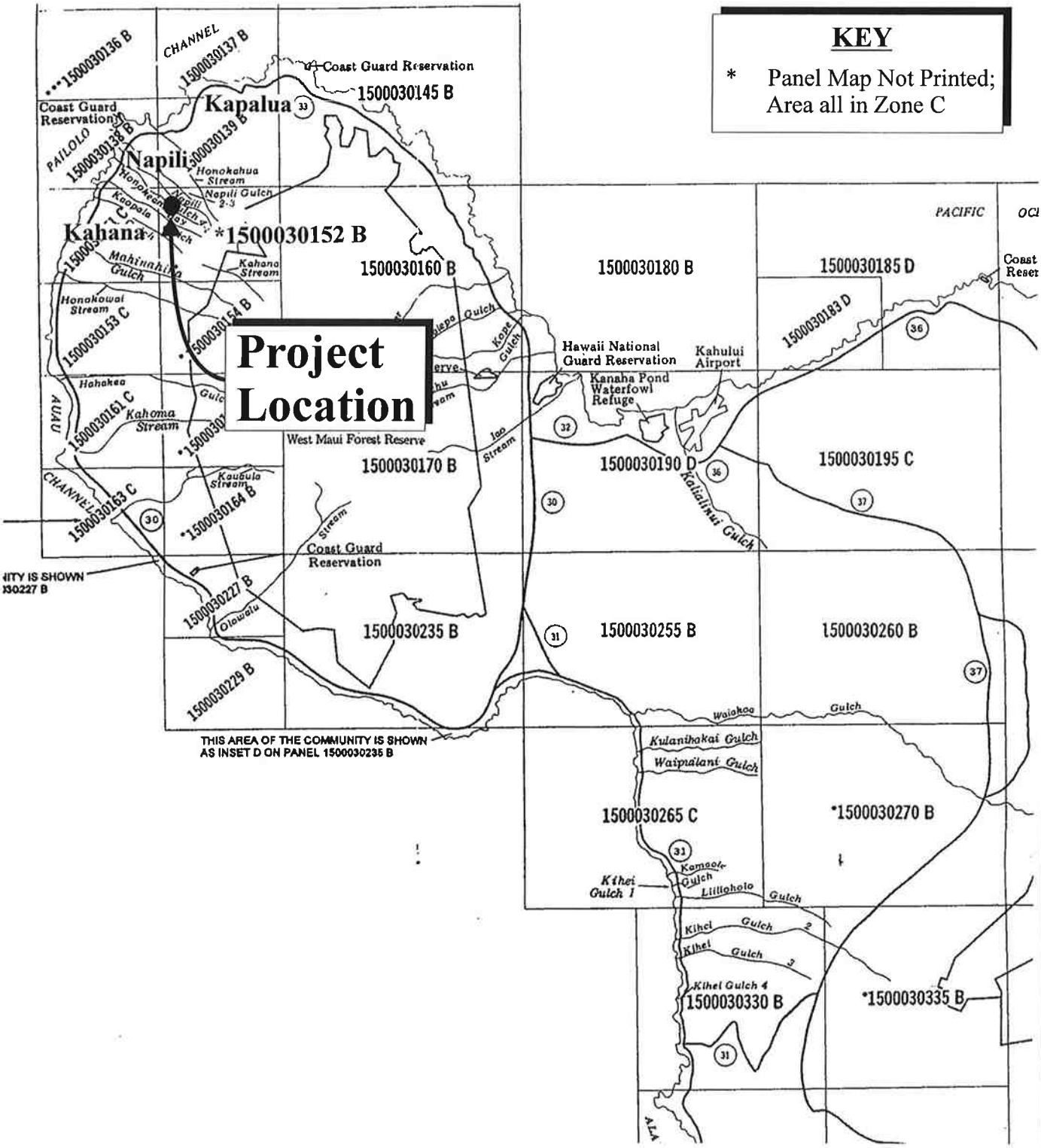
Agricultural Lands of Importance to the State of Hawai`i

1000 0 Feet 500 2000

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

KaiHi\NapiliWell\ALISH



Source: FIRM - Map Index

Figure 8

Proposed Napili Well "A" Site Improvements

Flood Insurance Rate Map

NOT TO SCALE

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

KaiHi\NapiliWellA\FIRM

plant species, including low-lying weeds and grasses and passion fruit trees (along makai fence line), and there are no known rare, threatened, or endangered species of flora within the site.

In addition, there are no wetlands or streams within the property or on nearby parcels which provide habitat ecosystems. Fauna typically found in the vicinity include cats, dogs, rats, and mongoose, as well as a variety of non-native birds. There are no known rare, endangered, or threatened species of animal life or significant habitats found in the vicinity of the proposed project.

b. Potential Impacts and Mitigation Measures

There are no known rare, endangered, or threatened species of flora, fauna, or avifauna within the vicinity of the project. Consequently, the proposed project is not anticipated to impact flora and fauna in the vicinity.

6. Streams, Wetlands, and Reservoirs

a. Existing Conditions

According to the United States Department of the Interior, Fish and Wildlife Service, National Wetland Inventory Map, there are two (2) wetland features in the general vicinity of the project site. The Honokahua Stream is located approximately 4,000 feet north of the project site. In addition, the Kahana Stream is located approximately 4,000 feet south of the project site. Both are considered Palustrine wetlands. Outside of these two (2) wetland features, there are no wetlands in the vicinity of the project site. Napili Gulch borders the project area to the north, and does not include wetland areas as documented by the National Wetland Inventory Map.

b. Potential Impacts and Mitigation Measures

The project site is situated outside of the flood area attributable to the two (2) wetland features. Moreover, in light of the limited scope of the project and its distance away from the noted wetland features, the proposed project is not anticipated to have any impact on streams or reservoirs in the region. Drainage measures will be implemented to minimize impacts to Napili Gulch

and other downstream properties.

7. Air and Noise Quality

a. Existing Conditions

Airborne pollutants that do exist can largely be attributed to vehicular exhaust from Honoapi`ilani Highway and adjoining roadways. Other sources may include dust from pineapple cultivation operations on surrounding lands. These sources are intermittent, however, and the prevailing tradewinds disperse particulates generated by these temporary sources.

Existing noise at the project vicinity is primarily attributed to the well pump motor and traffic to a zipline facility utilizing a neighboring access road. Noise associated with agricultural operations at adjacent pineapple fields include the ingress and egress of trucks and equipment. Limited truck traffic currently utilizes the existing unimproved agricultural road which provides access to the fields and the existing water tank site. There are no adverse aircraft related noise conditions which impinge upon the project site.

b. Potential Impacts and Mitigation Measures

The proposed action is not expected to have a direct impact on air or noise quality. There may be a temporary impact on air and noise quality attributable to construction activities associated with site grading and tank installation. These would, however, be limited, given the small size and scope of improvements. Best Management Practices (BMP's) will be implemented to mitigate impacts associated with construction activities.

8. Archaeological Resources

a. Existing Conditions

An archaeological analysis of the project site was completed by Xamanek Researches, LLC in March 2008. See **Appendix "A"**. The analysis consisted of background research of previous archaeological investigations in the vicinity of the project site, in addition to a field inspection to identify potential archaeological resources at the project site.

During the field inspection, it was noted that the project area was previously cultivated in pineapple. The site contained surface vegetation consisting of introduced grass and succulent weed species, along with scattered pineapple plants and Formosan koa trees. The site also contained other evidence of previous pineapple cultivation activities, such as black agricultural plastic sheeting, black drip irrigation line segments, and broken polyvinyl chloride (PVC) pipe fragments.

Research of previous archaeological studies revealed a number of archaeological agricultural sites in the vicinity, primarily in Honokahua Gulch to the north. While sites were also identified in Napili Gulch to the north, no sites were located in the surrounding pineapple field areas that were surveyed.

b. Potential Impacts and Mitigation Measures

Based on the results of the archaeological analysis conducted by Xamanek Researches, LLC, no further archaeological work is recommended for the project. There were no surface sites located within the project limits and the area has been heavily impacted by the previous pineapple cultivation activities.

In accordance with Section 6E-43.6, HRS and Chapter 13-300, Hawai`i Administrative Rules, if any significant cultural deposits or human skeletal remains are encountered, work will stop in the immediate vicinity and the State Historic Preservation Division of the Department of Land and Natural Resources (SHPD/DLNR) and the Office of Hawaiian Affairs (OHA) will be contacted.

The SHPD evaluated the archaeological field work by Xamanek Researches and, based on the submitted information, the SHPD believes "it is unlikely that historic properties will be affected by the proposed well storage tank". See **Appendix "A-1"**.

9. Cultural Resources

a. Existing Conditions

In pre-contact times, the Lahaina District was a garden-like area with taro lo`i, ditches (`auwai), and separating embankments, which created a verdant landscape. Scattered around the taro lo`i and situated on higher ground were the homes of the laborers who worked the land. Coastal marine resource areas and the inland use of agricultural lands, including the movement from one environment to another, were utilized by the early populations for a variety of resources available within the ahupua`a.

The evolution of the ahupua`a land use system essentially provided inhabitants access to resources present in the land unit which stretched from the ocean to the rim of the mountains. Semi-permanent and permanent settlement probably occurred in both coastal and upland areas. It is plausible that the ahupua`a in West Maui replicated settlement patterns found elsewhere in the Hawaiian archipelago (i.e., habitation in coastal and inland areas with relatively little activity occurring in the intermediate zone between these areas). In Honokowai and neighboring ahupua`a, the intermediate zone is fairly narrow due to the geographical layout of the mountains and the coastline. By late pre-contact times, the fairly sizable population dwelling in the region utilized coastal fishing areas and inland garden plots for subsistence, cultivating sweet potatoes near shore, or taro terraced lo`i in the wetter valleys inland.

By the time of contact, the Lahaina region had become an important socio-political center, and the residence of several powerful chiefs, most notably Kahekili, one of the highest ranking on Maui. Lahaina was considered by high chiefs to be a favorable place due to the abundance of natural resources and its close proximity to the islands of Lana`i and Moloka`i. In 1820, about 40 years after Captain James Cook's discovery of the Hawaiian Islands, the islands experienced the loss of King Kamehameha I, the crumbling of the ancient Hawaiian social system, and the sudden arrival on the scene of the first New England whaling ships and missionaries. The population of West Maui continued to decline in the second half of the 19th century followed by the collapse of the Pacific whaling industry in the 1860's which was prompted by the discovery of oil in Pennsylvania a decade or so earlier. In the Lahaina

area, sugar production developed in the mid-1800's, while further north, different crops were tried, including coffee and pineapple.

In the 1840's, sugar cane production began in the Lahaina-Ka`anapali area. In 1852, the first contract laborers from China arrived in Hawai`i in the sugar industry. Later, in 1868, the first Japanese laborers arrived, followed by Norwegians, Germans, Koreans, Puerto Ricans, Portuguese, Spaniards, Russians, and Filipinos. In 1865, Pioneer Mill Company was established and during the next decade, added other plantations to its holdings. Later in 1883, Pioneer Mill modernized sugar operations and constructed a railroad across plantation property. Trains were hauling harvested cane between Ka`anapali and Lahaina, with more track being laid out to outlying areas. At that time, Pioneer Mill owned 900 acres of land, with 600 acres in cultivation. By the end of the 19th century, Pioneer Mill had grown in size to approximately 12,500 acres. Its fields spread across the West Maui coastline for about ten (10) miles, from Launiupoko to Ka`anapali, and extended approximately a mile inland. In 1918, Pioneer Mill was sold to American Factors. Later, in 1960, Pioneer Mill became a subsidiary of Amfac, Inc.

The pineapple industry in West Maui began as Honolua Ranch. Along with its pineapple crop, Honolua Ranch, which later became Baldwin Packers, grew coffee, cotton, aloe, mango, and watermelon. In 1914, the first pineapple cannery was built at Honokahua and, five years later, a new cannery was constructed near Mala Wharf. By the 1920's, pineapple was being grown on a large scale. Later, in 1963, Baldwin Packers merged with Maui Pineapple Company, a subsidiary of Maui Land & Pineapple Company.

Up until the mid-1960's, sugar and pineapple cultivation occupied much of the land in the West Maui region. Since the 1960's, commercial, residential, and visitor industry related land uses have come to dominate the coastal strip along Lower Honoapi`ilani Road from Ka`anapali to Kapalua. While sugar cultivation in the region terminated in 1999, pineapple farming still continues on lands mauka of Honoapi`ilani Highway.

The subject property is located within the Alaeloa Ahupua`a, within the Ka`anapali District. The Ka`anapali District is known as a traditional population center, as well as a battleground area. Coastal areas of the ahupua`a was likely used in pre-contact times for marine resources utilization

and small gardening plots. Land Commission Awards (LCA) in the ahupua`a indicate habitation and agricultural activities involving sweet potato and dry land taro cultivation. After the Great Mahele, sugar and pineapple cultivation dominated the region. A railroad was constructed along the coast to facilitate transport of agricultural products. Lower Honoapi`ilani Road is located in proximity to the original railroad alignment.

Informant Documentation

To obtain a perspective about cultural resources relative to the project corridor, an informant interview was conducted with Wes Nohara. See **Appendix "B"**. A summary of the interview follows.

Wes Nohara was born in Lahaina at the former Pioneer Mill hospital. He is 53 years old and has lived on Maui all of his life. He was raised in Honolua and has resided in West Maui until five (5) years ago, when he moved to Makawao. In the 1969-1970 timeframe, Honolua Village, where the Nohara family lived, was condemned and families were relocated due to inadequate sewer infrastructure. Mr. Nohara's mother currently lives in Napilihau, as a result of the Honolua Village relocation almost 40 years ago.

Mr. Nohara has worked for Maui Land & Pineapple Company (ML&P) for 38 years, beginning as a part-time worker while he was in high school. He has worked full-time for the company for 28 years. Mr. Nohara is currently the General Manager of Kapalua Farms, a subsidiary of ML&P. He has been affiliated with ML&P as an employee since 1969, but members of his family had been with the company since the 1920's.

Regarding other agricultural affiliations, Mr. Nohara is currently on the board of the West Maui Soil and Water Conservation District and the Tri-Isle Resource Conservation and Development Council. These organizations advise and protect the proper use of land and water in the area, with respect to drainage and conservation. Mr. Nohara mentioned that, through his participation with these organizations, he has a role in administering grading permits in the area in conjunction with the National Resource Conservation Service (NRCS).

Mr. Nohara is quite familiar with the area, as his family formerly farmed

lands situated in the vicinity of the project site since the 1930's. Families would take care of agricultural lands until harvesting. The Baldwin Packers company would harvest the agricultural lands and compensate families based on the production of the lands. This continued until the 1940's, when the widespread use of the internal gas engine in World War II began. With the advent of the internal gas engine, more lands could be utilized for pineapple cultivation due to increased resource efficiencies.

Mr. Nohara recalls that the area has been in pineapple cultivation since 1970 and had probably been in cultivation since the 1950's. While the field area is currently not in cultivation, the field has been designated by Kapalua Farms for organic agriculture cultivation. While some lands in this region will be dedicated to organic pineapple, other areas will be used for plant nurseries and orchards.

Mr. Nohara is not aware of any cultural practices which may have occurred at or near the project site. Since the project site has been privately owned for decades, cultural practices likely have not occurred since pineapple cultivation began. He is aware that there is a water spring two valleys over from the project site where there is evidence of Hawaiian lo`i and homestead activities. However, there is no flowing water in the gulch near the project site. There are also old plantation roads in the vicinity.

Mauka (east) of the project site, zip-line recreational activities occur. In addition, there are proposals to increase mountain recreational activities, such as mountain biking, hiking trails, and equestrian rides. The impact of these activities with respect to the project site will be greater visibility to the general public.

Mr. Nohara mentioned that, since Kapalua Farms will implement organic farming in the area, the use of chemicals by the Department of Water Supply is of particular concern. The standards for organic cultivation are high and Kapalua Farms must ensure that potential detrimental impacts are prevented. He remarked that the area is not particularly well-suited for agriculture, specifically pineapple, due to poor drainage characteristics. As a result of the poor drainage, during times of heavy rainfall, roads may become treacherous. He also noted that there are power lines traversing the area.

Mr. Nohara understands the importance of the role water plays in development and the notion that people use water supply as a means to control growth. He realizes that the surface water supply from the Honolua Ditch varies and that the development of the proposed Napili Well "A" storage tank will have a positive impact on the consistency of water supply. He wants to ensure that appropriate easement and access road agreements are in place in conjunction with the project.

b. Potential Impacts and Mitigation Measures

The Ka`anapali District has a rich history, both in pre-contact and post-contact times. The coastal areas offered a source of food and recreation, while inland areas provided lands for agricultural use. The region experienced economic, social, and cultural transformation with the introduction of the whaling industry, followed by the sugar and pineapple industries.

Currently, the only chemical normally used by the DWS in the project area is chlorine. However, as necessary, the DWS will coordinate with Kapalua Farms to ensure that chemicals used onsite will not detrimentally impact Kapalua Farms' organic operations. Further, the DWS will manage onsite drainage so that downstream and neighboring properties will not be adversely impacted.

Within this regional and historic context, the site for the proposed Napili Well "A" Storage Tank has been used for pineapple cultivation purposes for decades. As indicated by the archaeological assessment, there are no historic sites on the property. In addition, the property is not used for traditional cultural gathering, access, or religious practices. With these considerations in mind, there are no adverse cultural impacts anticipated in connection with the proposed action.

10. Scenic and Open Space Resources

a. Existing Conditions

The project site is located on a sloping hillside mauka or east of Honoapi`ilani Highway. This geographical orientation provides for views

from the site to the urbanized coastal region of Napili to the west. Surrounding pineapple fields establish the visual context for lands to the immediate south and east of the property, while the adjacent existing water tank and Granular Activated Carbon (GAC) system facilities define the visual context to the north. The property is not part of a scenic corridor.

b. Potential Impacts and Mitigation Measures

The new water tank is not anticipated to affect the scenic character of the region. Given its relatively remote location and placement adjacent to the existing Napili water tank, the surrounding agricultural and scenic characteristics of the region will not be compromised.

B. SOCIO-ECONOMIC SETTING

1. Land Use and Community Character

a. Existing Conditions

The vast majority of lands in West Maui are either State designated "Conservation" or "Agricultural". Generally, "Conservation" lands occupy the higher elevations, while the "Agricultural" district spans the middle ground. Major exceptions to this trend are the Honolua Stream and Pohakupule Gulch areas, where the "Conservation" district extends down to sea level.

"Urban" designated lands, then, are left to occupy the lower elevations along the coast. Kapalua and Ka`anapali contain Community Plan designations reflective of their resort nature. The communities of Kahana and Napili contain a mixture of resort, residential, and business uses.

Lahaina, meanwhile, encompasses a diverse mix of land uses, including residential, business, light and heavy industrial, recreational, and agricultural uses. The town of Lahaina is the commercial center of West Maui. The town contains several shopping centers and retail business areas, and serves as a hub for the region's residential housing. To the east (mauka) of the Pioneer Mill smokestack in Lahaina, there exists a multitude of single-family homes and schools for island residents.

West Maui's attraction can be attributed to its year-round dry and warm climate, complemented by its many white-sand beaches and scenic landscapes. Visitor accommodations are located in Lahaina and the resort communities of Ka`anapali, Kahana, Napili, and Kapalua. The State of Hawai`i's Kapalua-West Maui Airport at Mahinahina links the region to O`ahu and other neighbor islands.

Diversified agriculture and pineapple fields occupy much of the land in the West Maui region. Maui Land & Pineapple Company's fields span along the slopes of the West Maui Mountains north of Lahaina.

b. Potential Impacts and Mitigation Measures

The proposed project is located adjacent to the existing County of Maui Napili water tank and is, therefore, not anticipated to significantly impact neighboring land uses or the character of the community.

2. Population and Demography

a. Existing Conditions

The population of the County of Maui has exhibited relatively strong growth over the past decade. The resident population of the County of Maui in 2005 is estimated to be 140,050 (SMS, June 2006) and is projected to increase to approximately 151,300 in 2010 (SMS, June 2006).

The subject property is located near the western coast of Maui, within the West Maui Community Plan region. Just as the County's population has grown, the resident population of the West Maui region has also increased. The estimated population of Lahaina in 2000 was 17,967 (SMS, June 2006), which comprised 15.3 percent of the island's population. The projection of the resident population for this region in 2010 is estimated to be 21,577 (SMS, June 2006). The overall West Maui population in 2000 differed from the County in terms of age and ethnic distribution as reflected in **Table 1**. West Maui has a larger percentage of its population in the eligible labor force than the County as a whole.

Table 1. Age and Ethnicity

AGE AND ETHNICITY		
	Maui County	**West Maui**
Population	128,094	17,748
Age		
Under 5	7 percent	7 percent
5 to 19	21 percent	17 percent
20 to 44	37 percent	42 percent
45 to 64	24 percent	24 percent
65 and older	11 percent	10 percent
Median Age	36.8 years	39.3 years
Ethnicity		
Caucasian	34 percent	55 percent
Japanese	10 percent	5 percent
Hawai`ian	9 percent	6 percent
Filipino	17 percent	13 percent
All Others	30 percent	21 percent
Source: U.S. Census Bureau, 2000.		

As noted in the preceding table, 66 percent (66%) of West Maui's population is in the labor force age bracket of 20 to 64 years, while Countywide, 61 percent (61%) of the population is in this age category. West Maui has a slightly higher median age of 39.3 years, when compared to the Countywide median of 36.8 years.

b. Potential Impacts and Mitigation Measures

The proposed project is not a direct population generator and, as such, is not anticipated to impact population or demography of the region.

3. Labor Force

a. Existing Conditions

In August 2008, the unemployment rate for Maui County and the island of Maui stood at 4.7 percent and 4.4 percent, respectively (State Department of Labor and Industrial Relations, September 2008).

In terms of the profile of employed persons, West Maui generally follows the Countywide trends for the labor force characteristics shown in **Table 2.**

Table 2. Labor Force Characteristics

Occupational Category	Maui County	West Maui
Agriculture	3 percent	2 percent
Manufacturing	2 percent	<1 percent
Construction	4 percent	2 percent
Transportation, Communication, and Utility	4 percent	2 percent
Trade	20 percent	22 percent
Banking & Finance	4 percent	4 percent
Service	31 percent	40 percent
Government	10 percent	4 percent
Self-employed	23 percent	23 percent
Source: SMS, June 2006		

However, more West Maui workers were employed in the service industry (40 percent) than the Countywide profile (31 percent). Because of the West Maui's emphasis on service jobs, most other job sectors exhibited slightly lower distribution rates.

b. Potential Impacts and Mitigation Measures

On a short-term basis, the project will support construction and construction-related employment. No significant negative impacts on labor conditions are anticipated.

4. Economy

a. Existing Conditions

The economy of Maui is heavily dependent upon the visitor industry. The dependency on the visitor industry is especially evident in West Maui, one of the State's major resort destination areas. As such, a community of tourism service sector workers has developed in the area. This group includes former sugar workers and their families, younger mobile workers, and immigrants from Mexico, Asia, and other Pacific Islands.

In the vicinity of the project area, Maui Land & Pineapple Company's fields are an important component of the region's agricultural base. Pioneer Mill Company, Ltd. had in the past handled agriculture, another vital component of the West Maui economy, further south. Until the cessation of sugar cane cultivation in September 1999, Pioneer Mill cultivated most of its approximately 6,700 acres of fee simple and leased lands. Ka`anapali Land Management Corp. (successor to Pioneer Mill Company, Ltd.) is in the process of diversifying its agricultural operations by utilizing portions of its lands to grow seed corn, with a portion of its land set aside for coffee production.

b. Potential Impacts and Mitigation Measures

In the short term, the project will have a beneficial impact on the local economy during the period of construction. The proposed project is viewed as an infrastructure system upgrade needed to accommodate existing and future demands. While primarily considered a public health and safety-related action, the proposed improvements will help to sustain the economic vitality of the West Maui region through provision of infrastructure system capacity.

C. PUBLIC SERVICES

1. Police and Fire Protection

a. Existing Conditions

The proposed project area is within the Lahaina Police Station service area, which includes the entire Lahaina district. The Lahaina Station, built in the early 1970s, is located in the Lahaina Civic Center complex at Wahikuli. The Lahaina Patrol includes 54 full-time personnel, including management-level officers and field police officers. Additional personnel consist of public safety aides and administrative support staff.

Fire prevention, suppression, and protection services for the Lahaina District are provided by personnel housed at the Lahaina Fire Station, also located in the Lahaina Civic Center, and the Napili Fire station, located about two (2) miles to the west of the project area. The Lahaina Fire Station includes an engine and a ladder company and is staffed by approximately 30 full-time personnel. The Napili Fire Station consists of an engine company, including approximately 15 full-time fire-fighting personnel.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to require a need for additional police or fire protection.

2. Medical Facilities

a. Existing Conditions

The only major medical facility on the island is Maui Memorial Medical Center, located midway between Wailuku and Kahului. This 231-bed facility recently added a new wing and provides general, acute, and emergency care services.

Private medical offices, however, are found in West Maui. For example, regular hours are offered by the Maui Medical Group, Lahaina Physicians, West Maui Healthcare Center, and Kaiser Permanente Lahaina Clinic.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to affect the service capabilities of emergency medical or general care operations.

3. Recreational Facilities

a. Existing Conditions

West Maui has numerous recreational facilities offering diverse opportunities for the region's residents. These facilities include several County and State parks and beach parks. Approximately one-third of the County parks are situated along the shoreline and offer excellent swimming, diving, and snorkeling areas. In addition, Ka`anapali and Kapalua Resorts operate world-class golf courses available for public use.

Recreational facilities in Lahaina town include the Lahaina Civic Center, the Lahaina Aquatic Center, the West Maui Youth Center, and the Lahaina Recreation Center. The Lahaina Civic Center contains an indoor gymnasium and five (5) outdoor tennis courts. The Lahaina Aquatic Center contains an Olympic-size swimming pool, a children's wading pool, a paved parking lot, and office and storage space, as well as shower, restroom, and changing room facilities. The West Maui Youth Center has a building for youth activities, as well as paved parking, an outdoor playground, and a basketball court. The Lahaina Recreation Center has baseball fields and other playfields for soccer and football, as well as restrooms and paved parking facilities.

The clear ocean waters and well-developed reef systems along the Lahaina coast offer many recreational opportunities for residents. Fishing, by shorecasting and netting, is practiced in the waters near the outlet of Kauaula Stream and Makila Point. Edible seaweed collecting, octopus fishing, and spearfishing occur on the adjacent reef flat.

b. Potential Impacts and Mitigation Measures

The proposed project is not anticipated to impact recreational facilities in the region.

4. Educational Facilities

a. Existing Conditions

The West Maui region is served by four (4) public schools (Lahainaluna High School, Lahaina Intermediate School, Princess Nahi`ena`ena Elementary School, and Kamehameha III Elementary School) operated by the State of Hawai`i, Department of Education (DOE) and two (2) smaller private schools (Sacred Hearts School and Maui Preparatory Academy). All four (4) of the public schools are located within Lahaina town and three (3) of those schools are located along Lahainaluna Road, mauka of Honoapi`ilani Highway. The enrollments in the four (4) schools have grown significantly in concert with the growth of residential development in the area. See **Table 3**.

Table 3. Actual and Projected Enrollments at Department of Education Schools

Lahaina Complex	Actual Enrollment		Capacity	Projected Enrollment				
	2006-07	2007-08	2006-07	2008-09	2009-10	2010-11	2011-12	2012-13
Kamehameha III Elementary	738	701	588	724	746	760	765	778
Lahaina Intermediate	584	615	545	598	605	608	611	615
Lahainaluna High	984	996	756	979	976	974	972	970
Princess Nahi`ena`ena Elementary	625	624	576	576	580	580	577	580
Source: Department of Education, 2008.								

Maui Community College (MCC), which is located in Kahului, is a branch of the University of Hawai`i system. In addition, there is an MCC-Lahaina Education Center that opened in Fall 2007. MCC is the primary higher education institution serving Maui.

b. Potential Impacts and Mitigation Measures

The proposed project is not a direct population generator and, as such, is not anticipated to impact educational facilities in the region.

D. INFRASTRUCTURE

1. Roadways

a. Existing Conditions

Access to the Lahaina region is provided by Honoapi`ilani Highway from Central (Wailuku/Kahului) and South (Kihei/Wailea) Maui. The following is a summary of the major roadways in the vicinity of the project site.

Honoapi`ilani Highway

This principal arterial roadway provides north-south regional mobility and access to communities in the region. For most of its length, Honoapi`ilani Highway is a two-lane, two-way arterial roadway with median left-turn lanes provided at major intersections. From Lahaina town (at Lahainaluna Road) to the Honokowai Stream bridge (at the Lahaina Wastewater Treatment Facility), Honoapi`ilani Highway functions as a four-lane arterial roadway. The project area is approximately 1.5 miles east of Honoapi`ilani Highway.

Lower Honoapi`ilani Road

This roadway follows the West Maui coastline in a north-south direction, generally parallel to and west of Honoapi`ilani Highway. This two-way, two-lane, County collector road primarily serves hotels/resorts, commercial areas, and residential communities of Honokowai, Kahana, Napili, and Kapalua.

b. Potential Impacts and Mitigation Measures

The State is currently in the process of developing a major roadway which will significantly alleviate the congestion along Honoapi`ilani Highway that exists today. The State's Lahaina Bypass will be developed in phases and will eventually span from Launiupoko in the south to Honokowai in the north. The first phase of the bypass highway will connect Ikena Street with Keawe Street. Future phases of the bypass highway will roughly parallel Honoapi`ilani Highway to the east.

The proposed project entails work adjacent to a remote Department of Water Supply (DWS) facility. In the short term, there will be an increase in the number of vehicle trips to the project site during the construction phase, though the increase in vehicle trips on Honoapi`ilani Highway will be minimal. Maintenance activities related to the well and water tanks are not anticipated to increase as a result of the project. Therefore, traffic in the region is not anticipated to be impacted by the implementation of the project.

2. Water

a. Existing Conditions

The West Maui region is served by the County's DWS domestic water system. The County water system services the coastal areas from Launiupoko to Ka`anapali and from Honokowai to Napili. The County's system includes both surface and groundwater sources.

The sources of water for Lahaina are five (5) deepwells located above Alaeloa, referred to as Napili Wells 1, 2, and 3, and Honokahua Wells A and B, and four (4) wells above Lahaina town, referred to as Kahana 1and 2 and Waipuka 1 and 2. These wells are supplemented by water treatment plants above Honokowai and Lahainaluna High School that draw surface water from the Honolua Ditch and Kanaha Valley. Several miles of 12- and 16-inch lines and two (2) in-line booster stations convey water from these sources to consumers in Lahaina.

b. Potential Impacts and Mitigation Measures

The proposed project is being sought to respond to the growing demand for water storage in the West Maui region. The 300,000 gallon capacity tank will supplement the existing 100,000 gallon Napili Well "A" storage tank to accommodate current and future water storage needs in the area. While the proposed project itself is not anticipated to generate significant negative impacts on water resources, it is intended to prevent potential significant impacts in the future regarding water storage capacity.

3. Wastewater Systems

a. Existing Conditions

The County Department of Environmental Management's Wastewater Reclamation Division provides sanitary sewer service for the West Maui region.

Wastewater from the Ka`anapali and Lahaina areas is treated at the County's Lahaina Wastewater Reclamation Facility (WWRF). The WWRF's total treatment capacity is 9.0 million gallons per day (mgd), with 6.0 mgd for secondary treatment and 3.0 mgd for R-1 treatment. Presently, the facility treats about 5.4 mgd of wastewater. About 1.2 mgd of the R-1 treated effluent is used to irrigate the Royal Ka`anapali golf courses, the landscaped areas along Honoapi`ilani Highway, and the landscaped median of Ka`anapali Parkway. The remaining treated effluent (4.2 mgd) is disposed into four (4) injection wells located within the facility. Under the conditions of its Environmental Protection Agency (EPA) permit, the County is allowed to dispose a maximum flow of 6.7 mgd into the injection wells. There are no wastewater facilities in the vicinity of the project site.

b. Potential Impacts and Mitigation Measures

The project will not generate wastewater, therefore, provisions for wastewater treatment are not required. Consequently, no adverse impacts on wastewater facilities are anticipated as a result of the proposed action.

4. Solid Waste

a. Existing Conditions

Single-family residential refuse collection is provided in Lahaina by the County's Department of Environmental Management's Solid Waste Division. Private refuse collectors provide solid waste disposal services for multi-family, commercial, and institutional accounts. With the exception of the Hana region, residential and commercial solid waste from throughout the island is transported to the Central Maui Landfill at Puunene.

A refuse transfer station at Olowalu accepts household and green wastes, as well as used oil, for transport to the Central Maui Landfill in Puunene. The disposal of commercial and institutional refuse is not permitted at the Olowalu transfer station.

b. Potential Impacts and Mitigation Measures

Construction-related waste will be disposed of in accordance with policy and practice directives established by the applicant's Solid Waste Division to ensure that there are no adverse impacts to the County's Central Maui Landfill. In the long term, the proposed project is not anticipated to generate solid waste and, as such, is not anticipated to impact solid waste facilities in the region.

5. Drainage

a. Existing Conditions

The project site gently slopes in a westerly direction and range in elevation from approximately 850 feet above mean sea level (msl) at its western extent to approximately 870 feet above msl along its northeastern extent.

The project site is situated within the limits of the Lahaina subwatershed, one of two (2) subwatersheds that comprise the Lahaina Watershed. The other subwatershed is the Kauaula Watershed.

The Lahaina subwatershed rises from the Pacific Ocean and the coastal area of the subwatershed is relatively flat and has been developed for residential and commercial uses. The area above the developed flatland is gently sloping and was formerly utilized for growing sugar cane. The remaining upper area of the Lahaina subwatershed is steep and was previously utilized for sugar cane cultivation or pasturing.

b. Potential Impacts and Mitigation Measures

A Preliminary Drainage Report and Grading Plan were prepared by Okahara and Associates, Inc. See **Appendix "B"** and **Appendix "C"**. The proposed drainage system will maintain the current drainage patterns as the existing

conditions. Approximately 40 percent of the improved area will be covered with asphalt paved roads and the storage tank structure. The remainder of the site will be grassed area. The runoff from the site for the future storage tank will flow in a northwesterly direction. The runoff from the storage tank site will sheet flow off the storage tank roof to the perimeter road. The runoff will then flow to the pineapple fields, where the runoff will percolate before it reaches the ocean.

6. Electrical, Telephone, and CATV Service

a. Existing Conditions

Electrical, telephone, and cable television (CATV) services for the West Maui region are provided by Maui Electric Company, Ltd., Hawaiian Telcom, and Oceanic Time Warner Cable Company, respectively. Maui Electric Company, Ltd. currently provides electrical service to the project site, but there are no telephone or cable television services in the vicinity of the project.

b. Potential Impacts and Mitigation Measures

Electrical service is already provided at the project site by Maui Electric Company. The electrical consultant will discuss the electrical requirements associated with the proposed improvements with Maui Electric staff prior to the start of construction and determine the specific improvements that may be required. Maui Electric did not note any significant concerns regarding electrical service in early consultation with them. As a result, the proposed project is not anticipated to significantly impact electrical service in the area.

E. CUMULATIVE AND SECONDARY IMPACTS

The proposed project is not an integral part of a larger growth action; however, the County of Maui's ongoing General Plan update process will involve the formulation of a Maui Island Plan which would delineate future urban and rural growth boundaries. As such, landowners in the region may seek to have portions of their respective land holdings placed on the Maui Island Plan map for purposes of defining future development potential in the West Maui area.

Should currently undeveloped lands be identified as potential future areas for urban and/or

rural growth, planning for such areas would need to consider infrastructure upgrade opportunities. For example, water system capacity may limit the potential build-out of these lands. Upon completion of the General Plan update, the respective community plans, including the West Maui Community Plan, will be updated. The timeframe for updating of the community plans has not yet been scheduled. However, the overall timeframe of the General Plan covers a planning horizon up to the year 2030.

The County of Maui acknowledges that future regional growth opportunities in West Maui are probable. The proposed project is intended to satisfy the current and future demands placed on the domestic water infrastructure system.

Similar to cumulative impacts, secondary impacts are those which have the potential to occur later in time, but are still reasonably foreseeable. They can be viewed as actions of others that are taken because of the presence of the project. Secondary impacts from water projects, for example, can occur because they can induce development by removing one of the impediments to growth – available water capacity.

Aside from the direct development impacts discussed in the previous sections of this chapter, secondary impacts may be attributed to the project's effects on the region's overall development potential. That is, the provision of increased water system capacity may affect development rate and patterns.

III. RELATIONSHIP TO LAND USE PLANS, POLICIES, AND CONTROLS

III. RELATIONSHIP TO LAND USE PLANS, POLICIES, AND CONTROLS

A. STATE LAND USE DISTRICTS

Chapter 205, Hawai`i Revised Statutes, relating to the Land Use Commission, establishes four (4) major use districts in which all lands in the State are placed. These districts are designated as "Urban", "Rural", "Agricultural", and "Conservation". The subject property is located within the "Agricultural" district. See **Figure 9**. The proposed water storage tank is a permitted use in the "Agricultural" district.

B. HAWAI`I STATE PLAN

Chapter 226, HRS, also known as the Hawai`i State Plan, is a long-range comprehensive plan which serves as a guide for the future long-term development of the State by identifying goals, objectives, policies, and priorities, as well as implementation mechanisms. Examples of State objectives and policies relevant to the proposed project are as follows:

1. **Section 226-14, Objective and policies for facility systems – in general. To achieve this objective, it shall be State policy to:**

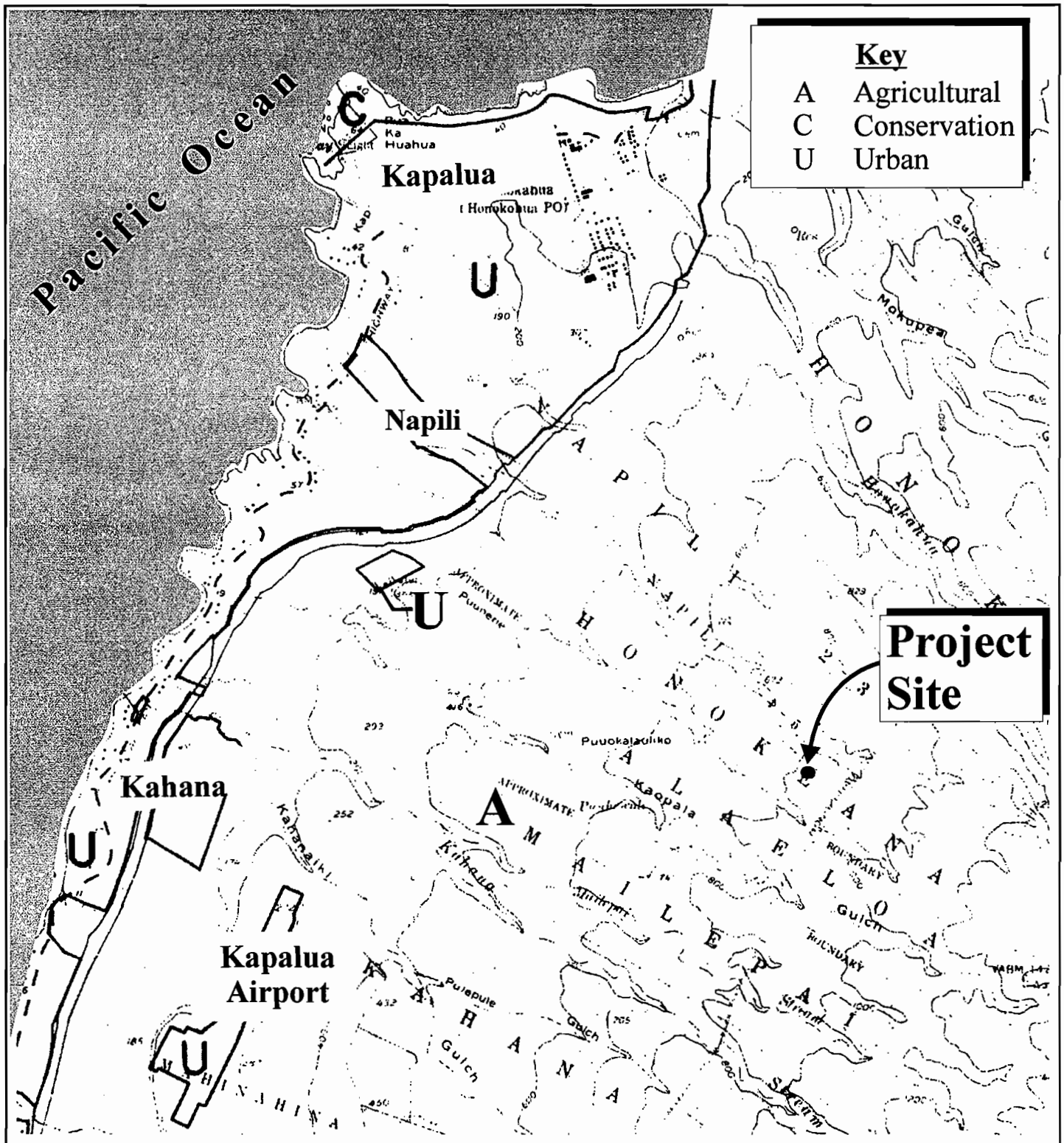
    a. Accommodate the needs of Hawaii's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.

    b. Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.

    c. Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.

2. **Section 226-16, Objective and policies for facility systems – water. To achieve the facility systems water objective, it shall be the policy of this State to:**

    a. Coordinate development of land use activities with existing and potential water supply.



Source: State Land Use District Boundary Map, Honolua Quad

Figure 9

Proposed Napili Well "A" Site Improvements

State Land Use Classifications

0 500 1000 2000 Feet

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

KaiHi\NapiliWell\SLUC

b. Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.

c. Reclaim and encourage the productive use of runoff water and wastewater discharges.

d. Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.

e. Support water supply services to areas experiencing critical water problems.

f. Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.

3. **Section 226-27, Objective and policies for socio-cultural advancement – government. To achieve this objective, it shall be State policy to:**

a. Provide for necessary public goods and services not assumed by the private sector.

b. Minimize the size of government to that necessary to be effective.

c. Assure that government attitudes, actions, and services are sensitive to community needs and concerns.

The objective of the proposed project is to provide government services which respond to the public's concerns regarding water storage capacity in the region. The proposed project will ensure that there is sufficient water storage capacity to manage existing demands and to complement planned growth in the area. This facility improvement is an integral component to the West Maui capital improvement program in the provision of efficient government services and will be developed in accordance with applicable health and safety standards. Consequently, the proposed project is consistent with the goals, objectives, policies, and priorities of the Hawai`i State Plan.

C. MAUI COUNTY GENERAL PLAN

The Maui County General Plan (1990 Update) sets forth broad objectives and policies to help guide the long-range development of the County. As stated in the Maui County Charter, the General Plan:

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

The proposed action is in keeping with the following General Plan objectives and policies:

Objective:

To provide an adequate supply of potable and irrigation water to meet the needs of Maui County's residents.

Policies:

i. Support the improvement of water transmission systems to those areas which historically experience critical water supply problems provided the improvements are consistent with the water priorities and the County's Water Use Development Plan provisions for the applicable community plan area.

e. Support the Board of Water Supply in its determination of future water needs consistent with the General Plan, Community Plans, and the growth management strategy.

Objective:

To make more efficient use of our ground, surface, and recycled water sources.

Policy:

e. Maximize use of existing water sources by expanding storage capabilities.

Objective:

To improve the quality and availability of public facilities throughout Maui County.

Policy:

c. Seek improvement in the maintenance and operation of public facilities.

Objective:

Improve the delivery of services by government agencies to all community plan areas.

Policy:

d. Insure that necessary services not provided by the private sector are made available by government.

The proposed project will improve the delivery of water services to the West Maui region and will ensure that there is adequate water storage capacity to accommodate planned growth in accordance with the West Maui Community Plan. In the provision of upgrading the County of Maui's water facility systems, potential impacts to the County's unique environmental resources will be minimized. The proposed project is in accordance with the objectives and policies of the Maui County General Plan.

D. WEST MAUI COMMUNITY PLAN

Within Maui County, there are nine (9) Community Plan regions. From a General Plan implementation standpoint, each region is governed by a Community Plan which sets forth desired land use patterns, as well as goals, objectives, policies, and implementing actions for a number of functional areas including infrastructure-related parameters. The subject property is located within the West Maui Community Plan region. See **Figure 10**.

The subject parcel is located on lands currently designated as "Agricultural" in the Community Plan. The proposed action is permitted in the "Agricultural" land use category. The proposed land use action is in keeping with the existing water storage facilities on the adjacent property.

Applicable goals, objectives, and policies of the West Maui Community Plan are cited below.

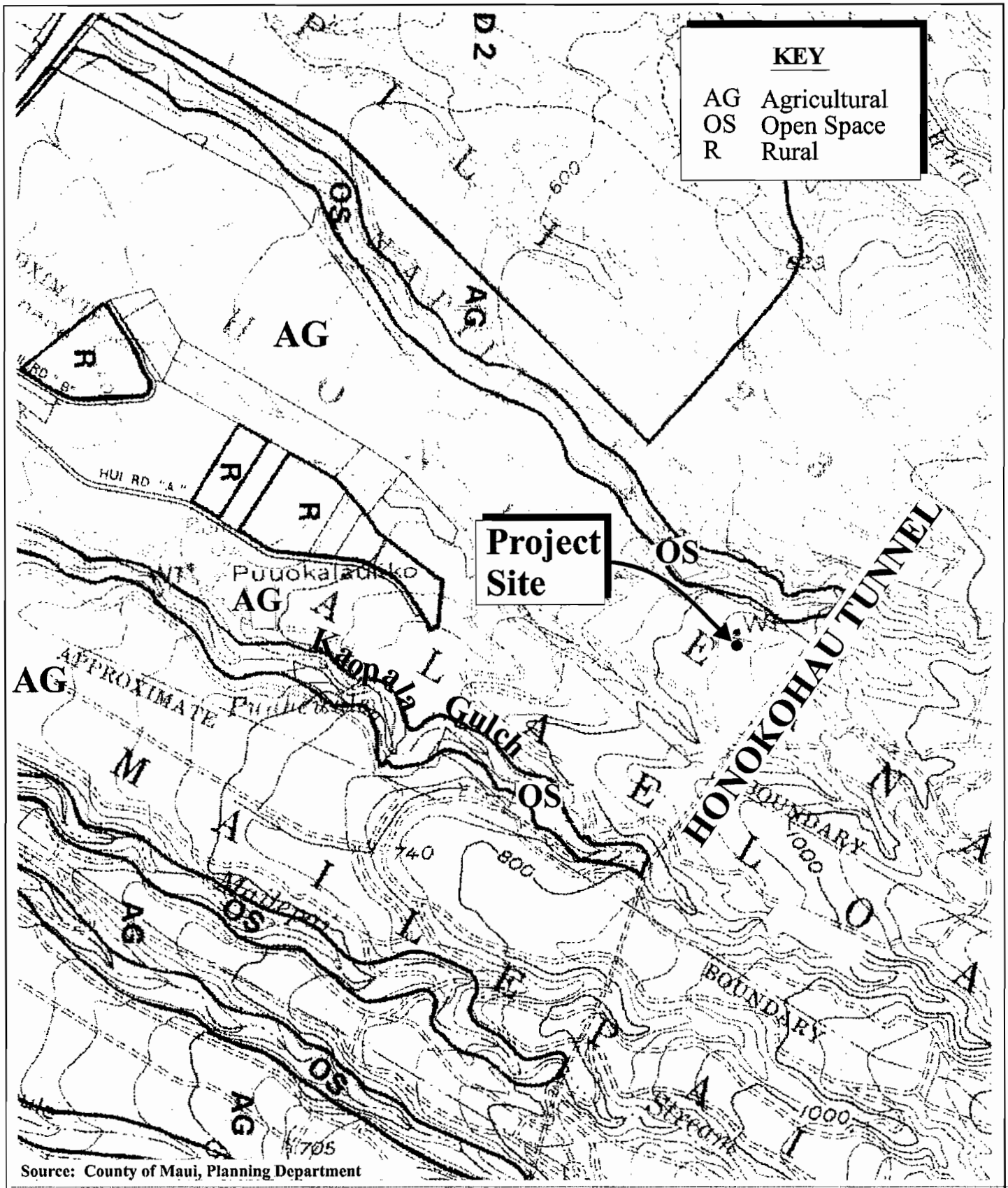


Figure 10

Proposed Napili Well "A" Site Improvements

West Maui Community Plan Land Use Designations

0 500 Feet
250 1000

Prepared for: County of Maui, Department of Water Supply

MUNEKIYO & HIRAGA, INC.

KaiHi\NapiliWell\WestMauiCPLUD

Goal:

Timely and environmentally sound planning, development, and maintenance of infrastructure systems which serve to protect and preserve the safety and health of the region's residents, commuters, and visitors through the provision of clean water, effective waste disposal, and efficient transportation systems which meets the needs of the community.

Objectives and Policies:

1. Protect ground water resources in the region.

2. Improve the quality of domestic water.

Goal:

Government that demonstrates the highest standards of fairness, responsiveness to the needs of the community, fiscal integrity, effectiveness in planning and implementing programs and projects to accommodate a stable social and economic well-being for residents, a fair and equitable approach to taxation, and efficient and results-oriented management.

Objective and Policy:

1. Coordinate and direct future public and private development, including capital improvement projects, consistent with the Community Plan and the island-wide directed and managed growth plan required by the General Plan.

As noted, the proposed project is in conformance with various goals, objectives, and policies of the West Maui Community Plan. The project will be undertaken to satisfy the current and future demands of water storage infrastructure in the West Maui region. Moreover, the proposed water storage tank installation is consistent with the underlying "Agricultural" community plan designation.

E. COUNTY ZONING

The subject parcel is zoned "Agricultural" by the County of Maui. According to Maui County Code (MCC) Section 19.30A.050 regarding permitted uses within the Agricultural District, minor utility facilities are permitted uses within the Agricultural District. Minor utility facilities are defined in MCC Section 19.04.040 as transmission lines used directly in the distribution of utility services that have minor impact on adjacent land uses which include, but which are not limited to, twenty-three kilovolt transmission substations, vaults,

water wells, tanks and distribution equipment, sewage pump stations, and other similar type uses. Therefore, the proposed water storage tank is a permitted use within the Agricultural District.

F. COASTAL ZONE MANAGEMENT AREA OBJECTIVES AND POLICIES

Pursuant to Chapter 205A, Hawai`i Revised Statutes, projects are evaluated with respect to Coastal Zone Management (CZM) objectives, policies, and guidelines. It should be noted that although the subject property is not located within the County of Maui's Special Management Area (SMA), the project's relationship to applicable coastal zone management considerations has been reviewed and assessed.

1. Recreational Resources

Objective:

Provide coastal recreational opportunities accessible to the public.

Policies:

(A) Improve coordination and funding of coastal recreational planning and management; and

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

(i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

(ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to, surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the state for recreation when replacement is not feasible or desirable;

(iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

(iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

(v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;

(vi) Adopting water quality standards and regulating point and non-point sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;

(vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and

(viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of Section 46-6, HRS.

Response: The subject property is located inland, away from the coastline. The proposed action is not, therefore, anticipated to adversely impact existing coastal recreational resources.

2. Historic Resources

Objective:

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

Policies:

(A) Identify and analyze significant archeological resources;

(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and

(C) Support state goals for protection, restoration, interpretation, and display of historic resources.

Response: An archaeological assessment was performed for the project area. Refer to **Appendix "A"**. There were no historic deposits found or any items of cultural significance which would be affected by the proposed project. In accordance with Section 6E-43.6, Hawai`i Revised Statutes and Chapter 13-300, Hawai`i Administrative Rules, if any significant cultural deposits or human skeletal remains are encountered, work will stop in the immediate vicinity and the State Historic Preservation Division (SHPD/DLNR) will be contacted.

3. **Scenic and Open Space Resources**

Objective:

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

Policies:

(A) Identify valued scenic resources in the coastal zone management area;

(B) Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments that are not coastal dependent to locate in inland areas.

Response: The project site is not located within a significant coastal view corridor. The proposed action is not anticipated to have an adverse impact on shoreline views or open space resources.

4. **Coastal Ecosystems**

Objective:

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

Policies:

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

(B) Improve the technical basis for natural resource management;

(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.

Response: Appropriate soil erosion and drainage control measures will be implemented during construction, in order to minimize disruption to downstream coastal water ecosystems. In light of the limited scope and scale of the proposed action, adverse impact on coastal ecosystems is not anticipated.

5. Economic Uses

Objective:

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

Policies:

(A) Concentrate coastal dependent development in appropriate areas;

(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable

long-term growth in such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Use of presently designated locations is not feasible;

(ii) Adverse environmental effects are minimized; and

(iii) The development is important to the State's economy.

Response: While short-term employment opportunities during project construction will be generated, there should be no significant adverse economic impacts associated with the proposed project. The proposed action is not contrary to the objective and policies for economic use.

6. Coastal Hazards

Objective:

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

Policies:

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint pollution hazards;

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

(D) Prevent coastal flooding from inland projects.

Response: According to the Flood Insurance Rate Map for the area, the project site is located within Zone "C", an area of minimal flooding. In addition, the project site is not located within environmentally sensitive areas that are subject to natural hazards. The proposed project is not anticipated to affect the region's susceptibility to coastal hazards.

7. Managing Development

Objective:

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

Policies:

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;

(B) Facilitate timely processing of applications for development permits and resolve overlapping of conflicting permit requirements; and

(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.

Response: Opportunities for public understanding of the proposed project are provided for during processing of the Environmental Assessment (EA) in accordance with Chapter 343, HRS, notice and public review provisions. All aspects of development will be conducted in accordance with applicable Federal, State, and County standards.

8. Public Participation

Objective:

Stimulate public awareness, education, and participation in coastal management.

Policies:

(A) Promote public involvement in coastal zone management processes;

(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and

(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Response: As noted above, the applicant conducted consultation in accordance with the Environmental Assessment requirements, Chapter 343, HRS. The proposed project does not contradict the objectives of public awareness, education, and participation.

9. **Beach Protection**

Objective:

Protect beaches for public use and recreation.

Policies:

(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;

(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline.

Response: The proposed project will not involve construction near shoreline areas, and is, therefore, not anticipated to have an adverse effect on the local beach environment.

10. **Marine Resources**

Objective:

Promote the protection, use, and development of marine and coastal resources to assure their sustainability.

Policies:

(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

(D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Response: Appropriate BMPs and erosion control measures will be implemented to ensure that coastal ecosystems are not adversely impacted by construction activities.

In addition to the foregoing objectives and policies, SMA permit review criteria pursuant to Act 224 (2005) provides that:

> No special management area use permit or special management area minor permit shall be granted for structures that allow artificial light from floodlights, uplights, or spotlights used for decorative or aesthetic purposes when the light:
>
> (1) Directly illuminates the shoreline and ocean waters; or
>
> (2) Is directed to travel across property boundaries toward the shoreline and ocean waters.

Response: The proposed project is not located on or near the shoreline. The project does not contain lighting which is directed across property boundaries towards the shoreline.

G. COMPLIANCE WITH THE STATE OF HAWAI'I'S DRINKING WATER STATE REVOLVING FUND PROGRAM

This project may be funded by Federal funds through the State of Hawaii's Drinking Water State Revolving Fund (DWSRF) program. The U.S. Congress established the DWSRF program as a new Section 1452 of the Safe Drinking Water Act (SDWA), 33 U.S.C. 300j-12, by the SWDA Amendments of 1996, Public Law 104-182. The DWSRF was established to help prevent contamination through source water protection and enhanced water system management. The proposed project is consistent with the overall program intent to prevent potential contamination. This document includes all of the environmental information required for compliance with the DWSRF program.

H. CROSS-CUTTING FEDERAL AUTHORITIES

The following subsections address the proposed project's relationship to other Federal "cross-cutting" authorities.

1. Archaeological and Historic Preservation Act (16 USC 461) and National Historic Preservation Act (16 USC 470)

As discussed in Chapter II, Section A.8., an Archaeological Field Inspection was prepared for the proposed project. No cultural deposits were discovered in the project site.

This Environmental Assessment (EA) was prepared after consultation with the Department of Land and Natural Resources, State Historic Preservation Division. A copy of the Draft EA was provided to them for review and comment.

2. Clean Air Act (42 USC 7401)

As discussed in Chapter II, Section A.7., air quality at the project site is good. The only anticipated impacts are short-term impacts associated with construction activities. There are no long-term impacts associated with the operation of the proposed Napili Well "A" Storage Tank.

This EA was prepared after consultation with the State Department of Health. A copy of the Draft EA was provided to them for review and comment.

3. Coastal Barriers Resources Act (16 USC 3501)

According to the State Department of Health, this act does not apply to the State of Hawai`i at this time. Nonetheless, the proposed water storage tank will be located approximately two (2) miles inland from the coastline and is not anticipated to adversely impact coastal resources.

4. Coastal Zone Management Act (16 USC 1451)

Section III.F. addresses the project's relationship to the Hawai`i Coastal Zone Management Program. The proposed project is not located within the County of Maui's Special Management Area and is not anticipated to have any adverse impact upon coastal resources.

This EA was prepared after consultation with the State Department of Business, Economic Development, and Tourism, which oversees the Office of Coastal Zone Management. A copy of the Draft EA was provided to them for review and comment.

5. Endangered Species Act (16 USC 1531)

The Endangered Species Act, as amended, provides broad protection for species of flora and fauna that are listed as rare, endangered, or threatened. This Act mandates that federal agencies seek to conserve such species and use their authorities in furtherance of the Act's purpose.

As discussed in Chapter II, Section A.5., there are no known rare, endangered, or threatened species of flora or fauna in the vicinity of the project site. Further, no known rare, endangered, or threatened species of flora or fauna are anticipated to be impacted by the project.

This EA was prepared after consultation with the U.S. Fish and Wildlife Service and the State Department of Land and Natural Resources. A copy of the Draft EA was provided to them for review and comment.

6. Environmental Justice (Executive Order 12898)

Executive Order 12898 calls upon federal agencies to attempt to identify and address disproportionately high and adverse human health or environmental effects of programs, policies, or actions upon minority and low-income populations.

Chapter III discusses the anticipated impacts of the proposed project. No human health or environmental effects are anticipated for all segments of the population. The project will improve human health by keeping the Napili Well "A" facility in accordance with federal drinking water safety standards.

7. Farmland Protection Policy Act (7 USC 4201)

The Farmland Protection Policy Act is intended to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, while assuring that federal programs are administered in such a way as to be compatible with other programs and policies concerning farmland protection.

As discussed in Chapter I, the subject property lies within the State Agricultural district and is used for agricultural production. It is, however, adjacent to the existing water storage tank and represents less than one percent of the approximately 245,000 acres of State Agricultural district lands on the island of Maui. Adverse impacts to agricultural productivity is not anticipated as a result of the proposed action.

This EA was prepared after consultation with the Natural Resources Conservation Service, which has the leadership in administering the Farmland Protection Policy Act. A copy of the Draft EA was provided to them for review and comment.

8. Fish and Wildlife Coordination Act (16 USC 661)

The Fish and Wildlife Coordination Act, as amended, authorizes the Secretaries of Agriculture and Commerce to require consultation with the U.S. Fish and Wildlife Service and the State agency responsible for fish and wildlife, when any body of water is proposed to be impacted by any agency under a federal permit or license. Consultation is to be undertaken to prevent any adverse impact to wildlife resources.

As discussed in Chapter II, Section A.5., there are no known rare, endangered, or

threatened species of flora or fauna in the vicinity of the project site. Further, no known rare, endangered, or threatened species of flora or fauna are anticipated to be impacted by the project. The proposed water storage tank will not result in any impacts to any bodies of water or fish or wildlife populations.

This EA was prepared after consultation with the U.S. Fish and Wildlife Service and the State Department of Land and Natural Resources. A copy of the Draft EA was provided to them for review and comment.

9. **Floodplain Management (Executive Order 11988, As Amended By Executive Order 12148)**

As discussed in Chapter II, Section A.4., the subject property lies well outside of any floodplain, on lands designated as Zone C by the Flood Insurance Rate Map. The project is consistent with all applicable regulations and guidance relating to floodplain management.

10. **National Historic Preservation Act (16 USC 470)**

As discussed in Chapter II, Section A.8. above, an Archaeological Field Inspection was prepared for the proposed project. No cultural deposits were discovered in the project site. In accordance with Section 6E-43.6, Hawai`i Revised Statutes and Chapter 13-300, Hawai`i Administrative Rules, if any significant cultural deposits or human skeletal remains are encountered, work will stop in the immediate vicinity and the State Historic Preservation Division (SHPD/DLNR) will be contacted.

11. **Protection of Wetlands (Executive Order 11990, As Amended by Executive Order 12608)**

There are no wetlands on or near to the project site. Neither are there any resources on the site vital to the wildlife that uses wetlands elsewhere on the island.

This EA was prepared after consultation with the U.S. Fish and Wildlife Service and the State Department of Land and Natural Resources. A copy of the Draft EA was provided to them for further review and comment.

12. Safe Drinking Water Act (42 USC 300f)

The Safe Water Drinking Act (SDWA) is the principal, federal law that ensures the quality of drinking water. Under this act, the Environmental Protection Agency (EPA) sets standards for drinking water quality and oversees those who implement said standards. All public water systems are required to meet these water quality standards. According to the EPA, there are no sole source aquifers on the island of Maui.

As discussed in Chapter I, the purpose of the new water storage tank is to increase water storage capacity at the Napili Well "A" facility. The proposed improvements will be implemented in accordance with Federal water quality standards.

13. Wild and Scenic Rivers Act (16 USC 1271)

According to the National Wild and Scenic Rivers System, there are no wild and scenic rivers in Hawai`i. As a result, the State Department of Health noted that this act does not apply to the State of Hawai`i at this time.

14. Essential Fish Habitat Consultation Process Under the Magnuson-Stevens Fishery Conservation and Management Act (16 USC 1801)

The proposed water storage tank will be located approximately two (2) miles inland from the coastline and is not anticipated to adversely impact any essential fish habitat situated near the coastline. Further, there are no other bodies of water in proximity to the project site.

IV. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

IV. SUMMARY OF ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

The proposed project will result in certain unavoidable construction-related environmental impacts as outlined in Chapter II.

In the short term, construction associated with the project will generate noise impacts. These impacts will be limited to the immediate vicinity of the project construction areas. Sound attenuating construction equipment will be used, where practicable, to mitigate noise impacts caused by construction.

Unavoidable air quality impacts will also arise as a result of construction activities, such as the generation of dust and other airborne pollutants. Appropriate BMPs will be incorporated in the construction process to mitigate adverse impacts such as frequent watering of exposed surfaces and regular maintenance of construction equipment to minimize construction-related impacts.

The development of the proposed new well storage tank will involve the commitment of vacant land, resulting in the use approximately 0.5 acre of prime agricultural land. In addition, the proposed action would involve a commitment of fuel, labor, funding, and material resources; however, the commitment of resources will be justified, given the eventual benefits to be realized through the completion of this water system component.

In the long term, the construction of the new water tank is not anticipated to result in any significant, long-term adverse environmental effects.

V. ALTERNATIVES TO THE PROPOSED ACTION

V. ALTERNATIVES TO THE PROPOSED ACTION

The applicant has looked at a variety of options in accommodating the proposed project.

A. PREFERRED ALTERNATIVE

The proposed development plan, outlined in Section I. Project Overview, represents the preferred alternative. The proposed storage tank was envisioned with the original planning and design of the site. The anticipated need for a water storage tank was considered by the DWS to be an important long-term consideration for additional storage capacity in the region.

B. NO ACTION ALTERNATIVE

As previously mentioned, there is already a need to increase water system storage capacity in the West Maui region. The no action alternative would not address the adequacy of water storage capacity and planned growth. The water system infrastructure upgrades represented by the proposed action are needed to ensure public health, safety, and welfare.

C. POSTPONED ACTION ALTERNATIVE

Similar to the no action alternative, the postponed action alternative does not address the water system capacity issues and will only exacerbate the issue as new development projects are brought on line.

D. ALTERNATIVE LOCATIONS

Alternative locations were not extensively considered due primarily to cost considerations. Expansion of water services are generally concentrated at existing facilities due to the capital costs related to the installation of redundant systems elsewhere, given that the existing tank site is already equipped with pumps and lines. This methodology is consistent with Hawai`i State Plan and the DWS objectives to provide public resource capacities at reasonable costs

to the general public.

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The development of the proposed project would involve the commitment of lands and funds, including the use of approximately 0.5 acre of prime agricultural land. In addition, labor and material resources would be expended as part of the project's construction phase. Commitments of these resources are considered irreversible and irretrievable. These commitments, however, are also considered appropriate in the context of providing sufficient water storage capacity to satisfy the current and future demands of the West Maui region.

VII. SIGNIFICANCE CRITERIA ASSESSMENT

VII. SIGNIFICANCE CRITERIA ASSESSMENT

The "Significance Criteria", Section 12 of the Administrative Rules, Title 11, Chapter 200, "Environmental Impact Statement Rules", were reviewed and analyzed to determine whether the proposed action will have significant impacts on the environment. The following criteria and preliminary analysis are provided.

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

   An archaeological field inspection was conducted on the property by Xamanek Researches, LLC and accepted by the State Historic Preservation Division (SHPD). Refer to **Appendix "A"** and **Appendix "A-1"**. There were no archaeological features identified through the inspection process. In accordance with Section 6E-43.6, HRS and Chapter 13-300, Hawai`i Administrative Rules, if any significant cultural deposits or human skeletal remains are encountered, work will stop in the immediate vicinity and the SHPD will be contacted.

   The project entails the use of approximately 0.5 acre of prime agricultural land.

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

   The subject property contains existing water storage and appurtenant facilities. The proposed action involves the construction of a second storage tank at the site.

   Given the limited size and scope of the proposed action, there would be no consequent curtailment of the range of beneficial uses of the environment.

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

   The State's Environmental Policy and Guidelines are set forth in Chapter 344, HRS. The proposed action is consistent with the policies and guidelines of Chapter 344, HRS.

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

The construction of the second storage tank will not have a significant impact on community economic or social welfare parameters.

5. **Substantially affects public health.**

No adverse impact to public health is anticipated to result from the proposed new water storage facility.

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

There will be no adverse effect on public services, such as police, fire, medical, educational, or waste collection services. Moreover, the proposed water tank will not impact population parameters. The proposed action is a needed upgrade to the County's water system.

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

In the context of the existing adjacent water facilities, the proposed second storage tank will not have a substantial impact on environmental quality.

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

The proposed action does not involve a commitment to larger actions nor will it have a significant cumulative impact on the environment. Best Management Practices (BMPs) will be employed to minimize and avoid environmental impacts.

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

There are no known rare, endangered, or threatened species on or near the project vicinity and, therefore, there should be no impact to wildlife by the proposed action.

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

Construction activities will result in short-term air quality and noise impacts. Dust control

measures, such as regular watering and sprinkling, and installation of dust screens, will be implemented to minimize wind-blown emissions. Noise impacts will occur primarily from construction equipment. Equipment mufflers or other noise attenuating equipment, as well as proper equipment and vehicle maintenance, will be used during construction activities.

Construction noise impacts will be mitigated through compliance with the provisions of the State of Hawai`i, Department of Health Administrative Rules Title 11, Chapter 46, "Community Noise Control". These rules require a noise permit if the noise levels from construction activities are expected to exceed the allowable levels set forth in the Chapter 46 rules. No long-term air or water quality or ambient noise level impacts are anticipated.

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 subject property is not located in an environmentally sensitive area. There are no wetlands or other environmentally sensitive areas in close proximity and the project lands are wholly within Flood Zone C, an area of minimal flooding. No other foreseeable environmental effects attributed to environmentally sensitive areas are anticipated in conjunction with the project.

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

The site for the new storage tank is located on the same parcel as the existing storage facility. The land immediately surrounding the property is predominantly in pineapple cultivation with urban residential uses beyond. The new tank will not impinge upon view corridors or adversely impact the visual character of the project area.

13. **Requires substantial energy consumption.**

The proposed action will not involve a significant commitment of energy resources. In the context of regional energy consumption, no adverse impact to energy is anticipated.

In addition, coordination with Maui Electric Company (MECO) will be undertaken during the electrical plans preparation phase of work to ensure all operational parameters are addressed for the proposed project.

Based on the foregoing analysis, the Department of Water Supply concludes that the proposed action will result in a Finding of No Significant Impact (FONSI).

VIII. LIST OF PERMITS AND APPROVALS

VIII. LIST OF PERMITS AND APPROVALS

The proposed action calls for the following governmental approvals:

County of Maui

1. Grading permit; and

2. Building permit.

State of Hawai`i

1. National Pollutant Discharge Elimination System Permit (as applicable)

IX. AGENCIES AND ORGANIZATIONS CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED; AND RESPONSES TO SUBSTANTIVE COMMENTS

IX. AGENCIES AND ORGANIZATIONS CONSULTED DURING THE PREPARATION OF THE DRAFT ENVIRONMENTAL ASSESSMENT; LETTERS RECEIVED; AND RESPONSES TO SUBSTANTIVE COMMENTS

The following agencies and organizations were consulted during the preparation of the Draft Environmental Assessment. Agency comments and responses to substantive comments are also included in this section.

1. Ranae Ganske-Cerizo
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Natural Resources Conservation Service
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2. George Young
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U.S. Army Engineer District, Honolulu
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3. Patrick Leonard
Field, Supervisor
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4. Laura Thielen, Director
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5. Patricia Hamamoto, Superintendent
State of Hawai`i
Department of Education
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6. Alec Wong, P.E., Acting Chief
Clean Water Branch
State of Hawai`i
Department of Health
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7. Herbert Matsubayashi
District Environmental Health
Program Chief
State of Hawai`i
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8. Peter Young, Chairperson
State of Hawai`i
Department of Land and Natural Resources
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9. Melanie Chinen, Administrator
State of Hawai`i
Department of Land and Natural Resources
State Historic Preservation Division
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10. Barry Fukunaga, Director
State of Hawai`i
Department of Transportation
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Honolulu, Hawai`i 96813
cc: Fred Cajigal

11. Haunani Apoliona
Board of Trustee Chair
Office of Hawaiian Affairs
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12. Carl Kaupalolo, Chief
County of Maui
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13. Vanessa A. Medeiros, Director
County of Maui
Department of Housing and
Human Concerns
200 S. High Street
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14. Jeffrey Hunt, Director
County of Maui
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15. Tamara Horcajo, Director
County of Maui
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16. Thomas Phillips, Chief
County of Maui
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Wailuku, Hawai`i 96793

17. Milton Arakawa, Director
County of Maui
Department of Public Works
and Environmental Management
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Wailuku, Hawai`i 96793

18. Neal Shinyama, Manager-
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Kahului, Hawai`i 96733

19. Mahealani Strong, Executive Director
West Maui Taxpayers Association
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Lahaina, Hawai`i 96761

20. Joe Pluta, President
West Maui Improvement Foundation
P.O. Box 10338
Lahaina, Hawai`i 96761

MAY 0 9 2007

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

REPLY TO
ATTENTION OF

May 7, 2007

Regulatory Branch

File No. POH-2007-160

Kyle Ginoza
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Ginoza:

This is in response to your letter dated April 19, 2007 for early consultation comments for an environmental assessment (EA) for the proposed construction of the 300,000 gallon well storage tank at the Napili storage tank site in Napili, Maui Island, Hawaii. We have reviewed the information you submitted with respect to the Corps' authority to issue Department of the Army (DA) permits pursuant to Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 USC 403) and Section 404 of the Clean Water Act (CWA) (33 USC 1344).

Based on the preliminary information you provided on behalf of the County of Maui, Department of Water Supply (DWS), we are unable to provide a determination whether a DA permit would be required. Please send us a copy of the draft EA for review and permit determination. The EA should identify any water resources, including wetlands, which may be affected by the proposed project.

If you have any questions regarding this information request, please contact Ms. Joy Anamizu by phone at 808-468-7023 or email at *joy.n.anamizu@usace.army.mil* and reference the file number above in future correspondence regarding this project.

Sincerely,

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

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KAPUNA KAWAHARA

MARK ALEXANDER ROY

April 4, 2008

George P. Young, P.E.
Chief, Regulatory Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Ft. Shafter, Hawai`i 96858

SUBJECT: Proposed Napili Well "A" Storage Tank

Dear Mr. Young:

We are writing to you on behalf of the applicant, the County of Maui, Department of Water Supply, to thank you for your letter dated May 7, 2007, providing comments on the proposed well storage tank in Napili.

We note that you will require more information to make a determination as to whether or not a Department of the Army (DA) permit will be required. The Draft EA will identify any water resources, including wetlands, which may be affected by the proposed project, to aid you in your evaluation.

We appreciate the input we received from your office. A copy of the draft environmental assessment will be provided for your review and comment.

Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
F:\DATA\KAIHi\NapiliWellA\DOA.res.wpd

MAY 0 7 2007

LINDA LINGLE
GOVERNOR

PATRICIA HAMAMOTO
SUPERINTENDENT

STATE OF HAWAI'I

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

OFFICE OF THE SUPERINTENDENT

May 4, 2007

Mr. Kyle Ginoza, Project Manager
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawai`i 96793

Dear Mr. Ginoza:

Subject: Early Consultation on Construction of a Water Storage Tank, Napili, West Maui

The Department of Education has no comment or concern about the plan to construct a 300,000 gallon well storage tank in Napili, West Maui. If you have any questions, please call Heidi Meeker of the Facilities Development Branch at (808) 733-4862.

Very truly yours,

Patricia Hamamoto
Superintendent

PH:jmb

c: Randolph Moore, Assistant Superintendent, OBS
Duane Kashiwai, Public Works Administrator, FDB
Ron Okamura, CAS, Hana/Lahainaluna/Lanai/Molokai Complex Areas

LINDA LINGLE
GOVERNOR OF HAWAII

MAY 0 2 2007

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

04095PKP.07

April 27, 2007

Mr. Kyle Ginoza
Project Manager
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Ginoza:

Subject: Proposed Napili Well Storage Tank

The Department of Health, Clean Water Branch (CWB), has reviewed the subject document and offers these comments on your project. Please note that our review is based solely on the information provided in the subject document 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://www.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. Antidegradation 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 are 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. **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. For this type of discharge, the NOI must be submitted 30 days before to the start of construction activities. The NOI forms may be picked up at our office or downloaded from our website at: http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html.

3. You must also submit a copy of the NOI or NPDES permit application to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the CWB that SHPD has or is in the process of evaluating your project. Please submit a copy of your request for review by SHPD or SHPD's determination letter for the project along with your NOI or NPDES permit application, as applicable.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 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://www.hawaii.gov/health/environmental/water/cleanwater/index.html, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

ALEC WONG, P.E., CHIEF
Clean Water Branch

KP:np

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GIVEN OHASHI HIRAGA
MITSURU "MICA" HIRANO
KAREN KAYAHARA

MARK ALEXANDER ROY

April 4, 2008

Alec Wong, P.E., Chief
Clean Water Branch
State of Hawai`i
Department of Health
P.O. Box 3378
Honolulu, Hawai`i 96801

SUBJECT: Proposed Napili Well "A" Storage Tank

Dear Mr. Wong:

We are writing to you on behalf of the applicant, the County of Maui, Department of Water Supply, to thank you for your department's letter dated April 27, 2007, providing comments on the proposed well storage tank in Napili. In response, we offer the following comments:

1. The applicant's civil engineer will evaluate potential impacts to State waters to determine whether or not specific sections of Hawai`i Administrative Rules (HAR), Chapter 11-54 are applicable. All discharges related to project construction or operation activities will comply with relevant State Water Quality Standards. Discharges will be kept at a minimum through the application of engineering Best Management Practices (BMPs).

2. The applicant does not anticipate discharging wastewater, including storm water runoff, into State surface waters. In addition, affected areas during construction activities will be kept under one (1) acre total, therefore, a National Pollutant Discharge Elimination System (NPDES) permit will not be required.

3. An archaeological assessment was completed for the project and was submitted to the State Historic Preservation Division (SHPD) for review and approval. In the event a Notice of Intent (NOI) or NPDES permit application is needed, the SHPD's determination letter will be submitted with the application.

4. All discharges related to project construction or operation activities will comply with the applicable State Water Quality Standards as specified in HAR, Chapter 11-54 and/or permitting requirements as specified in HAR, Chapter 11-55. Discharges will be kept to a minimum through the application of engineering BMPs.

We appreciate the input we received from your office. A copy of the draft environmental assessment will be provided for your review and comment.

305 High Street, Suite 104 · Wailuku, Hawaii 96793 · ph: (808)244-2015 · fax: (808)244-8729 · planning@mhinconline.com

Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
F:\DATA\KAIHi\NapiliWellA\DOH.res.wpd

MAY 1 1 2007

LINDA LINGLE
GOVERNOR OF HAWAII

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

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

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2102

May 10, 2007

Mr. Kyle Ginoza
Project Manager
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawai`i 96793

Dear Mr. Ginoza:

Subject: **Proposed Napili Well Storage Tank**

Thank you for the opportunity to participate in the early consultation process for the Draft Environmental Assessment for the proposed Napili Well Storage Tank. The following comments are offered:

National Pollutant Discharge Elimination System (NPDES) permit coverage is required for this project. The Clean Water Branch should be contacted at 808 586-4309.

It is strongly recommended that the Standard Comments found at the Department's website: www.state.hi.us/health/environmental/env-planning/landuse/landuse.html be reviewed, and any comments specifically applicable to this project should be adhered to.

Should you have any questions, please call me at 808 984-8230.

Sincerely,

Herbert S. Matsubayashi
District Environmental Health Program Chief

c: EPO w/Enc.

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KAREN KAWAHARA

MARK ALEXANDER ROY

April 4, 2008

Herbert Matsubayashi
District Environmental Health Program Chief
State of Hawai`i
Department of Health
Maui District Health Office
54 High Street
Wailuku, Hawai`i 96793

SUBJECT: Proposed Napili Well "A" Storage Tank

Dear Mr. Matsubayashi:

We are writing to you on behalf of the applicant, the County of Maui, Department of Water Supply, to thank you for your letter dated May 10, 2007, providing comments on the proposed well storage tank in Napili.

We have received comments from the Clean Water Branch regarding the applicability of a National Pollutant Discharge Elimination System (NPDES) permit. We will continue dialogue with the Clean Water Branch regarding the NPDES permit.

In addition, we will review the standard comments found on your department's website.

We appreciate the input we received from your office. A copy of the draft environmental assessment will be provided for your review and comment.

Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
F:\DATA\KAIHi\NapiliWellA\dohmaui.res.wpd

LINDA LINGLE
GOVERNOR OF HAWAII

MAY 09 2007

ALLAN A. SMITH
INTERIM 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 7, 2007

Muekiyo & Hiraga, Inc.
305 High Street Suite 104
Wailuku, Hawaii 96793

Attention: Mr. Kyle Ginoza

Gentlemen:

Subject: Proposed Napili Well Storage Tank, Napili, Maui, Tax Map Key: (2) 4-3-1:portion 1

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 Water Resource Management, 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,

Russell Y. Tsuji
Administrator

LINDA LINGLE
GOVERNOR OF HAWAII

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 24, 2007

MEMORANDUM

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
_x_Engineering Division
__Div. of Forestry & Wildlife
___Div. of State Parks
_x_Div. of Water Resource Management
__Office of Conservation & Coastal Lands
__Land Division – Maui District

RECEIVED
LAND DIVISION
2007 APR 27 A 7:44
DEPT OF LAND & NATURAL RESOURCES
STATE OF HAWAII

FROM: Russell Y. Tsuji
SUBJECT: Proposed Napili Well Storage Tank
LOCATION: Napili, Maui, TMK: (2) 4-3-1:portion 1
APPLICANT: Munekiyo & Hiraga, Inc., on behalf of County of Maui, Department 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 May 7, 2007.

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: Eric T. Hirano
Date: 4/30/07

12

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/RYT
ReF.: NapiliWellStorage
Maui.357

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 Zone C. The National Flood Insurance Program does not have any regulations for developments within Zone C.

( ) 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 Sumimoto at (808) 523-4254 or Mr. Mario Siu Li at (808) 523-4247 of the City and County of Honolulu, Department of Planning and Permitting.

( ) Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) 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 project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

( ) 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. Alyson Yim of the Planning Branch at 587-0259.

Signed: Eric T. Hirano
ERIC T. HIRANO, CHIEF ENGINEER

Date: 4/30/07

LINDA LINGLE
GOVERNOR OF HAWAII

PETER T. YOUNG
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
DEPUTY DIRECTOR

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

RECEIVED
LAND DIVISION
2007 MAY -7 P 3:36
DEPT OF LAND & NATURAL RESOURCES STATE OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 24, 2007

RECEIVED
07 APR 26 AM 11:06
COMMISSION ON WATER RESOURCE MANAGEMENT

MEMORANDUM

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
x Engineering Division
__Div. of Forestry & Wildlife
~~__Div. of State Parks~~
x Div. of Water Resource Management
__Office of Conservation & Coastal Lands
__Land Division – Maui District

FROM: Russell Y. Tsuji
SUBJECT: Proposed Napili Well Storage Tank
LOCATION: Napili, Maui, TMK: (2) 4-3-1:portion 1
APPLICANT: Munekiyo & Hiraga, Inc., on behalf of County of Maui, Department 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 May 7, 2007.

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: Edwin T. Sakuda
Date: 4/30/07

MAY 15 2007

LINDA LINGLE
GOVERNOR

BARRY FUKUNAGA
DIRECTOR

Deputy Directors
FRANCIS PAUL KEENO
BRENNON T. MORIOKA
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.2480

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

May 10, 2007

Mr. Kyle Ginoza
Project Manager
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Ginoza:

Subject: Napili Well Storage Tank
Draft Environmental Assessment (DEA) Early Consultation

We have reviewed the subject application for the subject storage tank project. The subject project is not expected to have an impact on our State highway facilities.

We appreciate the opportunity to provide our comments.

Very truly yours,

BARRY FUKUNAGA
Director of Transportation

MAY 2 1 2007

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

May 16, 2007 HRD07_3033

Kyle Ginoza
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawai'i 96793

Dear Mr. Ginoza:

Re: Pre-Environmental Assessment Consultation
Proposed Napili Well Storage Tank

The Office of Hawaiian Affairs (OHA) is in receipt of your April 19, 2007 letter initiating Pre-Environmental Assessment (EA) consultation on the proposed construction of a 300,000 gallon well storage tank.

OHA requests assurances that as this project moves forward, should historic properties, cultural deposits or human skeletal remains be inadvertently discovered during ground disturbance, all work will immediately cease, and the appropriate agencies notified pursuant to applicable laws.

Thank you for the opportunity to comment at this early stage, and we look forward to providing a more substantive review of the draft EA when it is prepared. Should you have any questions, please contact Kola Lindsey, Lead Advocate-Culture at (808) 594-1904 or keolal@oha.org.

'O wau iho nō,

Clyde W. Nāmu'o
Administrator

c. Thelma Shimaoka, OHA- Maui Island Community Resource Coordinator

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KAROLYNN KAWAHARA

MARK ALEXANDER ROY

April 4, 2008

Clyde W. Namu`o
State of Hawai`i
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawai`i 96813

SUBJECT: Proposed Napili Well "A" Storage Tank

Dear Mr. Namu`o:

We are writing to you on behalf of the applicant, the County of Maui, Department of Water Supply, to thank you for your letter dated May 16, 2007, providing comments on the proposed well storage tank in Napili.

We confirm that should any significant cultural deposits or human skeletal remains be encountered during development, work in the immediate vicinity will stop and the State Historic Preservation Division (SHPD/DLNR) will be contacted.

We appreciate the input we received from your office. A copy of the draft environmental assessment will be provided for your review and comment.

Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
F:\DATA\KAIHi\NapiliWellA\OHA.res.wpd

APR 27 2007

CHARMAINE TAVARES
MAYOR

CARL M. KAUPALOLO
CHIEF

NEAL A. BAL
DEPUTY CHIEF

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

780 ALUA STREET
WAILUKU, HAWAII 96793
(808) 244-9161
FAX (808) 244-1363

April 25, 2007

Mr. Kyle Ginoza
Munekiyo & Hiraga, Inc.
305 High Street
Wailuku, Hawaii 96793

Subject: Proposed Napili Well Storage Tank

Dear Mr. Ginoza,

At this time, we do not have any specific concerns regarding the project. We will take a look at the project details during the building permit process. Feel free to contact Lt. Scott English at 244-9161 if there are any questions or concerns regarding this project.

Sincerely,

for Carl M. Kaupalolo
Fire Chief

DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
COUNTY OF MAUI

MAY 2 2 2007

CHARMAINE TAVARES
Mayor

VANESSA A. MEDEIROS
Director

LORI TSUHAKO
Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165 • EMAIL director.hhc@mauicounty.gov

May 14, 2007

Mr. Kyle Ginoza, Project Manager
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Ginoza:

SUBJECT: PROPOSED NAPILI WELL STORAGE TANK

We have reviewed the material in your April 19, 2007 letter and enclosures and do not have any comment to offer.

Thank you for the opportunity to comment.

Sincerely,

Vanessa A. Medeiros

VANESSA A. MEDEIROS
Director of Housing and Human Concerns

xc: Edwin Okubo, Housing Administrator

CHARMAINE TAVARES
Mayor

MAY 0 8 2007

TAMARA HORCAJO
Director

ZACHARY Z. HELM
Deputy Director

(808) 270-7230
Fax (808) 270-7934

DEPARTMENT OF PARKS & RECREATION

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

April 27, 2007

Mr. Kyle Ginoza
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Ginoza:

SUBJECT: Proposed Napili Well Storage Tank

We have reviewed the subject project and have no comments or objections to the proposed action.

Thank you for the opportunity to review and comment. Please contact me or Mr. Patrick Matsui, Chief of Planning and Development, at 270-7387 if there are any questions.

Sincerely,

TAMARA HORCAJO
Director, Parks & Recreation

c: Patrick Matsui, Chief-Planning and Development

TH:PM:do

APR 25 2007

POLICE DEPARTMENT
COUNTY OF MAUI

CHARMAINE TAVARES
MAYOR

OUR REFERENCE
YOUR REFERENCE ti

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

THOMAS M. PHILLIPS
CHIEF OF POLICE

GARY A. YABUTA
DEPUTY CHIEF OF POLICE

April 23, 2007

Mr. Kyle Ginoza, Project Manager
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Mr. Ginoza:

SUBJECT: Proposed Napili Well Storage Tank

Thank you for your letter of April 19, 2007, requesting comments on the above subject.

We have reviewed the information submitted and have no comments or recommendations to make at this time. Thank you for giving us the opportunity to comment on this project.

Very truly yours,

AC Wayne T. Ribao

Assistant Chief Wayne T. Ribao
for: Thomas M. Phillips
Chief of Police

c: Jeff Hunt, Planning Department

MAY 3 1 2007

CHARMAINE TAVARES
Mayor

MILTON M. ARAKAWA, A.I.C.P.
Director

MICHAEL M. MIYAMOTO
Deputy Director

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

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS AND ENVIRONMENTAL MANAGEMENT
200 SOUTH HIGH STREET, ROOM 322
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Development Services Administration

DAVID TAYLOR, P.E.
Wastewater Reclamation Division

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

TRACY TAKAMINE, P.E.
Solid Waste Division

May 25, 2007

Mr. Kyle Ginoza
MUNEKIYO & HIRAGA, INC.
305 High Street, Suite 104
Wailuku, Maui, Hawaii 96793

Dear Mr. Ginoza:

SUBJECT: **PROPOSED NAPILI WELL STORAGE TANK EARLY CONSULTATION**

We reviewed the subject application and have the following comments:

1. Include waste management plan of cleared and grubbed material.

2. The plans submitted for this project do not adequately show sufficient detail to determine whether the project is compliant with building codes. We will review the project for building code requirements during the building permit application process.

3. When your project is financed with State or County funds, the requirements of Hawaii Revised Statutes, Section 103-50 will apply.

Please call Michael Miyamoto at 270-7845 if you have any questions regarding this letter.

Sincerely,

MILTON M. ARAKAWA, A.I.C.P.
Director of Public Works and
Environmental Management

MMA:MMM:ls
S:\LUCA\CZM\Napili_well_storage_tank_erly_ls.wpd

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KARLYNN KAWAHARA

MARK ALEXANDER ROY

April 4, 2008

Milton M. Arakawa, A.I.C.P.
Director
County of Maui
Department of Public Works
200 South High Street
Wailuku, Hawai`i 96793

SUBJECT: Proposed Napili Well "A" Storage Tank

Dear Mr. Arakawa:

We are writing to you on behalf of the applicant, the County of Maui, Department of Water Supply, to thank you for your letter dated May 25, 2007, providing comments on the proposed well storage tank in Napili. In response, we offer the following comments:

1. A waste management plan of cleared and grubbed material will be included in the construction plans.

2. We note that the project will be reviewed for building code requirements during the building permit application process.

3. The requirements of Hawai`i Revised Statutes, Section 103-50 regarding the consideration of persons with disabilities in the building design, will be addressed in the construction drawings, where applicable.

We appreciate the input we received from your office. A copy of the draft environmental assessment will be provided for your review and comment.

Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
F:\DATA\KAIH\NapiliWellA\dpwem.res.wpd

Maui Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 398 • Kahului, Maui, HI 96733-6898 • (808) 871-8461

April 27, 2007

Munekiyo & Hiraga, Inc.
Attention: Kyle Ginoza
305 High Street, Suite 104
Wailuku, Hawaii 96793

Subject: Proposed Napili Well Storage Tank, Napili, Maui, Hawai'i

Dear Mr. Ginoza,

Thank you for allowing us to comment on the letter regarding the subject project, which was received on April 19, 2007.

In reviewing our records and the information received, Maui Electric Company (MECO) has no objection to the subject project at this time. However, we highly encourage the developer's electrical consultant to submit the electrical demand requirements and project time schedule as soon as practical so that service can be provided on a timely basis.

In addition, may we suggest that the developer and/or their consultant make contact with Sage Kiyonaga of our Demand Side Management (DSM) group at 872-3283 to review potential energy conservation and efficiency opportunities for their project.

Should you have any other questions or concerns, please call Mark Suehiro at 872-3273.

Sincerely,

Neal Shinyama
Manager, Engineering

NS/ms:lh
cc: Sage Kiyonaga – MECO DSM

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KARLYNN KAWAHARA

MARK ALEXANDER ROY

April 4, 2008

Neal Shinyama
Manager, Engineering
Maui Electric Company, Ltd.
P.O. Box 398
Kahului, Hawai`i 96732

SUBJECT: Proposed Napili Well "A" Storage Tank

Dear Mr. Shinyama:

We are writing to you on behalf of the applicant, the County of Maui, Department of Water Supply, to thank you for your letter dated April 27, 2007, providing comments on the proposed well storage tank in Napili.

The applicant's electrical consultant will submit to you the electrical demand requirements and project time schedule as they become available. Moreover, as you requested, the electrical consultant will contact Sage Kiyonaga to review potential energy conservation and efficiency opportunities.

We appreciate the input we received from your office. A copy of the draft environmental assessment will be provided for your review and comment.

Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
F:\DATA\KAIHi\NapiliWellA\meco.res.wpd

X. AGENCIES CONSULTED DURING THE DRAFT ENVIRONMENTAL ASSESSMENT PUBLIC COMMENT PERIOD AND RESPONSES TO SUBSTANTIVE COMMENTS

X. AGENCIES CONSULTED DURING THE DRAFT ENVIRONMENTAL ASSESSMENT PUBLIC COMMENT PERIOD AND RESPONSES TO SUBSTANTIVE COMMENTS

A notice of the Draft Environmental Assessment for the subject project was filed and published in the Office of Environmental Quality Control's The Environmental Notice on May 8, 2008.

The following agencies were also sent a copy of the Draft Environmental Assessment for review and comment. Comments on the Draft EA were received during the 30-day public comment period. Comments, as well as responses to substantive comments, are included in this chapter.

1. Ranae Ganske-Cerizo
Soil Conservationist
Natural Resources Conservation Service
U.S. Department of Agriculture
210 Imi Kala Street, Suite 209
Wailuku, Hawai`i 96793-2100

2. George Young
Chief, Regulatory Branch
U.S. Department of the Army
U.S. Army Engineer District, Honolulu
Regulatory Branch
Building 230
Fort Shafter, Hawai`i 96858-5440

3. Patrick Leonard
Field, Supervisor
U. S. Fish and Wildlife Service
300 Ala Moana Blvd., Rm. 3-122,
Box 50088
Honolulu, Hawai`i 96813

4. Abbey Seth Mayer, Director
State of Hawai`i
Office of Planning
P.O. Box 2359
Honolulu, Hawai`i 96804

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

6. Alec Wong, P.E., Acting Chief
Clean Water Branch
State of Hawai`i
Department of Health
919 Ala Moana Blvd., Room 300
Honolulu, Hawai`i 96814

7. Stuart Yamada, P.E., Chief
Safe Drinking Water Branch
Department of Health
State of Hawai`i
919 Ala Moana Blvd., Room 308
Honolulu, Hawai`i 96814

8. Herbert Matsubayashi
District Environmental Health
Program Chief
State of Hawai`i
Department of Health
54 High Street
Wailuku, Hawai`i 96793

9. Laura Thielen, Chairperson
State of Hawai`i
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawai`i 96809

10. Administrator
State of Hawai`i
Department of Land and Natural Resources
State Historic Preservation Division
601 Kamokila Blvd., Room 555
Kapolei, Hawai`i 96707

11. Brennon Morioka, Director
State of Hawai`i
Department of Transportation
869 Punchbowl Street
Honolulu, Hawai`i 96813

cc: Fred Cajigal

12. Clyde Namu`o
Administrator
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawai`i 96813

13. Jeffrey A. Murray, Chief
County of Maui
Department of Fire and Public Safety
200 Dairy Road
Kahului, Hawai`i 96732

14. Vanessa A. Medeiros, Director
County of Maui
Department of Housing and Human Concerns
200 S. High Street
Wailuku, Hawai`i 96793

15. Jeffrey Hunt, Director
County of Maui
Department of Planning
250 South High Street
Wailuku, Hawai`i 96793

16. Tamara Horcajo, Director
County of Maui
Department of Parks and Recreation
700 Halia Nakoa Street, Unit 2
Wailuku, Hawai`i 96793

17. Thomas Phillips, Chief
County of Maui
Police Department
55 Mahalani Street
Wailuku, Hawai`i 96793

18. Milton Arakawa, Director
County of Maui
Department of Public Works and Environmental Management
200 South High Street
Wailuku, Hawai`i 96793

19. Cheryl Okuma, Director
County of Maui
Department of Environmental Management
200 South High Street
Wailuku, Hawai`i 96793

20. Neal Shinyama, Manager-Engineering
Maui Electric Company, Ltd.
P.O. Box 398
Kahului, Hawai`i 96733

21. Zeke Kalua, Executive Director
West Maui Taxpayers Association
P.O. Box 10338
Lahaina, Hawai`i 96761

22. Joe Pluta, President
West Maui Improvement Foundation
P.O. Box 10338
Lahaina, Hawai`i 96761

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

REPLY TO
ATTENTION OF:

July 1, 2008

Regulatory Branch

File Number POH-2007-160

RECEIVED
2008 JUL -8 AM 8:05
DEPT. OF WATER SUPPLY
COUNTY OF MAUI

Mr. Larry Winter
County of Maui
Department of Water Supply
200 South High Street
Wailuku, Hawaii 96793

Dear Mr. Winter:

This letter is in response to your request for a jurisdictional determination dated May 6, 2008 for a proposed site improvement and reconstruction of the Napili Well "A" water storage tank in Napili, Maui located at TMK (2)-4-3-001:001. We have reviewed the Draft Environmental Assessment (EA) you submitted for the subject project with respect to the Corps' authority to issue Department of the Army (DA) permits pursuant to Section 10 of the Rivers and Harbors Act (RHA) of 1899 (33 USC 403) and Section 404 of the Clean Water Act (33 USC 1344).

Based on the information you submitted, it appears the project site consists entirely of uplands and proposed improvements will not involve work activities in navigable waters of the U.S., including adjacent wetlands, or activities that will involve the placement or discharge of dredged and/or fill material into waters of the U.S.; therefore, **a DA permit will not be required.** This determination does not relieve you of the responsibility to obtain any other permits, licenses, or approvals that may be required under County, State, or Federal law for your proposed work.

Should you have any questions regarding this jurisdictional determination, please contact Ms. Joy Anamizu of my staff at (808) 438-7023 or by e-mail at *joy.n.anamizu@usace.army.mil* and reference the Corps File No. **POH-2007-160** in all future correspondence and inquiries related to this project.

Sincerely,

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

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KARLYNN FUKUDA

MARK ALEXANDER ROY
KYLE GINOZA

October 14, 2008

George P. Young, P.E.
Chief, Regulatory Branch
U.S. Department of the Army
U.S. Army Engineer District, Honolulu
Regulatory Branch, Building 230
Fort Shafter, Hawai`i 96858-5440

SUBJECT: Proposed Napili Well "A" Site Improvements
TMK: (2) 4-3-001:001(por.) and 006(por.)
Napili, Maui, Hawai`i

Dear Mr. Young:

Thank you for your department's letter dated July 1, 2008, providing comments to the Draft Environmental Assessment (EA) for the subject project.

On behalf of the applicant, the County of Maui, Department of Water Supply, we offer the following response to your comment.

We confirm that the proposed project does not involve work activities in navigable waters of the United States, including adjacent wetlands, or activities that will involve the placement or discharge of dredged and/or fill material into waters of the United States. Consequently, we acknowledge that a Department of the Army permit will not be required.

We appreciate the input we received from your office. Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
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LINDA LINGLE
GOVERNOR

JUN 0 2 2008

PATRICIA HAMAMOTO
SUPERINTENDENT

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

OFFICE OF THE SUPERINTENDENT

May 29, 2008

Mr. Larry Winter
County of Maui
Department of Water Supply
200 South High Street
Wailuku, Hawai`i 96783

Dear Mr. Winter:

SUBJECT: Draft Environmental Assessment for Proposed Napili Well "A" Site Improvements, TMK (2) 4-3-001:001 (por.) and 006 (por.), Napili, Maui, Hawai`i

The Department of Education has reviewed the Draft Environmental Assessment (DEA) for the installation of a new storage tank and enlargement of the control building at Napili Well "A." We have no comment or concern about this project or the DEA.

Should you have any questions, please call George Casen of the Facilities Development Branch at (808) 377-8308.

Very truly yours,

Patricia Hamamoto
Superintendent

PH:jmb

cc: Randolph Moore, Assistant Superintendent, OSFSS
Duane Kashiwai, Public Works Administrator, FDB
Ron Okamura, CAS, Hana/Lahaina/Lanai/Molokai Complex Areas
✓Kyle Ginoza, Munekiyo & Hiraga, Inc.

JUN 0 6 2008

LINDA LINGLE
GOVERNOR OF HAWAII

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

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

STATE OF HAWAII
DEPARTMENT OF HEALTH
MAUI DISTRICT HEALTH OFFICE
54 HIGH STREET
WAILUKU, MAUI, HAWAII 96793-2102

June 5, 2008

Mr. Kyle Ginoza
Munekiyo & Hiraga, Inc.
305 South High Street, Suite 104
Wailuku, Hawai`i 96793

Dear Mr. Ginoza:

Subject: **Draft Environmental Assessment for Proposed Napili Well "A" Site Improvements, TMK: (2) 4-3-001: 001 (por.) and 006 (por.)**

Thank you for the opportunity to comment on the Draft Environmental Assessment for the improvements for Napili Well Site "A". We have no additional comments other than the comments offered during the early consultation process.

Should you have any questions, please call me at 808 984-8230.

Sincerely,

Herbert S. Matsubayashi
District Environmental Health Program Chief

c: Larry Winter
EPO

JUN 0 9 2008

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

June 6, 2008

County of Maui
Department of Water Supply
200 South High Street
Wailuku, Hawaii 96793

Attention: Mr. Larry Winder

Dear Mr. Winter:

SUBJECT: Draft Environmental Assessment – Proposed Napili Well "A" Site Improvements, Napili, Maui, Hawaii; TMK: (2) 4-3-001:001(por.) and 006(por.)

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 comments.

At this time, enclosed are comments from the (a) Engineering Division, and (b) Commission on Water Resource Management on the subject matter. Should you have any questions, please feel free to call Darlene Nakamura at 587-0417. Thank you.

Sincerely,

Morris M. Atta
Administrator

Enclosures
cc: Munekiyo & Hiraga, Inc. (w/copies)
Attention: Mr. Kyle Ginoza

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

RECEIVED LAND DIVISION 2008 MAY 27 P 3:54 DEPT. OF LAND & NATURAL RESOURCES STATE OF HAWAII

May 14, 2008

MEMORANDUM

TO: **DLNR Agencies:**
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
✓ x Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
x Commission on Water Resource Management
__Office of Conservation & Coastal Lands
X Land Division – Maui District

'08 MAY 15 PM 04:12 ENGINEERING

FROM: Morris M. Atta, Administrator
SUBJECT: Draft Environmental Assessment – Proposed Napili Well "A" Site Improvements
LOCATION: Napili, Island of Maui; TMK: (2) 4-3-001:001 (por.) and 006 (por.)
APPLICANT: Munekiyo & Hiraga on behalf of the Maui County Department 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, 2008.

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: [signature]
Date: 5/23/08

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/MorrisAtta
Ref.: DEANapiliWell"A"
Maui.413

COMMENTS

( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone ___.

( ) 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 Zone D. The National Flood Insurance Program does not have any regulations for development within Zone D.

( ) 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. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) 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 project water demands and infrastructure required to meet water demands. Please note that the projects 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:_____

_____

(X) **Other: Our comments dated April 30, 2007 for the subject, which was incorporated at the Draft Environmental Assessment document, still apply.**

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: _____
ERIC T. HIRANO, CHIEF ENGINEER

Date: 5/23/08

LINDA LINGLE
GOVERNOR OF HAWAII

RECEIVED
08 MAY 15 P3:04
COMMISSION ON WATER RESOURCE MANAGEMENT

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

May 14, 2008

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_x_Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
_x_Commission on Water Resource Management
___Office of Conservation & Coastal Lands
_X_Land Division – Maui District

FROM: Morris M. Atta, Administrator
SUBJECT: Draft Environmental Assessment – Proposed Napili Well "A" Site Improvements
LOCATION: Napili, Island of Maui; TMK: (2) 4-3-001:001 (por.) and 006 (por.)
APPLICANT: Munekiyo & Hiraga on behalf of the Maui County Department 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, 2008.

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: _____

cc: Central Files

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

May 28, 2008

REF: NapiliAStorage.dr

TO: Morris Atta, Acting Administrator
Land Division

FROM: Ken C. Kawahara, P.E., Deputy Director
Commission on Water Resource Management

SUBJECT: Napili Well A Additional Storage Tank & Control Building

FILE NO.: TMK: (2) 4-3-001:001(por)

Ken C. Kawahara

RECEIVED
2008 JUN -2 A 9:55
LAND DIVISION

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. 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 *www.hawaii.gov/dlnr/cwrm/forms.htm.*

☐ 4. The proposed water supply source for the project is located in a designated ground-water management area, and a Water Use Permit is required prior to use of ground water.

☐ 5. A Well Construction Permit(s) is (are) required before the commencement of any well construction work.

☐ 6. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.

☐ 7. 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.

☐ 8. Ground-water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

☐ 9. A Stream Channel Alteration Permit(s) is (are) required before any alteration can be made to the bed and/or banks of a stream channel.

☐ 10. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is constructed or altered.

☐ 11. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.

☐ 12. 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.

☐ 13. We recommend that the report identify feasible alternative non-potable water resources, including reclaimed wastewater.

☒ OTHER:

The document does not indicate additional demand from this project, but rather provide additional storage for existing use. Also, pump installation permits for the project have expired and we are in the process of notifying the Maui Department of Water Supply.

If there are any questions, please contact Charley Ice at 587-0251.

Cl:ss

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KARLYNN FUKUDA

MARK ALEXANDER ROY
KYLE GINOZA

October 14, 2008

Laura Thielen, Chairperson
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawai`i 96809

SUBJECT: Proposed Napili Well "A" Site Improvements
TMK: (2) 4-3-001:001(por.) and 006(por.)
Napili, Maui, Hawai`i

Dear Ms. Thielen:

Thank you for your department's letter dated June 6, 2008, providing comments to the Draft Environmental Assessment (EA) for the subject project.

On behalf of the applicant, the County of Maui, Department of Water Supply, we offer the following responses to your comments.

1. As recommended, the applicant will work toward incorporating this project into the County's Water Use and Development Plan.

2. We confirm that the project is being pursued to provide additional storage capacity. After discussion with Mr. Charlie Ice of your department, we found that the expired pump installation permits noted in your office's letter did not pertain to the project or the subject property.

We appreciate the input we received from your office. Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
F:\DATA\KAIHi\NapiliWellA\dlnrdeares.ltr.wpd

MAY 1 9 2008

LINDA LINGLE
GOVERNOR

BRENNON T. MORIOKA
DIRECTOR

Deputy Directors
MICHAEL D. FORMBY
FRANCIS PAUL KEENO
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.2870

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

May 14, 2008

Mr. Larry Winter
Department of Water Supply
County of Maui
200 South High Street
Wailuku, Hawaii 96793

Dear Mr. Winter:

Subject: Napili Well Storage Tank
Draft Environmental Assessment (DEA)
TMK: 4-3-001: 001 (por.) and 006 (por.)

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

The proposed storage tank project will not impact any State highway facilities.

The DOT appreciates the opportunity to provide comments.

Very truly yours,

BRENNON T. MORIOKA, PH.D., P.E.
Director of Transportation

c: Kyle Ginoza, Munekiyo & Hiraga, Inc.

JUN 0 9 2008

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

HRD08/3033B

June 2, 2008

Larry Winter
Department of Water Supply
200 South High Street
Wailuku, Hawai'i 96793

RE: Request for comments on the proposed Napili well "A" site improvements and Draft Environmental Assessment (DEA), Napili, Maui, TMKs: 4-3-001:001 and: 002.

Aloha e Larry Winter,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-mentioned letter dated May 6, 2008. OHA has reviewed the project and offers the following comments.

OHA understands that the proposed project consists of a new 300,000 gallon well storage tank and related building expansion. OHA also read on page 6 pf the DEA that, "The 100,000 gallon capacity of the existing tank in not adequate t meet the storage needs of the service area, as population growth in the region has led to increased demand on the water infrastructure system." As such, OHA understands that this proposed project is needed to meet current needs and not projected future demands in the area.

OHA notes that there are two streams very close to the project area as well as two wetland areas. (DEA, page 15) We see that no Department of the Army permits such as a Clean Water Act section 404 permit which provides for alteration of wetlands were listed on page 65 of the DEA. We ask whether or not the Department of the Army has made a determination whether any permits would be required.

OHA is pleased that the applicant included language from our May 16, 2007 correspondence relating to cultural deposits in the DEA on page 17. Additionally, OHA would also like to suggest that the project area be landscaped with drought tolerant native or indigenous species that are common to the area. Any invasive species should also be removed. Doing so would serve to further the traditional Hawaiian concept of mālama 'āina and create a more

Hawaiian sense of place. This would also help to reduce the amount of impervious surfaces in the project area, thereby reducing runoff as well.

Thank you for the opportunity to comment. If you have further questions, please contact Grant Arnold (808) 594-0263 or e-mail him at granta@oha.org.

'O wau iho nō me ka 'oia'i'o,

Clyde W. Nāmu'o
Administrator

C: Kyle Ginoza
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawai'i 96793

C: OHA Maui CRC Office

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KARLYNN FUKUDA

MARK ALEXANDER ROY
KYLE GINOZA

October 14, 2008

Clyde Namu`o, Administrator
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawai`i 96813

SUBJECT: Proposed Napili Well "A" Site Improvements
TMK: (2) 4-3-001:001(por.) and 006(por.)
Napili, Maui, Hawai`i

Dear Mr. Namu`o:

Thank you for your letter dated June 2, 2008, providing comments to the Draft Environmental Assessment (EA) for the subject project.

On behalf of the applicant, the County of Maui, Department of Water Supply, we offer the following responses to your comments.

1. The Department of the Army sent us a letter noting that a Department of the Army permit is not needed as the proposed project does not involve work activities in navigable waters of the United States, or activities that will involve the placement or discharge of dredged and/or fill material into the waters of the United States.

2. We will recommend to the applicant that the project area be landscaped with drought tolerant native or indigenous species that are common to the area and that invasive species be removed.

We appreciate the input we received from your office. Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
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DEPARTMENT OF
HOUSING AND HUMAN CONCERNS
COUNTY OF MAUI

MAY 1 6 2008

CHARMAINE TAVARES
Mayor
VANESSA A. MEDEIROS
Director
LORI TSUHAKO
Deputy Director

200 SOUTH HIGH STREET • WAILUKU, HAWAII 96793 • PHONE (808) 270-7805 • FAX (808) 270-7165 • EMAIL director.hhc@mauicounty.gov

May 14, 2008

Mr. Larry Winter
County of Maui
Department of Water Supply
200 South High Street
Wailuku, Hawaii 96793

Dear Mr. Winter:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR PROPOSED NAPILI WELL "A" SITE IMPROVEMENTS, NAPILI, MAUI, HAWAII TMK (2) 4-3-001:001(por.) and 006 (por.)

We have reviewed the Draft Environmental Assessment for the above subject matter and wish to inform you that this Department has no comment to offer.

Thank you for the opportunity to comment.

Sincerely,

Vanessa A Medeiros

VANESSA A. MEDEIROS
Director of Housing and Human Concerns

xc: Kyle Ginoza, Munekiyo & Hiraga, Inc.
Housing Division

CHARMAINE TAVARES
Mayor

JEFFREY S. HUNT
Director

COLLEEN M. SUYAMA
Deputy Director

JUN 2 5 2008

COUNTY OF MAUI
DEPARTMENT OF PLANNING

June 23, 2008

Mr. Kyle Ginoza
Munekiyo & Hiraga, Inc.
205 High Street, Suite 104
Wailuku, Hawaii 96793

Dear Mr. Ginoza:

SUBJECT: **COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR PROPOSED NAPILI WELL "A" SITE IMPROVEMENTS, LOCATED AT NAPILI, MAUI, HAWAII, TMK: (2) 4-3-001:001 (POR.) AND 006 (POR.) (EAC 2008/0024)**

The Department of Planning (Department) is in receipt of your request for comments, dated May 6, 2008, transmitting the DEA, April 2008, for comment on the above-referenced project. **The Department understands that the proposed action includes the following:**

1. The Applicant is Munekiyo & Hiraga, Inc., on behalf of the County of Maui, Department of Water Supply;

2. The Applicant proposes to construct a new 300,000 gallon water supply tank on a new contiguous parcel to the existing Napili Well "A" storage tank site, enlarge the existing control building by 105 square feet, upgrade mechanical equipment, and complete grading for the new proposed tank slab of 860 square feet;

3. The valuation is $1.5 million;

4. The proposed project site is adjacent to, and on land contiguous with the existing storage tank on Maui Land and Pine land. The Department of Water Supply is in the process of acquiring the land for the project. In the past, the proposed location was used as a pineapple field. The project site is located approximately 7,000 feet

away from the urban district, thus because of its relative remote location, no impact is anticipated on the urban district;

5. An Archaeological Inventory Survey was completed with a recommendation of no further work is required;

6. The trigger for Chapter 343, Hawaii Revised Statutes, compliance is the use of County lands and funds;

7. The Accepting Authority is Department of Water Supply;

8. The State Land Use District is Agriculture, the County Zoning is Agriculture, and the West Maui Community Plan designation is Agriculture;

9. The proposed action is a permitted use in the Agriculture District; and

10. The proposed action is not in the Special Management Area. The proposed action is in a Flood Zone C, minimal flooding, and a Flood Hazard Development Permit is not required.

Based on the foregoing, the Department provides the following comments on the DEA:

1. Please note that "Prime Agricultural Land will be lost" in both Section IV, *Summary of Adverse Environmental Effects which Cannot be Avoided*, page 57, and in Section VI, *Irreversible and Irretrievable Commitment of Resources*, page 60;

2. The Applicant completed *An Archaeological Field Inspection of a Portion of Land Located in Napili 3 & 3 Ahupua'a, Lahaina District, Island of Maui (TMK 4-3-01: portion of 1), Xamanek Researches, LLC*, author is Eric Fredericksen, March 20, 2008. As part of the DEA, please consult with the Department of Land and Natural Resources, State Historic Preservation Division, to approve of Archaeological Field Inspection Report and to determine that an Archaeological Monitoring Plan is not required for the project;

3. Add a Preliminary Engineering Report which includes increased runoff calculations due to the proposed action, and Best

Management Practices to mitigate and minimize the additional generated runoff; and

4. Include a Preliminary Grading Plan.

Thank you for your cooperation. If additional clarification is required, please contact Staff Planner James Buika via email at james.buika@mauicounty.gov or by phone at 270-6271.

Sincerely,

CLAYTON I. YOSHIDA, AICP
Program Planning Administrator

For: JEFFREY S. HUNT, AICP
Planning Director

xc: Aaron H. Shinmoto, PE, Program Planning Administrator (2)
James A. Buika, Staff Planner
EAC File
General File

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MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KARLYNN FUKUDA

MARK ALEXANDER ROY
KYLE GINOZA

October 14, 2008

Jeffrey S. Hunt, AICP, Director
Department of Planning
County of Maui
250 South High Street
Wailuku, Hawai`i 96793

SUBJECT: Proposed Napili Well "A" Site Improvements
TMK: (2) 4-3-001:001(por.) and 006(por.)
Napili, Maui, Hawai`i

Dear Mr. Hunt:

Thank you for your department's letter dated June 23, 2008, providing comments to the Draft Environmental Assessment (EA) for the subject project.

On behalf of the applicant, the County of Maui, Department of Water Supply, we offer the following responses to your comments.

1. The reference to the loss of prime agricultural land will be included in the Summary of Adverse Environmental Effects Which Cannot be Avoided and Irreversible and Irretrievable Commitment of Resources sections.

2. The Archaeological Field Inspection (AFI) report was submitted to the State Historic Preservation Division (SHPD) by Xamanek Researches for review and approval. The SHPD accepted the AFI report by letter dated July 22, 2008 and noted that no further archaeological work is recommended for the proposed project. The SHPD letter will be included in the Final EA.

3. A Preliminary Drainage Report, which includes runoff calculations, a list of Best Management Practices, and a Preliminary Grading Plan, will be included in the Final EA.

We appreciate the input we received from your office. Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
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MAY 3 0 2008

CHARMAINE TAVARES
Mayor

TAMARA HORCAJO
Director

ZACHARY Z. HELM
Deputy Director

(808) 270-7230
Fax (808) 270-7934

DEPARTMENT OF PARKS & RECREATION

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

May 21,2008

County of Maui
Department of Water Supply
Attn: Larry Winter
200 South High St
Wailuku, Hawaii 96793

Dear Mr. Larry Winter

Subject: Draft Environmental Assessment for the Proposed Napili Well "A" site Improvements, Napili, Maui, Hawaii TMK (2) 4-3-001:001 (por.) and 006 (por.)

We have reviewed the Draft Environmental Assessment for the Proposed Napili Well "A" site Improvements, Napili, Maui, Hawaii TMK (2) 4-3-001:001 (por.) and 006 (por.), and we have no comments or objections to the subject project.

Thank you for the opportunity to comment. Please contact me or Patrick Matsui, Chief of Planning and Development, at 270-7387 if there are any questions.

Sincerely,

TAMARA HORCAJO
For Director, Parks & Recreation

xc: Patrick Matsui, Chief of Planning & Development
Kyle Ginoza, Munekiyo & Hiraga Inc.

TH:PM:ak

JUN 0 9 2008

POLICE DEPARTMENT
COUNTY OF MAUI

CHARMAINE TAVARES
MAYOR

OUR REFERENCE
YOUR REFERENCE

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

THOMAS M. PHILLIPS
CHIEF OF POLICE

GARY A. YABUTA
DEPUTY CHIEF OF POLICE

June 4, 2008

Mr. Kyle Ginoza
Project Manager
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, HI 96793

Dear Mr. Ginoza

SUBJECT: D.E.A. for Proposed Napili Well "A" Site Improvements
TMK (2) 4-3-001:001 (por.) and 006 (por.)

This is in response to your letter May 6, 2008, requesting comments on the above subject.

We have reviewed the information for the above mentioned subject and offer the enclosed comments.

Thank you for giving us the opportunity to comment on this project. We are returning the D.E.A. which was submitted for our review.

Very truly yours,

Assistant Chief Wayne T. Ribao
for: Thomas M. Phillips
Chief of Police

c: Jeffrey Hunt, Maui County Dept. of Planning
Larry Winter, Maui County Dept. of Water Supply

COPY

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

VIA: CHANNELS

FROM: Lawrence N. KAUHA'AHA'A, ACTING SERGEANT, LAHAINA SPEICALIZED

CONCUR:
AC [signature]
06/04/08

SUBJECT: DRAFT ENVIONMENTAL ASSESSMENT FOR PROPOSED NAPILI WELL "A" SITE IMPROVEMENTS.

The following to/from transmittal is being submitted following the review of the attached Environmental Assessment of this project.

Based on the information provided this Officer does not anticipate any adverse safety conditions created by this project.

Submitted for your perusal,

[signature]
Lawrence N. KAUHA'AHA'A, 8851
ACTING SERGEANT, LAHAINA SPECIALIZED
05.30.08 @ 1506 HOURS

NO IMPACTS NOTED.

[signature] 6/3/08

MAY 2 9 2008

CHARMAINE TAVARES
Mayor

MILTON M. ARAKAWA, A.I.C.P.
Director

MICHAEL M. MIYAMOTO
Deputy Director

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

RALPH NAGAMINE, L.S., P.E.
Development Services Administration

CARY YAMASHITA, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS
200 SOUTH HIGH STREET, ROOM NO. 434
WAILUKU, MAUI, HAWAII 96793

May 27, 2008

Mr. Kyle Ginoza
MUNEKIYO & HIRAGA, INC.
305 High Street, Suite 104
Wailuku, Maui, Hawaii 96793

Dear Mr. Ginoza:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR PROPOSED NAPILI WELL "A" SITE IMPROVEMENTS TMK : (2) 4-3-001:001 (POR.) AND 006 (POR.)

We have reviewed the subject application and have the following comments:

1. The architect and owner are advised that the project is subject to possible tsunami and flood inundation. As such, said project must conform to Ordinance No. 1145, pertaining to flood hazard districts.

2. A verification shall be provided by a Registered Civil Engineer that the grading and runoff water generated by the project will not have an adverse effect on the adjacent and downstream properties.

3. A detailed and final drainage report and a Best Management Practices (BMP) Plan shall be submitted with the grading plans for review and approval prior to issuance of grading permits. The drainage report shall include hydrologic and hydraulic calculations and the schemes for disposal of runoff waters. It must comply with the provisions of the "Rules and Design of Storm Drainage Facilities in the County of Maui" and must provide verification that the grading and runoff water generated by the project will not have an adverse effect on adjacent and downstream properties. The BMP plan shall show the location and details of structural and non-structural measures to control erosion and sedimentation to the maximum extent practicable.

4. The applicant shall be responsible for all required improvements as required by Hawaii Revised Statutes, Maui County Code and rules and regulations.

5. In case of catastrophic failure of the water tanks, provide an inundation zone map of the downstream properties (similar to what is done for dams). Indicate how warning notification can be given to affected properties.

Please call Michael Miyamoto at 270-7845 if you have any questions regarding this letter.

Sincerely,

MILTON M. ARAKAWA, A.I.C.P.
Director of Public Works

MMA:MMM:ls
xc: Department of Water Supply
Highways Division
Engineering Division
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MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KARLYNN FUKUDA

MARK ALEXANDER ROY
KYLE GINOZA

October 14, 2008

Milton Arakawa, Director
Department of Public Works
200 South High Street
Wailuku, Hawai`i 96793

SUBJECT: Proposed Napili Well "A" Site Improvements
TMK: (2) 4-3-001:001(por.) and 006(por.)
Napili, Maui, Hawai`i

Dear Mr. Arakawa:

Thank you for your letter dated May 27, 2008, providing comments to the Draft Environmental Assessment (EA) for the subject project.

On behalf of the applicant, the County of Maui, Department of Water Supply, we offer the following responses to your comments.

1. The project site is wholly located in an area designated as Flood Zone "C", an area of minimal flooding, by the Flood Insurance Rate Map. The risk of possible tsunami and flood inundation is low in areas designated as Flood Zone "C". Nonetheless, the applicant's civil engineer will ensure that the project conforms to applicable sections of Ordinance No. 1145, pertaining to flood hazard districts.

2. A Preliminary Drainage Report will be included in the Final EA. The Preliminary Drainage Report will prepared by a Registered Civil Engineer and will provide verification that the grading and runoff water generated by the project will not have an adverse effect on adjacent and downstream properties.

3. A Final Drainage Report will be prepared by a registered professional civil engineer and submitted to the Department during the grading permit process. The Final Drainage Report will include hydrologic and hydraulic calculations and the schemes for disposal of runoff waters, in compliance with the provisions of the "Rules and Design of Storm Drainage Facilities in the County of Maui". The report will also verify that the grading and runoff water generated by the project will not have an adverse effect on adjacent or downstream properties. As part of the Final Drainage Report, a list of Best Management Practices (BMPs) will be included. The BMP plan will show the location and details of structural and non-structural measures to

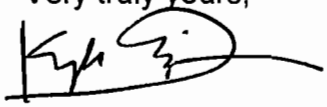
control erosion and sedimentation.

4. The applicant acknowledges that it is responsible for all improvements required by the Hawai`i Revised Statutes, Maui County Code and rules and regulations.

5. We note that the proposed project involves the installation of a relatively small 0.3 million gallon reinforced concrete reservoir. As such, while the likelihood of catastrophic failure of the reservoir is minuscule, the downstream property is a pineapple field which slopes and drains to a natural gulch. The nearest downstream residence is more than 7,000 feet from the reservoir. Therefore, in the unlikely event of catastrophic failure of the reservoir, it is anticipated that downstream residences will be minimally impacted.

We appreciate the input we received from your office. Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,



Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
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JUN 2 4 2008

CHARMAINE TAVARES
Mayor

CHERYL K. OKUMA, Esq.
Director

GREGG KRESGE
Deputy Director

TRACY TAKAMINE, P.E.
Solid Waste Division

DAVID TAYLOR, P.E.
Wastewater Reclamation
Division

COUNTY OF MAUI
DEPARTMENT OF
ENVIRONMENTAL MANAGEMENT
2200 MAIN STREET, SUITE 175
WAILUKU, MAUI, HAWAII 96793

June 19, 2008

Mr. Kyle Ginoza
Munekiyo & Hiraga, Inc.
305 High Street, Suite 104
Wailuku, Hawaii 96793

SUBJECT: NAPILI WELL "A" SITE IMPROVEMENTS
DRAFT ENVIRONMENTAL ASSESSMENT
TMK (2) 4-3-001:001 (POR.) AND 006 (POR.), NAPILI

We reviewed the subject application and have the following comments:

1. Solid Waste Division comments

   a. None.

2. Wastewater Reclamation Division comments:

   a. None. No County sewer in the vicinity of the project.

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

Sincerely,

Cheryl K. Okuma

Cheryl Okuma, Director

xc: Larry Winter, Department of Water Supply

Maui Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 398 • Kahului, Maui, HI 96733-6898 • (808) 871-8461

June 2, 2008

Larry Winter
County of Maui
Department of Water Supply
200 South High Street
Wailuku, HI 96793

Dear Mr. Winter,

Subject: Draft Environmental Assessment for Proposed Napili Well "A" Site Improvements
Napili, Maui, Hawaii
TMK: (2) 4-3-001:001(por.) and 006(por.)

Thank you for allowing us to comment on the Draft Environmental Assessment for the proposed subject project, which was received on May 7, 2008.

Maui Electric Company (MECO) still has no objection to the project at this time. However, we still highly suggest and encourage the developer's electrical consultant to submit its electrical demand requirements and project time schedule as soon as practical so that service can be provided on a timely basis.

Should you have any other questions or concerns please don't hesitate to call me at 871-2345 or email me at kimberly.kawahara@mauielectric.com.

Sincerely,

K. Kawahara

Kimberly Kawahara
Engineer I

cc: Kyle Ginoza, Munekiyo & Hiraga, Inc.

MUNEKIYO & HIRAGA, INC.

MICHAEL T. MUNEKIYO
GWEN OHASHI HIRAGA
MITSURU "MICH" HIRANO
KARLYNN FUKUDA

MARK ALEXANDER ROY
KYLE GINOZA

October 14, 2008

Greg Kauhi
Manager, Customer Operations
Maui Electric Company, Ltd.
P.O. Box 398
Kahului, Hawai`i 96733

SUBJECT: Proposed Napili Well "A" Site Improvements; TMK: (2) 4-3-001:001(por.) and 006(por.), Napili, Maui, Hawai`i

Dear Mr. Kauhi:

Thank you for your office's letter dated June 2, 2008, providing comments to the Draft Environmental Assessment (EA) for the subject project.

On behalf of the applicant, the County of Maui, Department of Water Supply, we offer the following response to your comment.

As previously noted, the applicant's electrical consultant will submit to you the electrical demand requirements and project time schedule as they become available. Moreover, the electrical consultant will contact Sage Kiyonaga to review potential energy conservation and efficiency opportunities.

We appreciate the input we received from your office. Should you have any questions, please do not hesitate to contact me at (808) 244-2015.

Very truly yours,

Kyle Ginoza
Project Manager

KG:lh
cc: Jerry Fujita, KAI Hawai`i
Larry Winter, County of Maui, Department of Water Supply
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REFERENCES

REFERENCES

County of Maui, The General Plan of the County of Maui 1990 Update, 1990.

County of Maui, West Maui Community Plan, February 1996.

County of Maui, Department of Planning, Socio-Economic Forecast: The Economic Projections for the Maui County General Plan 2030, June 2006.

Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map (FIRM 1500030185D), May 15, 2002.

Land Study Bureau, Detailed Land Classification—Island of Maui, May 1967.

Munekiyo & Hiraga, Inc. Draft Environmental Assessment, Proposed Kamole Weir Water Treatment Facility Clearwell Reservoir, June 2005.

Munekiyo & Hiraga, Inc., Draft Environmental Assessment, Proposed Kaupakalua Pump Control Tank, November 2005.

Munekiyo & Hiraga, Inc., Draft Environmental Assessment, Proposed Lahaina Wastewater Pump Station No. 1 Modifications, January 2008.

Munekiyo & Hiraga, Inc., Final Environmental Assessment, Proposed Maui Prepatory Academy, November 2004.

Munekiyo & Hiraga, Inc., Final Environmental Assessment, Use of Former Pioneer Mill Plantation Manager's House and Surrounding Botanical Gardens for Special Events and Temporary Event-Related Minor Structures, March 2007.

State of Hawai`i, Department of Labor and Industrial Relations, http://hawaii.gov/labor, September 2008.

U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of the Islands of Kaua`i, O`ahu, Maui, Molokai, and Lana`i, State of Hawai`i, 1972.

APPENDIX A.

Archaeological Field Inspection

An Archaeological Field Inspection of a portion of land located in Napili 2 & 3 *Ahupua'a*, Lahaina District, Island of Maui (TMK: 4-3-01: Portion of 1)

Prepared on behalf of:

County of Maui
Department of Water Supply
Wailuku, Maui

Prepared by:

Xamanek Researches, LLC
Pukalani, Maui

Erik Fredericksen

20 March 2008

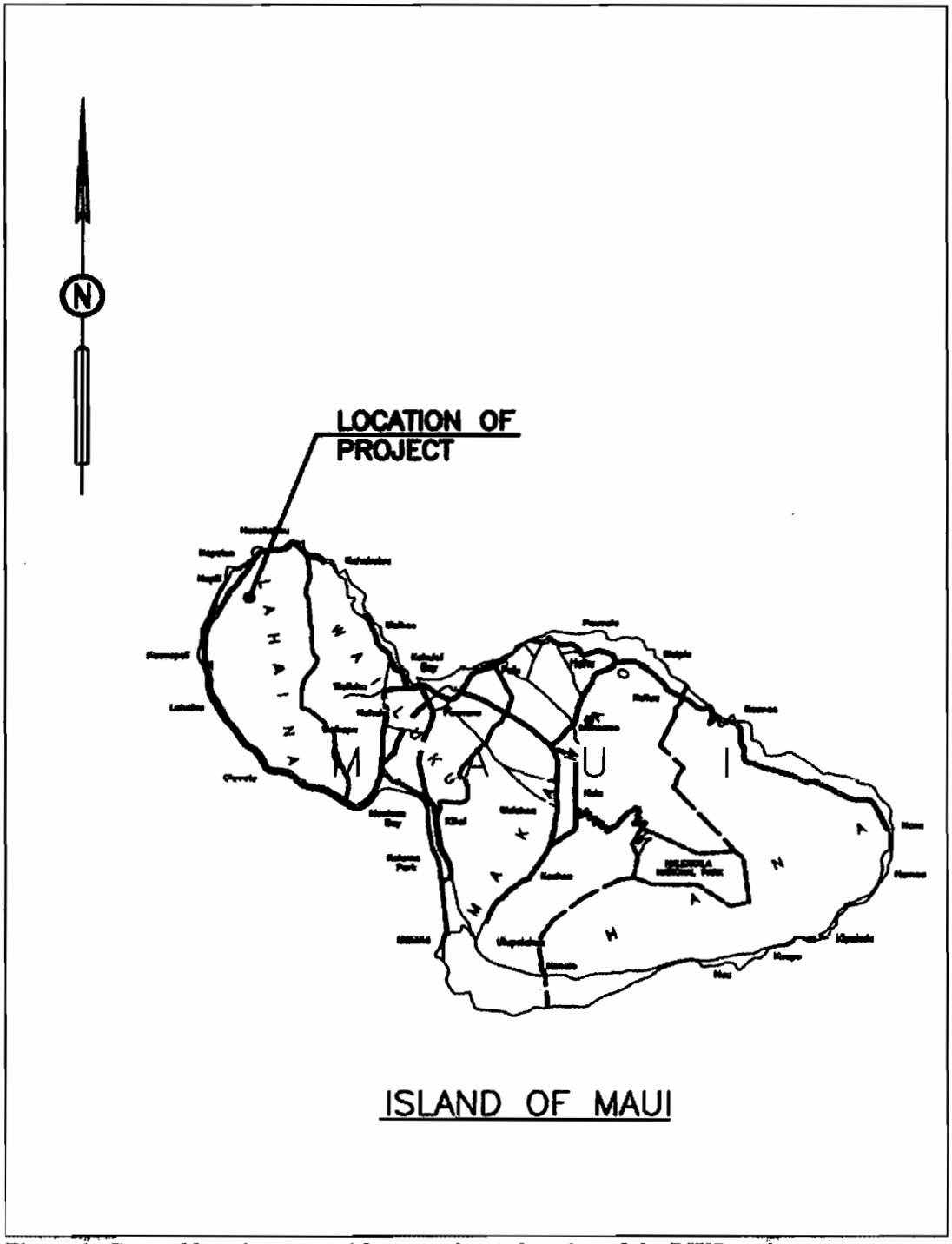


Figure 1: General location map with approximate location of the DWS project area, Napili, Maui.

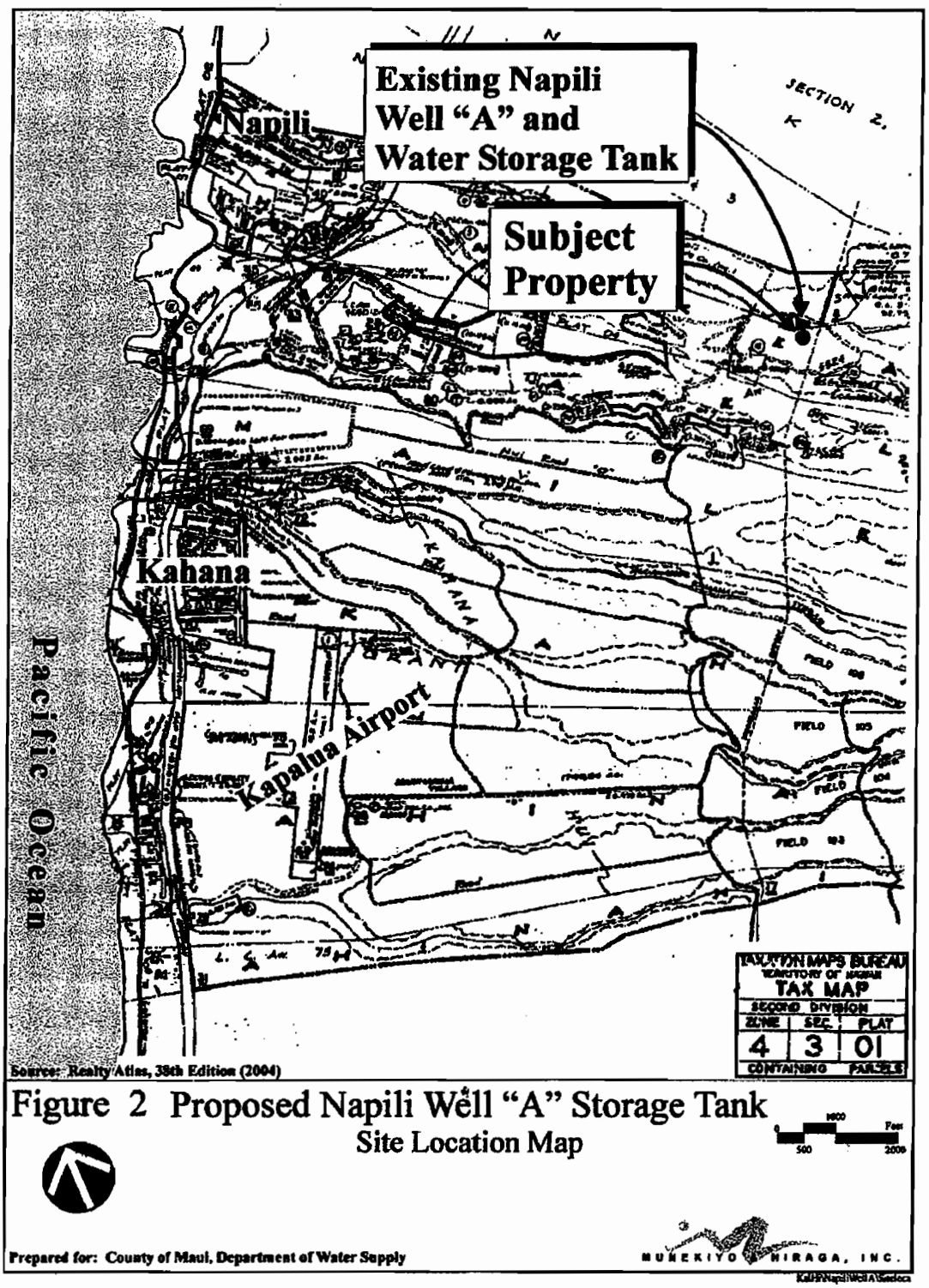


Figure 2: Tax Key Map with approximate location of the DWS project area, Napili, Maui.

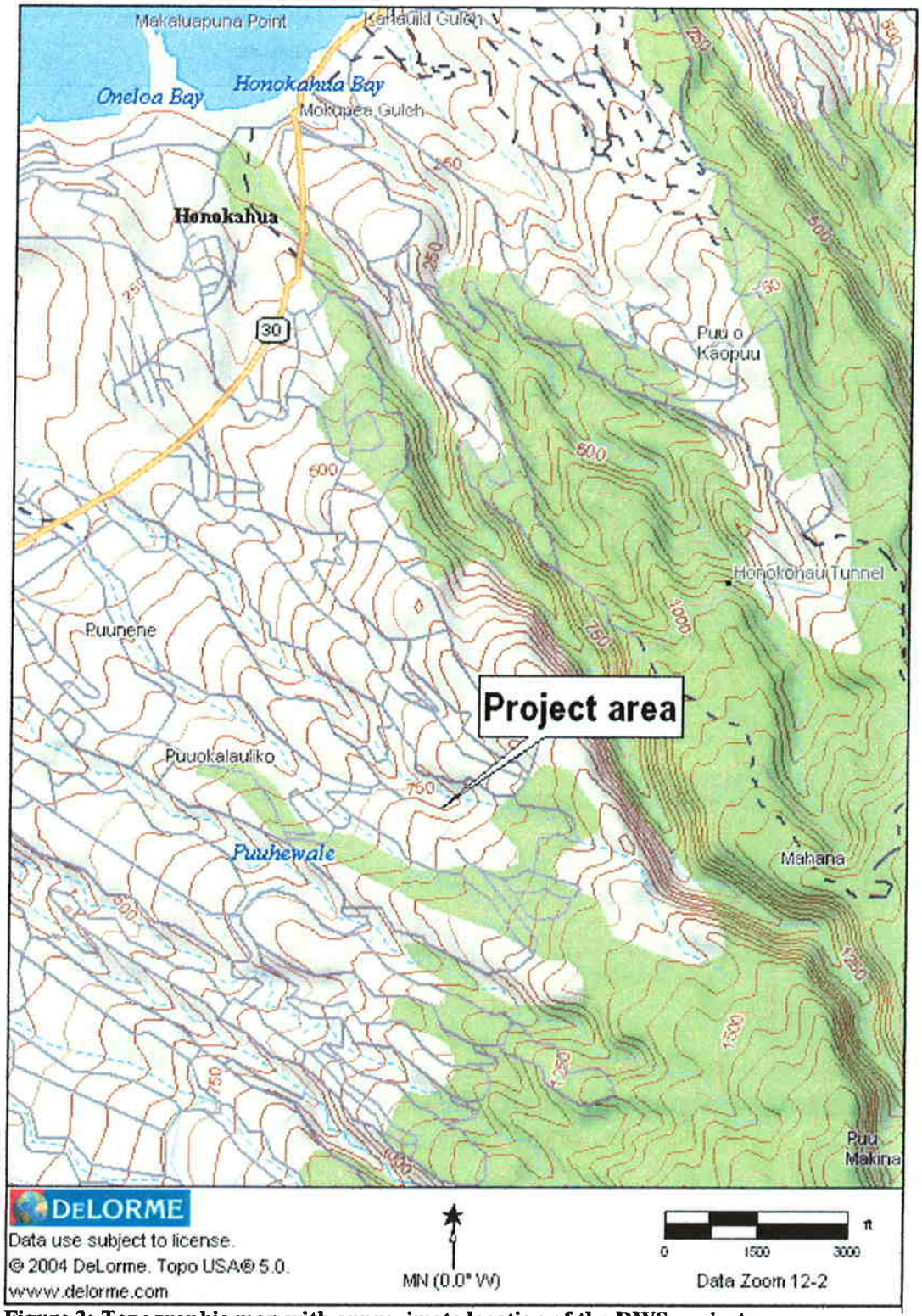


Figure 3: Topographic map with approximate location of the DWS project area, Napili, Maui.

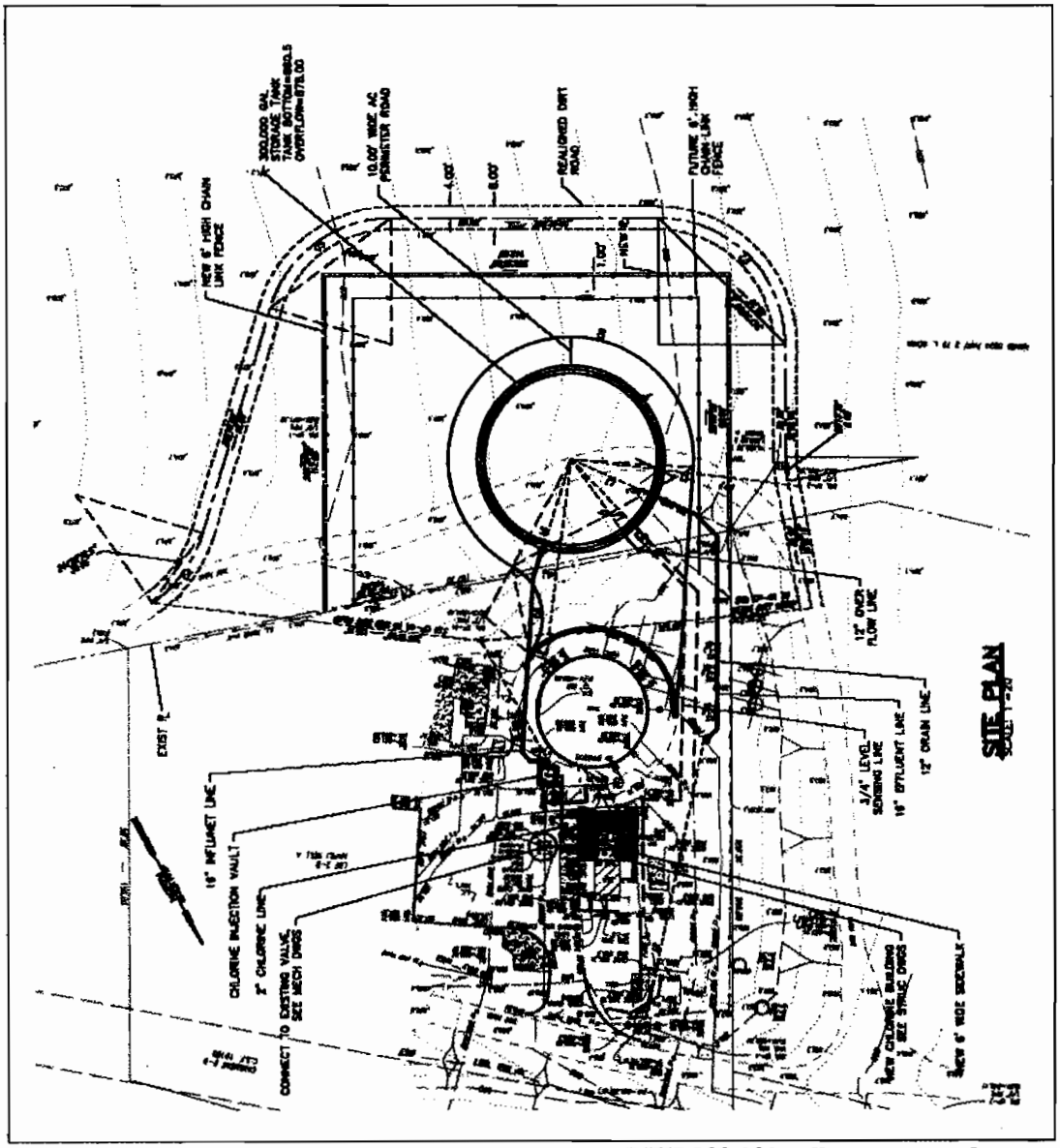


Figure 4: Plan map with proposed location of the new DWS 300,000 gallon water tank, Napili. Note: existing County of Maui DWS facility is adjacent to and northwest of the planned tank.

Introduction

Xamanek Researches LLC conducted a field inspection of a portion of land in Napili, Maui on 14 March 2008 (Figures 1-4). This field inspection was carried out per discussions with Mr. Kyle Ginoza, Planner, Munekiyo & Hiraga, Inc., Wailuku, Maui. The archaeological inspection was conducted on behalf of the County of Maui Department of Water Supply (DWS), under contract with KAI Hawaii, Inc., Honolulu, Hawaii. Project plans call for the development of a new 300,000 gallon water tank, adjacent to an existing DWS Napili Well "A" and Water Storage Tank facility. The project is identified as the Napili Well "A" Improvements (DWS Job No: 06-07). The proposed impact area will be located within a fallow pineapple field, southwest of Napili Gulch in Napili 2 *Ahupua`a*, Lahaina District, Maui (TMK (2) 4-3-01: Portion of 1).

While the Department of Water Supply Napili Well A Improvements project is located in a former pineapple field area, an archaeological evaluation was stipulated, because previously identified sites are located in the nearby Napili Gulch area to the north.

Background Information

Xamanek Researches[1] previously carried out an archaeological inventory survey of a c. 475-acre parcel of land on West Maui during the summer of 2001. The project area included portions of land in Honokahua and Napili 2 & 3 *Ahupua`a*, Lahaina District, Island of Maui. The study area was comprised of active and abandoned pineapple fields, and portions of Honokahua, Napili, and Mokupe`a Gulches.

A total of 37 previously unidentified sites were located during the archaeological 2001 inventory survey. These sites were assigned SIHP[2] No. 50-50-01-5127 through 5163. In addition further information was gathered on a previously identified rock wall (Site 4459) and an exposed portion of Honolua Ditch (Site 1591) was photographed. Site types identified during the inventory survey included single and multiple component agricultural sites such as terraces, temporary and more permanent habitation areas, possible ceremonial areas, possible burial features, and ranch era and plantation era sites.

The State Historic Preservation Division subsequently reviewed the archaeological inventory survey report and accepted it with revisions in a 30 July 2002

[1] Xamanek Researches was converted to Xamanek Researches, LLC—a Hawaii-based Limited Liability Company—in February 2005.
[2] **SIHP** = **S**tate **I**nventory of **H**istoric **P**laces

preservation was recommended for the bulk of the sites that were encountered during the 2001 study. The SHPD letter further recommended that the Maui/Lana`i Islands Burial Council (MLIBC) review burial treatment/preservation actions for four of the sites that contained possible burial features ( i.e. Sites 5139, 5142, 5157 and 5158). A Burial Treatment Pland and Preservation Plan for the possible burial features has been presented to the Maui/Lana`i Islands Burial Council (MLIBC) for review and comments. This plan has since been accepted by the SHPD Burial Sites Program.

Field Inspection of the project area

As previously noted above, the field inspection was carried out on 14 March 2008. I was guided to the proposed c. ½ acre area of potential impact (APE) by a DWS employee. It is estimated that the proposed well site is located c. 860 ft AMSL. It was possible to walk over and inspect the overall APE, which is located adjacent to and southwest of a previously developed DWS water treatment facility (see Photographs). Surface vegetation consisted of introduced grass and succulent weed species, along with scattered pineapple plants. In addition, some Formosan koa trees were noted along the existing fence for the DWS facility.

During the course of the field inspection, there were no significant surface features or cultural materials noted within the proposed area of impact. Evidence of previous pineapple cultivation activities included black agricultural plastic sheeting, black drip irrigation line segments, broken PVC pipe fragments, scattered pineapple plants, disc plow rills and a section of a field access dirt road. In addition, a water line marked by PVC uprights was noted across a section of the APE. Finally, exposed subsoil was noted in sections of the old pineapple field within the project area.

Summary

In closing, the area to the immediate north has been previously investigated at the inventory survey level. There are several previously recorded sites that were located within Napili Gulch during this earlier survey. During the course of this recent archaeological field inspection, no new surface sites were located within the proposed APE for the new DWS 300,000 gallon water tank location.

Recommendation

There are numbers of archaeological sites that were located during the previous inventory survey. Many of these consisted of agricultural sites with terracing – primarily in Honokahua Gulch to the north. While there were sites identified within Napili Gulch, there were none located in the surrounding pineapple field areas that were surveyed. Based on the location of the proposed DWS project and the fact that the APE has been heavily impacted by pineapple cultivation, no further archaeological work is recommended for this water tank development project.

Please feel free to contact me @ 572-8900, or 283-3796 (cell) should you have any questions or need additional information regarding this archaeological field inspection of a c. ½ acre portion of Napili, Maui.

Sincerely,

Erik M. Fredericksen

Erik M. Fredericksen

PROJECT PHOTOGRAPHS, Napili Well A Improvements field inspection

Photograph 1: View to the east along the existing access road; DWS facility is at right.

Photograph 2: View to the southwest along the existing access road for DWS facility.

Photograph 3: View to the southeast across the existing DWS facility.

Photograph 4: View to the northeast across the project area; the DWS facility is visible in the background.

Photograph 5: View to the southwest across the project area.

Photograph 6: View to the northeast across the project area; note PVC upright that marks existing water line.

Photograph 7: View to the northwest across the project area; note DWS facility in background.

Photograph 8: Note black plastic mulch, irrigation pipe and small pineapple plants.

APPENDIX A-1.

State Historic Preservation Division Approval Letter

JUL 2 5 2008

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

July 22, 2008

Mr. Kyle Ginoza
Project Manager
Munekiyo & Hiraga
305 High Street, Suite 104
Wailuku, Hawai'i 96793

LOG NO: 2008.2269
DOC NO: 0807JP25
Archaeology

Dear Mr. Ginoza:

SUBJECT: **UPDATE Chapter 6E-42 Historic Preservation Review [County/Water] – Information Request and Archaeological Field Inspection Report Concurrence Regarding the Proposed Napili Well Storage Tank (Job No: 06-07) Napili Ahupua'a, Lahaina District, Island of Maui TMK: (2) 4-3-001:006 (Portion)**

The subject action for the proposed project includes the construction of o 300,000 gallon well storage tank adjacent to an existing storage tank site. Archaeological Inventory Survey was accepted for approximately 475 acres of land immediately north of the subject area (DOC NO: 0207MK04). Thirty-seven previously unidentified significant historic properties were documented including several single and multiple component agricultural sites, temporary/permanent habitation sites, ceremonial areas, possible burial features, as well as ranch and plantation historic era remains. We previously recommended archaeological investigations for the current subject action (LOG NO: 2007.1488/ DOC NO: 0709JP22). We have since received updated information and this letter serves to apprise you of our amended recommendation.

We concur that **it is unlikely that any historic properties will be affected** because:

- ☒ Intensive cultivation has altered the land
- ☐ Residential development/urbanization has altered the land
- ☒ Previous grubbing/grading has altered the land
- ☒ An archaeological field inspection found no historic properties
- ☒ SHPD previously reviewed this project and mitigation has been completed
- ☒ Other: *Xamanek Researches, LLC conducted a field inspection for the proposed project area (on file dated 20 March 2008). We appreciate the submittal of the field inspection letter report and will place it in our permanent reference files. The proposed area of potential impact is located within a fallow pineapple field, southwest of Napili Gulch. We have been informed that there are no historic properties located within the proposed impact area. Evidence of prior intensive pineapple cultivation activities include black agricultural plastic sheeting, black drip irrigation line segments, broken PVC pipe fragments, scatted pineapple plants, disc plow rills, and a section of a field access dirt road. An existing water line was noted in the subject area in a section of the old pineapple field. Exposed subsoil was noted. We concur with Xamanek Researches' recommendation for no further archaeological work with reference to the specific proposed project. Based on the submitted information, we believe it is unlikely that historic properties will be affected by the proposed well storage tank.*

In the event that any historic resources including bottles, ceramics, rock alignments, petroglyphs, artifacts, charcoal, shell midden, or skeletal remains (etc.) are identified on the subject parcel, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Maui Section, needs to be contacted immediately at (808) 243-1285, (808) 243-4640, or (808) 243-4641. Please feel free to contact us with any concerns.

Aloha,

Nancy A. McMahon

Nancy McMahon
Historic Preservation Manager
State Historic Preservation Division

JP:

c: Mr. Erik Fredericksen, Xamanek Researches, FAX (808) 572-8900
Dept of Planning, FAX (808) 270-7634
Dept. of Water Supply (FAX)
Maui Cultural Resources Commission, Dept. of Planning, 250 S. High Street, Wailuku, HI 96793

APPENDIX B.

Cultural Impact Assessment Interview

PROPOSED NAPILI WELL "A" STORAGE TANK CULTURAL IMPACT ASSESSMENT

Interview with: Wes Nohara

Interviewed by: Kyle Ginoza, Project Manager
Munekiyo & Hiraga, Inc.

The interview was conducted at the Hali`imaile office of Maui Land and Pineapple Company on January 9, 2008.

Wes Nohara was born in Lahaina at the former Pioneer Mill Hospital. He is 53 years old and has lived on Maui all of his life. He was raised in Honolua and has resided in West Maui until five (5) years ago, when he moved to Makawao. In the 1969-1970 timeframe, Honolua Village, where the Nohara family lived, was condemned and families were relocated due to inadequate sewer infrastructure. Mr. Nohara's mother currently lives in Napilihau, as a result of the Honolua Village relocation almost 40 years ago.

Mr. Nohara has worked for Maui Land and Pineapple Company (ML&P) for 38 years, beginning as a part-time worker while he was in high school. He has worked full-time for the company for 28 years. Mr. Nohara is currently the General Manager of Kapalua Farms, a subsidiary of ML&P. He has been affiliated with ML&P as an employee since 1969, but members of his family had been with the company since the 1920's.

Regarding other agricultural affiliations, Mr. Nohara is currently on the board of the West Maui Soil and Water Conservation District and the Tri-Isle Resource Conservation and Development Council. These organizations advise and protect the proper use of land and water in the area, with respect to drainage and conservation. Mr. Nohara mentioned that, through his participation with these organizations, he has a role in administering grading permits in the area in conjunction with the National Resource Conservation Service (NRCS).

Mr. Nohara is quite familiar with the area, as his family formerly farmed lands situated makai of the project site since the 1930's. Families would take care of agricultural lands until harvesting. The Baldwin Packers company would harvest the agricultural lands and compensate families based on the production of the lands. This continued until the 1940's,

when the widespread use of the internal gas engine in World War II began. With the advent of the internal gas engine, more lands could be utilized for pineapple cultivation due to increased resource efficiencies.

Mr. Nohara recalls that the project area has been in pineapple cultivation since 1970 and had probably been in cultivation since the 1950's. While the field area is currently not in cultivation, the field has been designated by Kapalua Farms for organic agriculture cultivation. While some lands in this region will be dedicated to organic pineapple, other areas will be used for plant nurseries and orchards.

Mr. Nohara is not aware of any cultural practices which may have occurred at or near the project site. Since the project site has been privately owned for decades, cultural practices likely have not occurred since pineapple cultivation began. He is aware that there is a water spring two valleys over from the project site where there is evidence of Hawaiian lo`i and homestead activities. However, there is no flowing water in the gulch near the project site. There are also old plantation roads in the vicinity.

Mauka (east) of the project site, zip-line recreational activities occur. In addition, there are proposals to increase mountain recreational activities, such as mountain biking, hiking trails, and equestrian rides. The impact of these activities, with respect to the project site, will be greater visibility to the general public.

Mr. Nohara mentioned that, since Kapalua Farms will implement organic farming in the area, the use of chemicals by the Department of Water Supply is of particular concern. The standards for organic cultivation are high and Kapalua Farms must ensure that potential detrimental impacts are prevented. He remarked that the area is not particularly suited for agriculture, specifically pineapple, due to poor drainage characteristics. As a result of the poor drainage, during times of heavy rainfall, roads may become treacherous. He also noted that there are power lines traversing the area.

Mr. Nohara understands the importance of the role water plays in development and the notion that people sometimes use water supply as a means to control growth. He realizes that the surface water supply from the Honolua Ditch varies and that the development of the proposed Napili Well "A" storage tank will have a positive impact on the consistency of water supply. He wants to ensure that appropriate easement and access road agreements are in place in conjunction with the project.

INTERVIEW SUMMARY CONSENT FORM

Job Name: Napili Well "A" Storage Tank

Person Interviewed: Wes Nohara

Date of Interview: January 9, 2008

Interviewer: Kyle Ginoza

Purpose of interview: Cultural Impact Assessment

I hereby give permission to Munekiyo & Hiraga, Inc. to use the information from this interview in preparing a cultural impact assessment report for the subject project. I understand that appropriate credit will be provided in the cultural impact assessment report.

By: Wes Nohara
Print Name

Signature: Wesley M Nohara

Date: 1/18/08

APPENDIX C.

Preliminary Drainage Report

DRAINAGE REPORT

FOR

NAPILI WELL "A"
SITE IMPROVEMENTS

NAPILI, MAUI

TMK: (2) 4-3-001:006 (PORTION)
& (2) 4-3-001:001 (PORTION)

JOB NO. 06-07

Prepared by: Okahara and Associates, Inc.

August 2008

DRAINAGE REPORT
FOR
NAPILI WELL "A" SITE IMPROVEMENTS
Napili, Maui, Hawaii

INTRODUCTION

The purpose of this report is to examine the existing drainage conditions and proposed drainage improvements related to the proposed project site. Figures 1 & 2 shows the location of the project on the island of Maui.

SITE LOCATION AND PROJECT DESCRIPTION

Napili Well "a" is located in Napili, Maui, TMK: (2) 4-3-001:006 (portion). The new storage tank will be located on a portion of TMK: 4-3-001:001 next to the existing storage tank The property owned by the Maui Land & Pineapple, the land is not being sued to grow pineapples at the present. See Figure 2 for a vicinity map of the site.

The proposed project will expand the existing storage capacity of Napili Well "A" by constructing a new 300,000 gallon storage tank in the adjacent property currently owned by the State of Hawaii. The proposed improvements include some grading, paving, utility improvements, constructing one 300,000 gallon storage tank, expanding the current control building, and all required appurtenances. The area of the new storage tank site is 0.375 acres.

EXISTING TOPOGRAPHY AND SOIL CONDITIONS

The proposed site for the new improvements is located on the southwest side of Napili Well "A". The land on the northeast and northwest sides of the existing Napili Well "A" are owned by Maui Land & Pineapple. The land is not grow pineapples at the present time. There is an existing canal that runs in northeast to southwest direction on the southeast side of Napili Well "A".

The site consists primarily of Alaeloa silty clay, 15 to 35% slopes, (AeE) according to the "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii (August 1972)," prepared by the United States Department of Agriculture Soil Conservation Service. Alaeloa silty clay has a medium runoff and the erosion hazard is moderate See Figure 3 for the soil survey map of the area.

EXISTING DRAINAGE CONDITIONS

The site for the new storage tank slopes in a southeast to northwest direction. The current storm drainage for the new storage tank site and Napili Well "A" site, flows through the pineapple field towards the ocean.

PROPOSED DRAINAGE SYSTEM

The proposed drainage system will maintain the current drainage patterns as the existing conditions. Approximately 40% of the improved area will be covered with asphalt paved roads and the storage tank structure. The remainder of the site will be grassed area. The runoff from the site for the future storage tank will flow in a northwesterly direction. The runoff from the storage tank site will sheet flow off the storage tank roof to the perimeter road. The runoff will then flow the perimeter road to the pineapple field.

METHODOLOGY

The runoff calculations were computed utilizing the Rational Method, using Title MC-15, Department of Public Works and Waste Management, County of Maui, Chapter 4, Rules for the Design of Storm Drainage Facilities in the County of Maui. The drainage area is less than 100 acres; therefore a 10-year, 1-hour storm event was used in the calculations.

Rational Formula: $Q = CIA$

Where Q = rate of flow (cubic feet per second)

C = runoff coefficient

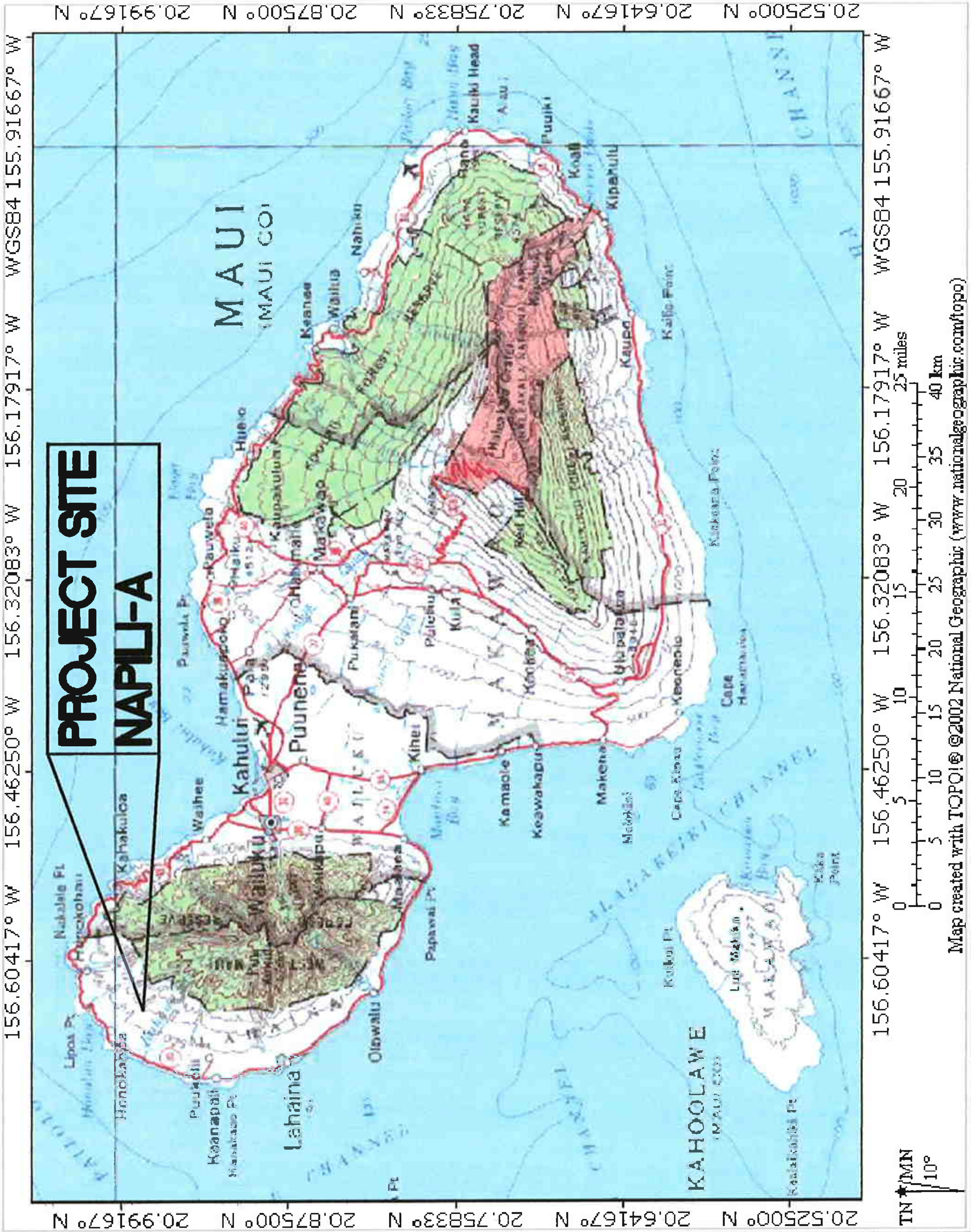
I = rainfall intensity for a duration of time (in/hr)

A = drainage area (acres)

See Appendix A for the hydraulic calculations.

SUMMARY

The existing runoff is 1.274 CFS. The proposed runoff from the new storage tank is 2.312 CFS. The total increase in runoff from the construction of the two 3 MG clearwells will be 1.038 CFS. The runoff from the site will percolate into the pineapple field long before it reaches the ocean.



TITLE

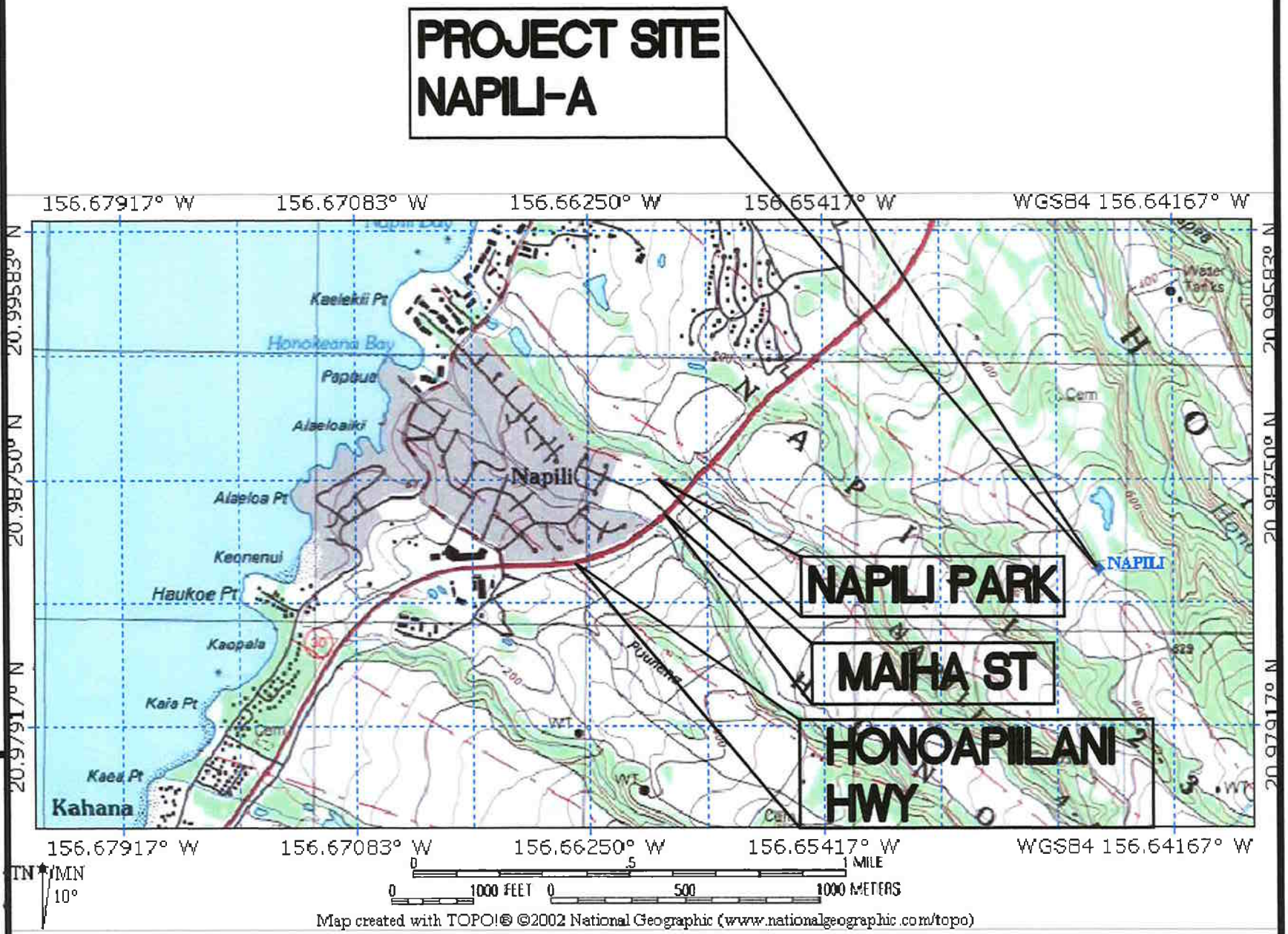
LOCATION MAP

FIGURE

1

TITLE

VICINITY MAP



FIGURE

2

TITLE

SOILS SURVEY MAP

FIGURE

3

APPENDIX A

EXISTING CONDITION

DRAINAGE AREA 1 (SEE FIGURE 1)

AREA = 0.6800 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[X] 5-15%	[ ] 0-5%	0.03
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[X] AGRICULTURAL	0.15
				C=	0.25

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 12.9 MIN (DPW DRAINAGE STD, PLATE 1)

I= 5.68 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.25 X 5.68 X 0.680 = 0.966 CFS

DRAINAGE AREA 2A (SEE FIGURE 1)

AREA = 0.0464 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[X] 5-15%	[ ] 0-5%	0.03
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[X] INDUSTRIAL/ BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.65

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 6.74 MIN (DPW DRAINAGE STD, PLATE 1)

I= 6.96 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.65 X 6.96 X 0.046 = 0.210 CFS

DRAINAGE AREA 2B (SEE FIGURE 1)

AREA = 0.0075 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[x] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%	0.00
VEGETAL COVER	[x] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[x] INDUSTRIAL/ BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 6.85 MIN (DPW DRAINAGE STD, PLATE 1)

I= 6.93 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 6.93 X 0.008 = 0.043 CFS

DRAINAGE AREA 3A (SEE FIGURE 1)

AREA = 0.0055 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%	0.00
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [x] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
					C= 0.62

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 10.3 MIN (DPW DRAINAGE STD, PLATE 1)

I= 6.08 0 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.62 X 6.08 X 0.006 = 0.021 CFS

DRAINAGE AREA 3B (SEE FIGURE 1)

AREA = 0.0014 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[X] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[X] 0-5%	0.00
VEGETAL COVER	[X] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [X] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
					C= 0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 0 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.001 = 0.009 CFS

DRAINAGE AREA 3C (SEE FIGURE 1)

AREA = 0.0008 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[x] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%	0.00
VEGETAL COVER	[x] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [x] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
					C= 0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.001 = 0.005 CFS

DRAINAGE AREA 3D (SEE FIGURE 1)

AREA = 0.0007 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[X] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[X] 0-5%	0.00
VEGETAL COVER	[X] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[X] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.001 = 0.004 CFS

DRAINAGE AREA 4 (SEE FIGURE 1)

AREA = 0.0035 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[X] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[X] 0-5%	0.00
VEGETAL COVER	[X] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [X] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 12.6 MIN (DPW DRAINAGE STD, PLATE 1)

I= 5.72 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 5.72 X 0.004 = 0.016 CFS

DEVELOPED CONDITION

DRAINAGE AREA 1A (SEE FIGURE 2)

AREA = 0.0035 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[X] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[X] 0-5%	0.00
VEGETAL COVER	[X] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [X] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.004 = 0.022 CFS

DRAINAGE AREA 1B (SEE FIGURE 2)

AREA = 0.0252 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[X] 5-15%	[ ] 0-5%	0.03
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[X] AGRICULTURAL	0.15
					C= 0.25

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 6.48 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.05 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.25 X 7.05 X 0.025 = 0.044 CFS

DRAINAGE AREA 1C (SEE FIGURE 2)

AREA = 0.2221 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[X] 5-15%	[ ] 0-5%	0.03
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[X] AGRICULTURAL	0.15
					C= 0.25

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 16.9 MIN (DPW DRAINAGE STD, PLATE 1)

I= 5.22 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.25 X 5.22 X 0.222 = 0.290 CFS

DRAINAGE AREA 1D (SEE FIGURE 2)

AREA = 0.0437 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%	0.00
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[x] INDUSTRIAL/ BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
					C= 0.62

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 13.1 MIN (DPW DRAINAGE STD, PLATE 1)

I= 5.64 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.62 X 5.64 X 0.044 = 0.153 CFS

DRAINAGE AREA 1E (SEE FIGURE 2)

AREA = 0.0376 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[X] 5-15%	[ ] 0-5%	0.03
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[x] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.65

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 6.33 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.1 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.65 X 7.1 X 0.038 = 0.174 CFS

DRAINAGE AREA 1F (SEE FIGURE 2)

AREA = 0.0209 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%	0.00
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[x] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.62

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 10.1 MIN (DPW DRAINAGE STD, PLATE 1)

I= 6.13 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.62 X 6.13 X 0.021 = 0.079 CFS

DRAINAGE AREA 2 (SEE FIGURE 2)

AREA = 0.0307 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[X] 5-15%	[ ] 0-5%	0.03
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [x] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.65

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 9.4 MIN (DPW DRAINAGE STD, PLATE 1)

I= 6.27 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.65 X 6.27 X 0.031 = 0.125 CFS

DRAINAGE AREA 3A (SEE FIGURE 2)

AREA = 0.0108 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[X] 5-15%	[ ] 0-5%	0.03
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[x] INDUSTRIAL/ BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
					C= 0.65

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5.1 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.6 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.65 X 7.6 X 0.011 = 0.053 CFS

DRAINAGE AREA 3B (SEE FIGURE 2)

AREA = 0.0166 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[x] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%	0.00
VEGETAL COVER	[x] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[x] INDUSTRIAL/ BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
					C= 0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.017 = 0.105 CFS

DRAINAGE AREA 4A (SEE FIGURE 2)

AREA = 0.0218 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[X] 5-15%	[ ] 0-5%	0.03
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.00
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[X] AGRICULTURAL	0.15
					C= 0.25

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5.75 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.3 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.25 X 7.3 X 0.022 = 0.040 CFS

DRAINAGE AREA 4B (SEE FIGURE 2)

AREA = 0.0110 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[X] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[X] 0-5%	0.00
VEGETAL COVER	[X] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [X] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 7.8 MIN (DPW DRAINAGE STD, PLATE 1)

I= 6.66 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 6.66 X 0.011 = 0.060 CFS

DRAINAGE AREA 4C (SEE FIGURE 2)

AREA = 0.0092 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%	0.00
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[x] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.62

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 9.01 MIN (DPW DRAINAGE STD, PLATE 1)

I= 6.17 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.62 X 6.17 X 0.009 = 0.035 CFS

DRAINAGE AREA 5A (SEE FIGURE 2)

AREA = 0.0375 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%	0.00
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [x] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.62

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 20.8 MIN (DPW DRAINAGE STD, PLATE 1)

I= 4.76 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.62 X 4.76 X 0.038 = 0.111 CFS

DRAINAGE AREA 5B (SEE FIGURE 2)

AREA = 0.0554 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[X] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[X] 0-5%	0.00
VEGETAL COVER	[X] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [X] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.055 = 0.350 CFS

DRAINAGE AREA 5C (SEE FIGURE 2)

AREA = 0.0659 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[X] 15-25%	[ ] 5-15%	[ ] 0-5%	0.06
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [X] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.68

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5.9 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.26 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.68 X 7.26 X 0.066 = 0.325 CFS

DRAINAGE AREA 5D (SEE FIGURE 2)

AREA = 0.0163 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[X] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[X] 0-5%	0.00
VEGETAL COVER	[X] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [X] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 7.3 MIN (DPW DRAINAGE STD, PLATE 1)

I= 6.8 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 6.8 X 0.016 = 0.091 CFS

DRAINAGE AREA 5E (SEE FIGURE 2)

AREA = 0.0078 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[x] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH	0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%	0.00
VEGETAL COVER	[x] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%	0.07
DEVELOPMENT TYPE	[ ] INDUSTRIAL/ [x] BUSINESS	[ ] HOTEL/ APARTMENT	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.008 = 0.049 CFS

DRAINAGE AREA 6 (SEE FIGURE 2)

AREA = 0.0250 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[X] 15-25%	[ ] 5-15%	[x] 0-5%	0.06
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[x] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL	0.55
				C=	0.68

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 7.09 MIN (DPW DRAINAGE STD, PLATE 1)

I= 6.9 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.68 X 6.9 X 0.025 = 0.117 CFS

DRAINAGE AREA 7 (SEE FIGURE 2)

AREA = 0.0101 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH	0.07
RELIEF	[ ] >25%	[X] 15-25%	[ ] 5-15%	[ ] 0-5%	0.06
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%	0.00
DEVELOPMENT TYPE	[ ] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[X] AGRICULTURAL	0.15
				C=	0.28

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.28 X 7.7 X 0.010 = 0.022 CFS

DRAINAGE AREA 8A (SEE FIGURE 2)

AREA = 0.0029 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[ ] NEGLIGIBLE	[ ] SLOW	[X] MEDIUM	[ ] HIGH		0.07
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%		0.00
VEGETAL COVER	[ ] NONE	[ ] <10%	[ ] 10-50%	[X] 50-90%		0.00
DEVELOPMENT TYPE	[x] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL		0.55
					C=	0.62

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 12.6 MIN (DPW DRAINAGE STD, PLATE 1)

I= 5.72 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.62 X 5.72 X 0.003 = 0.010 CFS

DRAINAGE AREA 8B (SEE FIGURE 2)

AREA = 0.0006 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[x] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH		0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%		0.00
VEGETAL COVER	[x] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%		0.07
DEVELOPMENT TYPE	[x] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL		0.55
					C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 6.7 MIN (DPW DRAINAGE STD, PLATE 1)

I= 6.99 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 6.99 X 0.001 = 0.003 CFS

DRAINAGE AREA 9A (SEE FIGURE 2)

AREA = 0.0038 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[x] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH		0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[x] 0-5%		0.00
VEGETAL COVER	[x] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%		0.07
DEVELOPMENT TYPE	[x] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL		0.55
					C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.004 = 0.024 CFS

DRAINAGE AREA 9B (SEE FIGURE 2)

AREA = 0.0027 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[X] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH		0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[X] 0-5%		0.00
VEGETAL COVER	[X] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%		0.07
DEVELOPMENT TYPE	[X] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL		0.55
					C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.003 = 0.017 CFS

DRAINAGE AREA 9C (SEE FIGURE 2)

AREA = 0.0009 AC

RUNOFF COEFICIENT "C" =

INFILTRATION	[X] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH		0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[X] 0-5%		0.00
VEGETAL COVER	[X] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%		0.07
DEVELOPMENT TYPE	[X] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL		0.55
					C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.001 = 0.006 CFS

DRAINAGE AREA 9D (SEE FIGURE 2)

AREA = 0.0011 AC

RUNOFF COEFICIENT "C" =

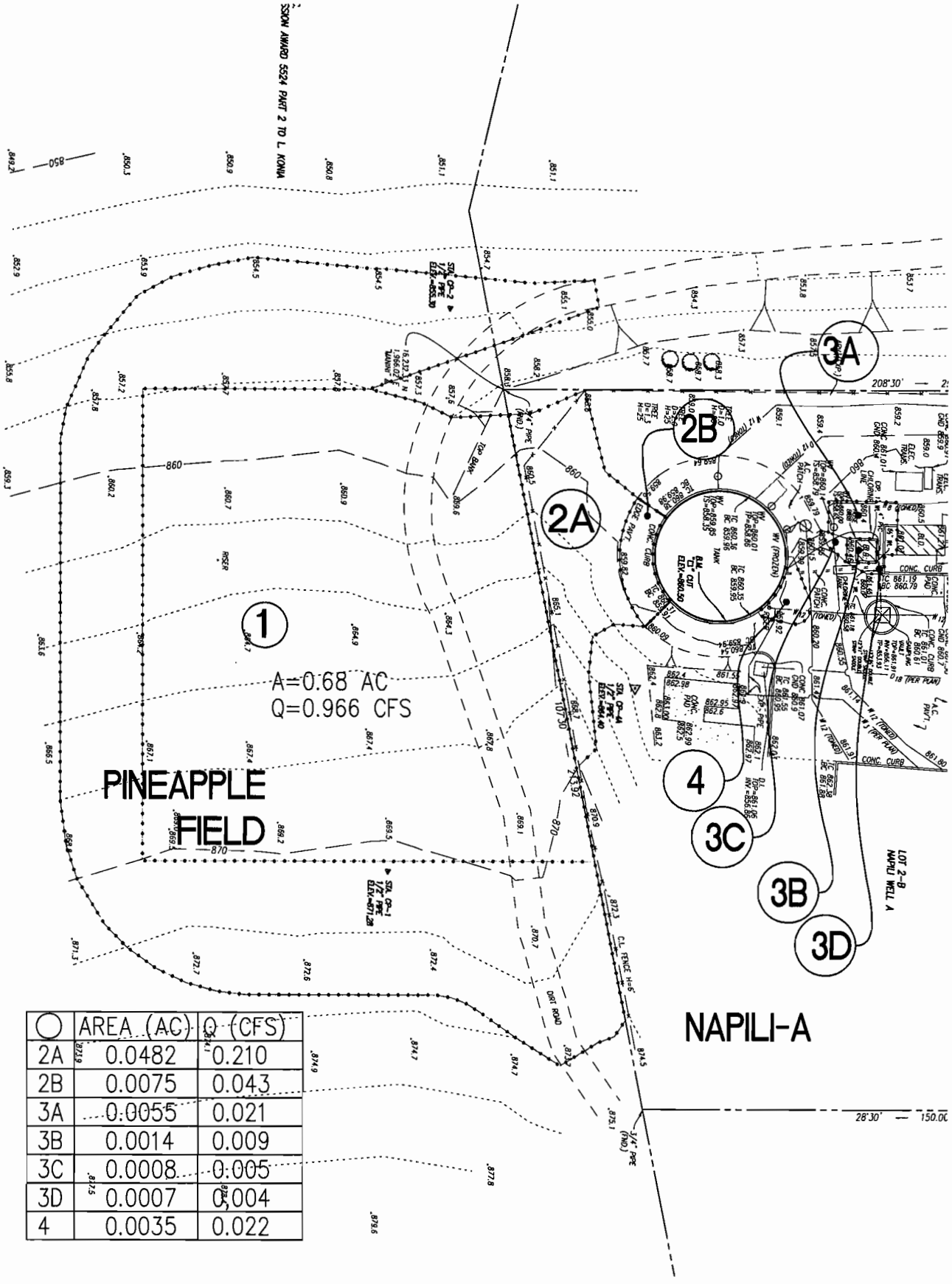
INFILTRATION	[X] NEGLIGIBLE	[ ] SLOW	[ ] MEDIUM	[ ] HIGH		0.20
RELIEF	[ ] >25%	[ ] 15-25%	[ ] 5-15%	[X] 0-5%		0.00
VEGETAL COVER	[X] NONE	[ ] <10%	[ ] 10-50%	[ ] 50-90%		0.07
DEVELOPMENT TYPE	[X] INDUSTRIAL/	[ ] HOTEL/	[ ] RESIDENTIAL	[ ] AGRICULTURAL		0.55
					C=	0.82

T_m =10 YRS (DPW DRAINAGE STD, PLATE 4)
tc= 5 MIN (DPW DRAINAGE STD, PLATE 1)

I= 7.7 (DPW DRAINAGE STD, PLATE 2)

Q=CIA= 0.82 X 7.7 X 0.001 = 0.007 CFS

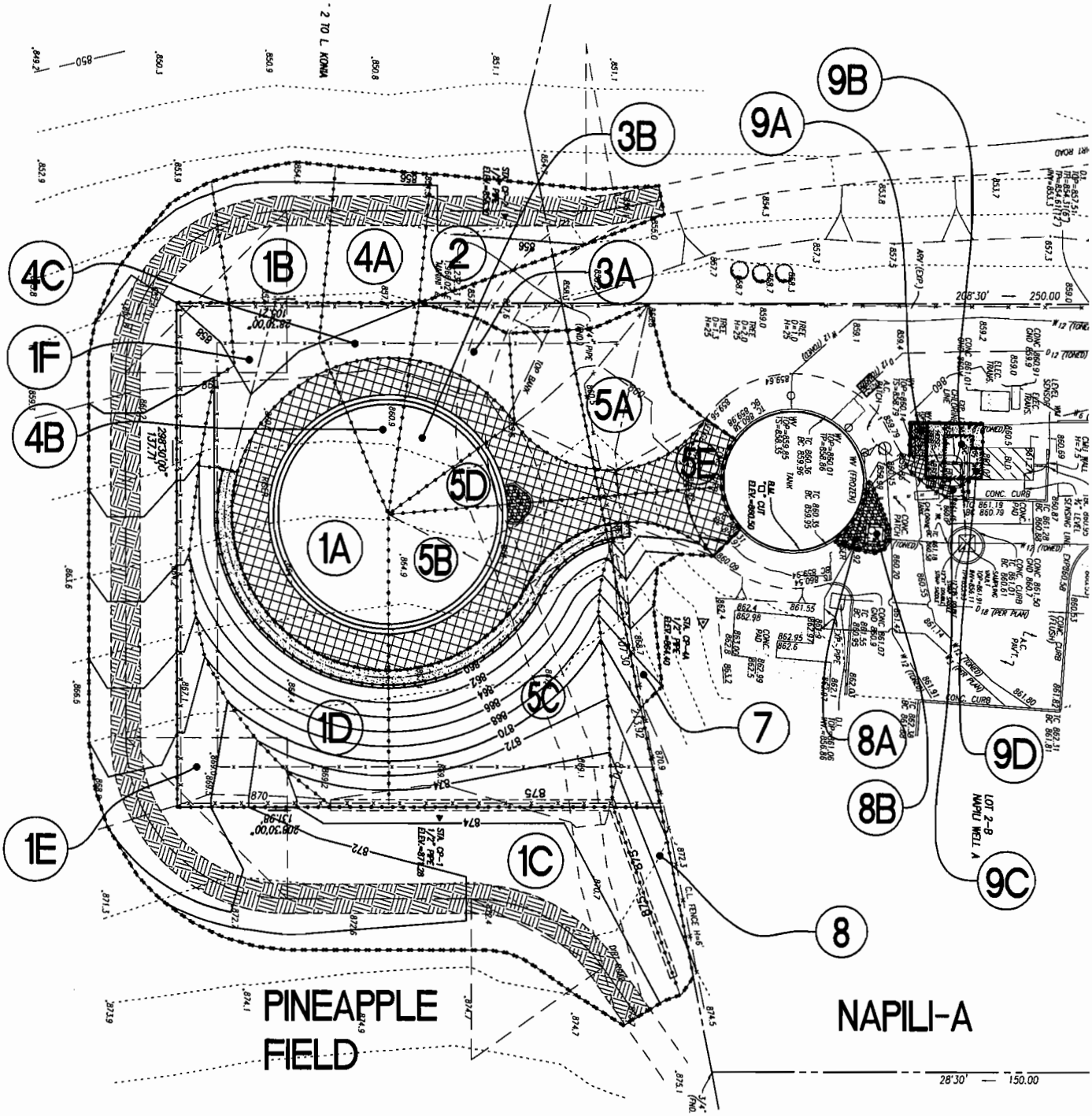
FIGURES



	AREA (AC)	Q (CFS)
2A	0.0482	0.210
2B	0.0075	0.043
3A	0.0055	0.021
3B	0.0014	0.009
3C	0.0008	0.005
3D	0.0007	0.004
4	0.0035	0.022

FIGURE 1 – EXISTING CONDITION

SCALE 1"=40'



○	AREA (AC)	Q (CFS)
1A	0.0652	0.022
1B	0.0252	0.044
1C	0.2221	0.290
1D	0.0437	0.153
1E	0.0376	0.174
1F	0.0209	0.079
2	0.0307	0.125
3A	0.0108	0.053
3B	0.0166	0.105

○	AREA (AC)	Q (CFS)
4A	0.031	0.04
4B	0.011	0.06
4C	0.0092	0.035
5A	0.0375	0.111
5B	0.0554	0.35
5C	0.0659	0.325
5D	0.0163	0.091
5E	0.0078	0.049

○	AREA (AC)	Q (CFS)
6	0.0250	0.117
7	0.0101	0.022
8A	0.0029	0.01
8B	0.0006	0.003
9A	0.0038	0.024
9B	0.0027	0.017
9C	0.0009	0.006
9D	0.0011	0.007

FIGURE 2 – DEVELOPED CONDITION

SCALE 1"=40'

Table 1

GUIDE FOR THE DETERMINATION OF RUNOFF COEFFICIENTS FOR BUILT-UP AREAS*

WATERSHED CHARACTERISTICS	EXTREME	HIGH	MODERATE	LOW
INFILTRATION	NEGLIGIBLE 0.20	SLOW 0.14	MEDIUM 0.07	HIGH 0.0
RELIEF	STEEP (> 25%) 0.08	HILLY (15 - 25%) 0.06	ROLLING (5 - 15%) 0.03	FLAT (0 - 5%) 0.0
VEGETAL COVER	NONE 0.07	POOR (< 10%) 0.05	GOOD (10 - 50%) 0.03	HIGH (50 - 90%) 0.0
DEVELOPMENT TYPE	INDUSTRIAL & BUSINESS 0.55	HOTEL - APARTMENT 0.45	RESIDENTIAL 0.40	AGRICULTURAL 0.15

NOTE: The design coefficient "c" must result from a total of the values for all four watershed characteristics of the site.

Table 2

RUNOFF COEFFICIENTS

Type of Drainage Area	Runoff Coefficient C
Parks, cemeteries	0.25
Playgrounds	0.35
Railroad yard areas	0.40
Unimproved areas	0.30
Streets:	
Asphaltic	0.95
Concrete	0.95
Brick	0.85
Driveway and walks	0.85
Roofs	0.95
Lawns:	
Sandy soil, flat, 2%	0.10
Sandy soil, avg., 2-7%	0.15
Sandy soil, steep, 7%	0.20
Heavy soil, flat, 2%	0.17
Heavy soil, avg., 2-7%	0.22
Heavy soil, steep, 7%	0.35

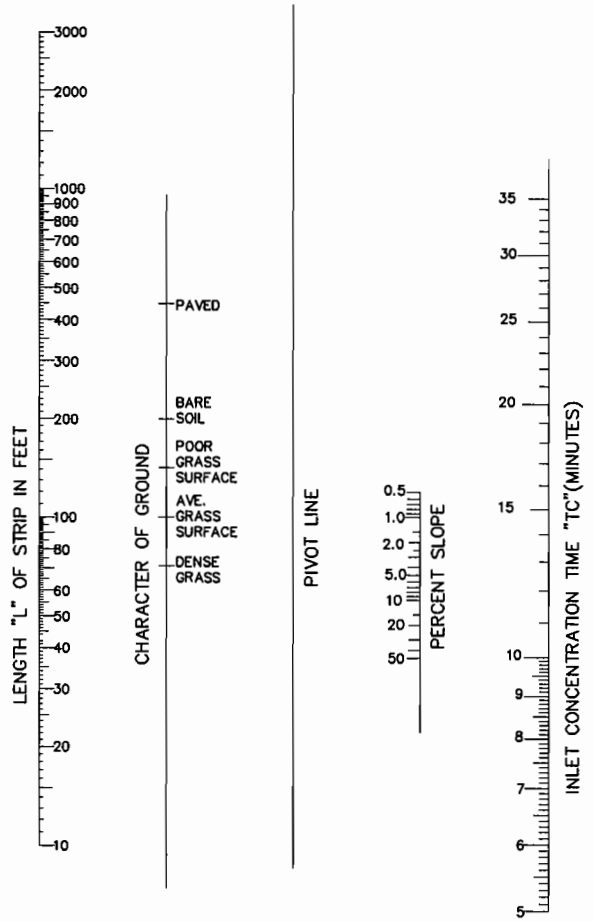
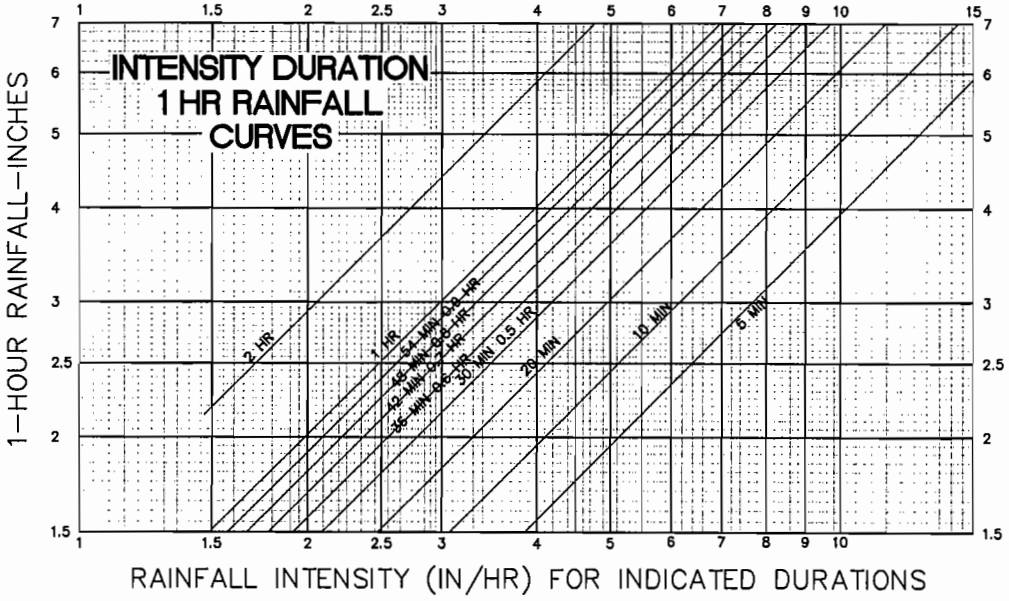


PLATE 1
OVERLAND
FLOW
CHART

PLATE 2



PLATES 1 & 2

PLATE 4
10-YEAR 1-HOUR RAINFALL

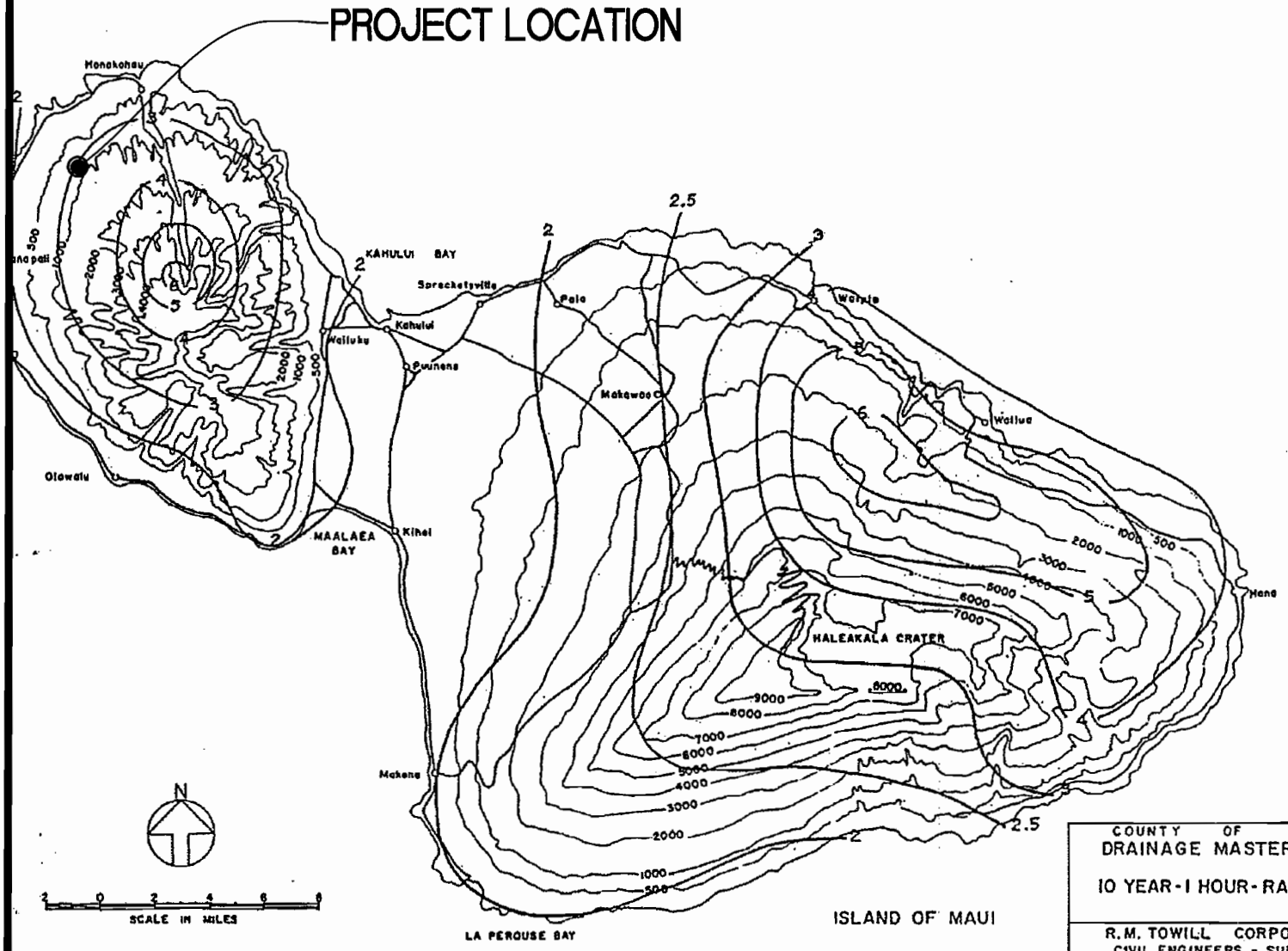
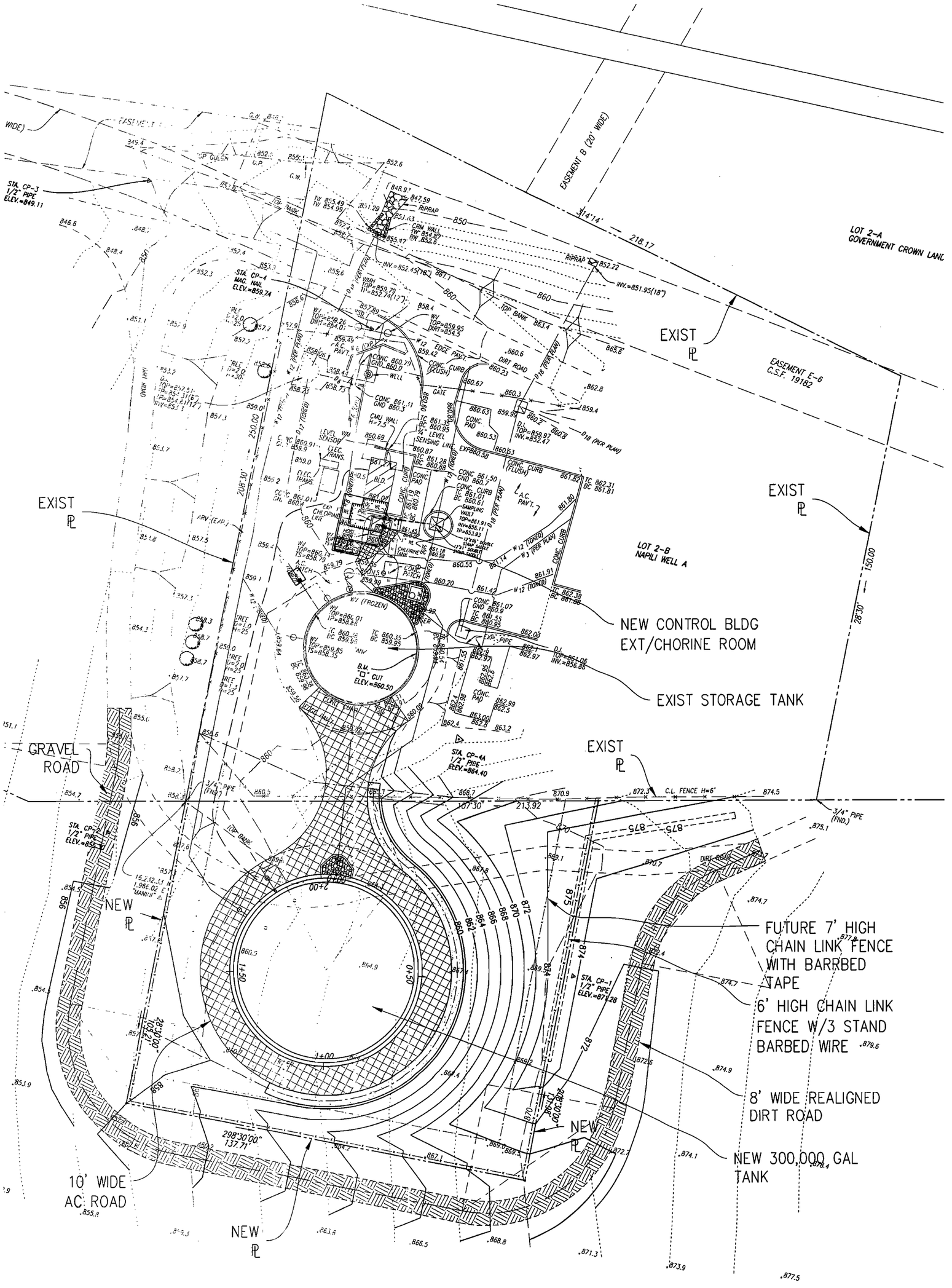


PLATE 4

APPENDIX D.

Preliminary Grading Plan and Best Management Practices


EASEMENT B (20' WIDE)
LOT 2-A
GOVERNMENT CROWN LAND
EXIST
℄
EASEMENT E-6
C.S.F. 19182
EXIST
℄
LOT 2-B
NAPILI WELL A
EXIST
℄
NEW CONTROL BLDG
EXT/CHORINE ROOM
EXIST STORAGE TANK
GRAVEL
ROAD
EXIST
℄
NEW
℄
FUTURE 7' HIGH
CHAIN LINK FENCE
WITH BARBED
TAPE
6' HIGH CHAIN LINK
FENCE W/3 STAND
BARBED WIRE
8' WIDE REALIGNED
DIRT ROAD
NEW
℄
NEW 300,000 GAL
TANK
10' WIDE
AC ROAD
NEW
℄

BMP NOTES

TEMPORARY EROSION CONTROL MEASURES:

1. PRIOR TO CLEARING LAND FOR GRADING, TEMPORARY EROSION CONTROL MEASURES, SUCH AS SILT FENCES SHALL BE INSTALLED.
2. OPENING AND CLEARING OF LAND FOR GRADING SHALL BE PERFORMED INCREMENTALLY TO MINIMIZE EROSION POTENTIAL.
3. AREAS NOT WITHIN THE LIMITS OF CLEARING AND GRUBBING SHALL REMAIN VEGETATED DURING GRADING OPERATIONS.
4. SILT WHICH HAS ACCUMULATED ON SILT FENCE SHALL BE REMOVED AND DISPOSED OF ON A BI-WEEKLY BASIS.
5. SEED, PLANT OR HYDROSEED TEMPORARY VEGETATION WHEN CLEARED OR GRUBBED AREAS ARE NOT TO BE GRADED OR DISTURBED FOR 14 DAYS OR MORE. ALTERNATIVES TO GRASS INCLUDE 2" MINIMUM STRAW MULCH COVER, EROSION BLANKETS WITH ANCHORS, 6-MIL PLASTIC SHEETS, SEDIMENT TRAPS OR PONDS, OR INTERCEPTOR DIKES/SWALES. SURFACE FLOW FROM ABOVE AN EXPOSED SLOPE SHALL NOT BE ALLOWED TO FLOW OVER THE SLOPE WITHOUT PROTECTION. SLOPE PROTECTION SHALL BE USED ON AREAS WITH SLOPES GREATER THAN 50% AND ON AREAS OF MODERATE SLOPES THAT ARE PRONE TO EROSION.
6. STOCK PILES SHALL NOT BE LOCATED IN DRAINAGE WAYS OR OTHER AREAS OF CONCENTRATED FLOWS. SEDIMENT TRAPPING DEVICES SUCH AS FENCES, TRAPS, BASINS OR BARRIERS SHALL BE USED AROUND THE BASE OF ALL STOCKPILES.
7. SEDIMENT FENCES OR BARRIERS SHALL BE USED DOWN SLOPE OF ALL DISTURBED AREAS OR STOCKPILE AREAS.
8. ALL DRAINAGE STRUCTURES ON SITE, AND THOSE OFFSITE WHICH MAY RECEIVE RUNOFF FROM THE SITE SHALL USE AN INLET PROTECTION DEVICE.
9. CUT AND FILL SLOPES SHALL BE PROTECTED IN 5' VERTICAL SEQUENTIAL INCREMENTS AS CONSTRUCTION PROGRESSES.
10. ALL DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED PRIOR TO REMOVING EROSION AND SEDIMENT MEASURES. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND AREAS OF DISTURBED SOIL WHICH RESULT FROM THE REMOVAL OF THE TEMPORARY MEASURES SHALL BE IMMEDIATELY PERMANENTLY STABILIZED.
11. ALL POINTS OF EGRESS AND INGRESS TO A SITE SHALL BE PROTECTED WITH A STABILIZED CONSTRUCTION ENTRANCE.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) NOTES

(I) EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES.

(A) THE CONTRACTOR SHALL INSPECT THE EROSION AND SEDIMENT CONTROL MEASURES AT LEAST ONCE A WEEK OR AFTER 0.5 INCHES OF RAINFALL

(B) THE CONTRACTOR SHALL MAINTAIN THE EROSION AND SEDIMENT CONTROL MEASURES ACCORDING TO THE CONTRACT. IF A REPAIR IS NECESSARY, THE CONTRACTOR SHALL INITIATE THE REPAIRS WITHIN TWENTY-FOUR (24) HOURS AFTER THE INSPECTION SUCH AS:

(1) WHEN SEDIMENT BUILDUP REACHES ONE-THIRD (1/3) THE HEIGHT OF THE SILT FENCE, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SEDIMENT BUILDUP FROM THE SILT FENCE.

(2) WHEN THE DEPTH OF THE SEDIMENT BASIN REACHES TEN PERCENT (10%) OF THE DESIGN CAPACITY, THE CONTRACTOR SHALL REMOVE AND DISPOSE OF THE SEDIMENT BUILDUP.

(3) WHEN TEARS ARE FOUND ON THE SILT FENCE, THE CONTRACTOR SHALL REPLACE THE FABRIC.

(4) THE CONTRACTOR SHALL CHECK TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.

(5) THE CONTRACTOR SHALL INSPECT THE DIVERSION DIKE AND REPAIR THE BREACHES.

(6) THE CONTRACTOR SHALL INSPECT TEMPORARY AND PERMANENT SEEDING AND PLANTING FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.

(C) THE CONTRACTOR SHALL HAVE ITS PERSONNEL MAKE A MAINTENANCE INSPECTION REPORT PROMPTLY AFTER EACH INSPECTION. THE CONTRACTOR SHALL SELECT A MINIMUM OF THREE (3) PERSONNEL WHO WILL BE RESPONSIBLE FOR INSPECTION, MAINTENANCE, REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT. PERSONNEL SELECTED FOR THE INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE CONTRACTOR. THE CONTRACTOR SHALL TRAIN THESE PERSONNEL IN THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT USED ON-SITE ACCORDING TO THE CONTRACT.

(II) CONTRACTOR SUBMITTAL REQUIREMENTS

(A) CONSTRUCTION ACTIVITIES OF ONE (1) ACRE OR MORE

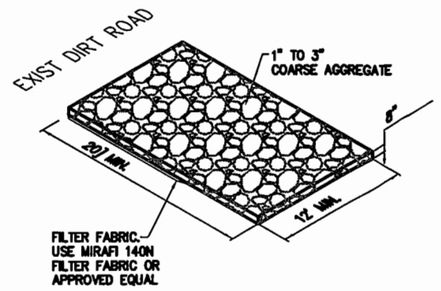
(1) CONSTRUCTION ACTIVITIES OF ONE (1) ACRE OR MORE, WILL REQUIRE AN NPDES PERMIT FROM THE DEPARTMENT OF HEALTH (DOH). THE CONTRACTOR SHALL SUBMIT TO THE DEPARTMENT OF HEALTH FOUR (4) SETS OF SITE-SPECIFIC BEST MANAGEMENT PLANS (BMP). THE PLANS SHALL BE SUBMITTED NO LATER THAN THIRTY (30) CALENDAR DAYS AFTER THE AWARD OF CONTRACT.

(2) NO CONSTRUCTION ACTIVITIES WILL BE AUTHORIZED UNTIL THE CONTRACTOR'S SITE-SPECIFIC BMP HAS BEEN APPROVED BY THE DEPARTMENT OF HEALTH.

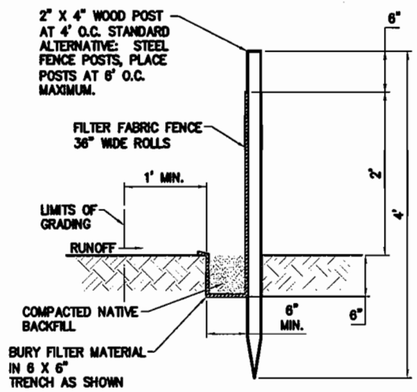
(B) CONSTRUCTION ACTIVITIES DEWATERING AND/OR HYDROTESTING WATER

(1) DISCHARGES INTO STATE WATERS DUE TO DEWATERING AND/OR HYDROTESTING ACTIVITIES WILL REQUIRE NPDES PERMIT(S) FROM DOH. IF THE CONTRACTOR OPTIONS TO DISCHARGE DEWATERING AND/OR HYDROTESTING EFFLUENT INTO STATE WATER, THE CONTRACTOR SHALL SUBMIT TO THE DEPARTMENT OF HEALTH FOUR (4) SETS OF SITE-SPECIFIC DEWATERING AND/OR HYDROTESTING BMP, AND FOUR (4) COPIES OF THE QUALITY OF DISCHARGE TEST RESULTS. THE PLANS AND TEST RESULTS SHALL BE SUBMITTED NO LATER THAN THIRTY (30) CALENDAR DAYS AFTER THE AWARD OF CONTRACT.

(2) NO DEWATERING AND/OR HYDROTESTING ACTIVITIES WILL BE AUTHORIZED UNTIL THE RECEIPT OF THE NPDES PERMIT(S) FROM THE DOH.



1 C-10 **GRAVEL CONSTRUCTION ENTRANCE**
N.T.S.



2 C-10 **SILT FENCE**
N.T.S.

APPROVED

MARK T. YOSHIMURA LICENSED PROFESSIONAL ENGINEER No. 6419-C HAWAII, U.S.A.

APRIL 2010
EXPIRATION DATE OF THE LICENSE

NO.	DATE	DESCRIPTION	APPROVED
		REVISIONS	

Okahara & Associates Inc.
CONSULTING ENGINEERS

DEPARTMENT OF WATER SUPPLY
MAUI COUNTY
WAILUKU, MAUI, HAWAII

NAPILI WELL "A" SITE IMPROVEMENTS

EROSION CONTROL

C-11

APPROVED
MAUI DEPT. WATER SUPPLY, COUNTY OF MAUI

JOB NO. 08-07 S
DATED

SHEET OF SHEETS