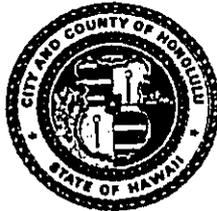


DEPARTMENT OF PUBLIC WORKS  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

RECEIVED

FRANK F. FASI  
MAYOR



'93 MAY 12 AIO:29

C. MICHAEL STREET  
DIRECTOR AND CHIEF ENGINEER

DIV. OF ENVIRONMENTAL  
QUALITY CONTROL

FELIX B. LIMTIACO  
DEPUTY DIRECTOR

WPW 93-522

May 3, 1993

Mr. Brian J.J. Choy, Director  
State Office of Environmental Quality Control  
220 South King Street, 4th Floor  
Honolulu, Hawaii 96813

Dear Mr. Choy:

Subject: Notice of Negative Declaration for Waianae Wastewater Treatment Plant Secondary Treatment Facilities, Waianae, Oahu Hawaii, TMK: 8-6-1:44

This letter is a Notice of Negative Declaration for the Waianae Wastewater Treatment Plant Secondary Treatment Facilities, Waianae, Oahu, Hawaii, pursuant to Chapter 343, HRS. The construction of the proposed project will involve the use of public funds and City lands. This notice of determination is based on an environmental assessment prepared by the City and County of Honolulu, Department of Public Works, Division of Wastewater Management, and after consulting with other agencies and individuals. Attached are four (4) copies of the Notice of Negative Declaration/Environmental Assessment.

The pertinent data for this Notice are as follows:

1. Proposing Agency: City and County of Honolulu, Department of Public Works
2. Proposed Action: The proposed action consists of construction of secondary treatment facilities to upgrade the treatment level of the Waianae Wastewater Treatment Plant from primary treatment to secondary treatment. Primary treatment is targeted to remove a minimum of 30% of the organic material as measured by the five-day Biochemical Oxygen Demand (BOD5) test and a minimum of 50% of the suspended solids as measured by the total suspended solids (TSS) test. (The plant had an average BOD removal of 57% and an average TSS removal of 84% for 1992). With the secondary treatment upgrade, the target removal rate of organic material (BOD5) and total suspended solids (TSS) is 85% each.

Environmental impacts are primarily economic and long term in nature. The City and County of Honolulu and the State of Hawaii is expected to participate in funding the construction. The State of Hawaii is expected to participate by providing loans through the State Revolving Fund. The operation and maintenance costs are to be borne solely by the City. These costs may have an impact on the City sewer user charge program. However, the costs of not doing the construction and violating Federal requirements will be even greater.

Mr. Brian J.J. Choy

- 2 -

May 3, 1993

The Contractor will be required to mitigate impacts during construction by following State and County regulations in controlling dust and noise, posting warning signs and covering or barricading trenches when required for safety.

3. Determination: After preparing an environmental assessment and consulting with other agencies and individuals, we have determined that the proposed project will not have a significant impact on the environment, and an Environmental Impact Statement is not required.
4. Reasons Supporting the Determination: Reasons and conclusions supporting the determination are as follows. The proposed project will not:
  - a. destroy archaeological, historical or cultural resources;
  - b. directly affect any rare or endangered species, flora or fauna;
  - c. conflict with the State's environment policies and goals expressed in Chapter 344, HRS;
  - d. grossly affect the economic or social welfare of the community or State;
  - e. involve an environmentally sensitive area;
  - f. degrade environmental quality.

The proposed wastewater improvements will support planned developments designated on the Development Plan Land Use Map and is consistent with the Development Plan Public Facilities Map.

5. Contact Person:

Mr. Jared Lum  
City and County of Honolulu  
Department of Public Works  
Division of Wastewater Management  
650 South King Street, 14th Floor  
Honolulu, Hawaii 96813

Very truly yours,

  
C. MICHAEL STREET  
Director and Chief Engineer

Attachment

cc: Planning Department  
Department of Land Utilization

13

1993-05-23-0A-PEA - Waianae Wastewater Treatment  
Plant, Secondary Treatment

MAY 23 1993

ENVIRONMENTAL ASSESSMENT for the

**WAIANAE WASTEWATER TREATMENT PLANT  
SECONDARY TREATMENT FACILITIES**  
Waianae, Oahu, Hawaii

MAY 1993

PREPARED FOR:

Division of Wastewater Management  
Department of Public Works  
City & County of Honolulu

**RMTC**

R. M. Towill Corporation

420 Waiakamilo Rd., Suite 411  
Honolulu, Hawaii 96817-4941  
(808) 842-1133 • Fax (808) 842-1937

DEPARTMENT OF PUBLIC WORKS  
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650 SOUTH KING STREET  
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Mr. Brian J.J. Choy

- 2 -

May 3, 1993

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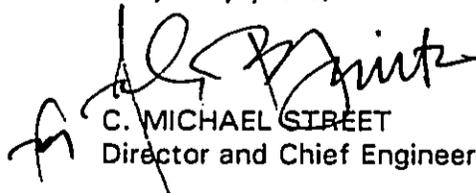
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Very truly yours,

  
C. MICHAEL STREET  
Director and Chief Engineer

Attachment

cc: Planning Department  
Department of Land Utilization

ENVIRONMENTAL ASSESSMENT  
WAIANAE WASTEWATER TREATMENT PLANT  
SECONDARY TREATMENT FACILITIES  
OAHU, HAWAII

TMK: 8-6-01:44

This document is prepared pursuant to Chapter 343, H.R.S.

PROPOSING AGENCY:

Department of Public Works  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

RESPONSIBLE OFFICIAL:

*for*   
C. MICHAEL STREET  
Director and Chief Engineer

5/7/93

Date

PREPARED BY:

R. M. Towill Corporation  
420 Waiakamilo Road, Suite 411  
Honolulu, Hawaii 96817

## TABLE OF CONTENTS

	<u>Page</u>
SECTION 1 - INTRODUCTION .....	1
1.1 Background .....	1
1.2 Purpose .....	2
1.3 Project Location and Ownership .....	2
SECTION 2 - DESCRIPTION OF PROJECT SITE AND PROPOSED ACTIONS ..	4
2.1 Past Land Use .....	4
2.2 Existing Facilities .....	4
2.3 Proposed New Facilities .....	5
2.3.1 Trickling Filters .....	6
2.3.2 Solids Contact Reaeration Basins .....	6
2.3.3 Final Clarifiers .....	7
2.3.4 Thickening Process .....	7
2.3.5 Dewatering Process .....	7
2.3.6 Auxiliary Facilities .....	7
2.4 Potential Pollutants .....	8
2.5 Required Permits .....	8
SECTION 3 - ALTERNATIVES TO THE PROPOSED ACTION .....	10
3.1 No Action .....	10
3.2 Activated Sludge Process with Selector Control .....	10
3.3 Sequencing Batch Reactor Process .....	10
3.4 Trickling Filter/Solids Contact Reaeration Process .....	11
SECTION 4 - ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION ...	12
4.1 Physical Environment .....	12
4.1.1 Climate .....	12
4.1.2 Topography .....	12
4.1.3 Geology and Soils .....	12
4.1.4 Flooding .....	13
4.1.5 Flora and Fauna .....	14
4.1.6 Coastal Water Environment .....	14
4.1.7 Wetlands .....	14
4.1.8 Rivers .....	14
4.1.9 Air Quality .....	14
4.1.10 Noise .....	15

4.2	Socio-economic Environment .....	16
4.2.1	Surrounding Land Use .....	16
4.2.2	Historic and Archaeological Resources .....	16
4.2.3	Coastal Views and Visual Resources .....	17
4.2.4	Recreational Facilities .....	17
4.2.5	Population Characteristics .....	17
4.2.6	Economic Characteristics .....	18
4.3	Infrastructure Systems and Services .....	18
4.3.1	Traffic and Transportation System .....	18
4.3.2	Electrical System .....	19
4.3.3	Solid Waste Disposal System .....	19
4.3.4	Potable Water System .....	19
4.4	Summary of Impacts and Mitigation Measures .....	19
SECTION 5 - ENVIRONMENTAL IMPACTS OF ALTERNATIVE ACTIONS ...		20
5.1	No Action .....	20
5.2	Activated Sludge Process with Selector Control .....	20
5.3	Sequencing Batch Reactor Process .....	20
5.4	Trickling Filter/Solids Contact Reaeration Process .....	20
SECTION 6 - DETERMINATION .....		21
SECTION 7 - CONSULTING AGENCIES LIST .....		22
SECTION 8 - INDIVIDUALS, AGENCIES, AND DOCUMENTS CONSULTED ..		27
APPENDIX - CONSULTATION PHASE COMMENTS AND RESPONSES		

### LIST OF FIGURES

<u>Figure</u>	<u>Title</u>
1-1	Site Location Map
2-1	Vicinity Map
2-2	Unit Process Diagram - Trickling Filter Process
2-3	Proposed Site Layout - Trickling Filter Process
4-1	Flood Classification Map

### LIST OF TABLES

<u>Table</u>	<u>Title</u>
2-1	Estimated Facilities for the Trickling Filter Process
4-1	Summary of Impacts and Mitigation Measures

SECTION 1  
INTRODUCTION

1.1 BACKGROUND

The Waianae Wastewater Treatment Plant (WWTP) is a primary wastewater treatment facility owned and operated by the City and County of Honolulu since 1967. In September 1979, the City applied for a 301(h) waiver to the National Pollutant Discharge Elimination System (NPDES) standard from the U.S. Environmental Protection Agency (EPA). This waiver allows the discharge of primary treated wastewater into the open ocean and waives the requirement for secondary treatment.

In order to meet state water quality standards, Waianae WWTP's ocean outfall was extended in 1986 to 6,180 feet in length from an original length of 3,000 feet. In order to construct the outfall extension, the City and County of Honolulu applied for and received approval for a Conservation District Use Application (CDUA) by the State of Hawaii Department of Land and Natural Resources. As part of the application approval, the City and County of Honolulu is required to conduct monitoring of various water quality parameters. According to the City and County of Honolulu, Division of Wastewater Management, tests on fish tissue, sediments, and effluent show that almost all CDUA priority pollutants were below detectable levels. In addition, the Waianae CDUA reports on fish and benthic organisms indicate no adverse effects have occurred from the Waianae outfall.

However, in August 1989, the State of Hawaii Department of Health (DOH) denied the 301(h) waiver request, and two months later, the EPA denied the request as well. As a result, the City and County of Honolulu must comply with the Federal Water Pollution Control Act's requirements for secondary treatment by publicly-owned treatment works. In addition, the City and County of Honolulu must comply with DOH's Consent Order dated February 16, 1984, which establishes a compliance schedule for implementing secondary treatment at Waianae WWTP. According to the compliance schedule, construction for the upgrade to secondary treatment must be completed by February 1, 1996.

As a result of the denial of the waiver for secondary treatment, secondary treatment facilities must be added to the existing Waianae WWTP. The existing primary treatment plant is designed to remove 50% of the suspended solids (SS) and 30% of the organics as measured by the parameter 5-day Biochemical Oxygen Demand (BOD). With secondary treatment, the level of SS and BOD removal by the treatment process will increase to a minimum of 85% for each constituent.

The reduction of SS in the effluent will reduce the potential of smothering of the ocean floor in the area of the discharge. The reduction of BOD will: (i) decrease the oxygen demand in the receiving waters and (ii) reduce the likelihood of anaerobic activity and associated reduced environmental quality in the area of the discharge.

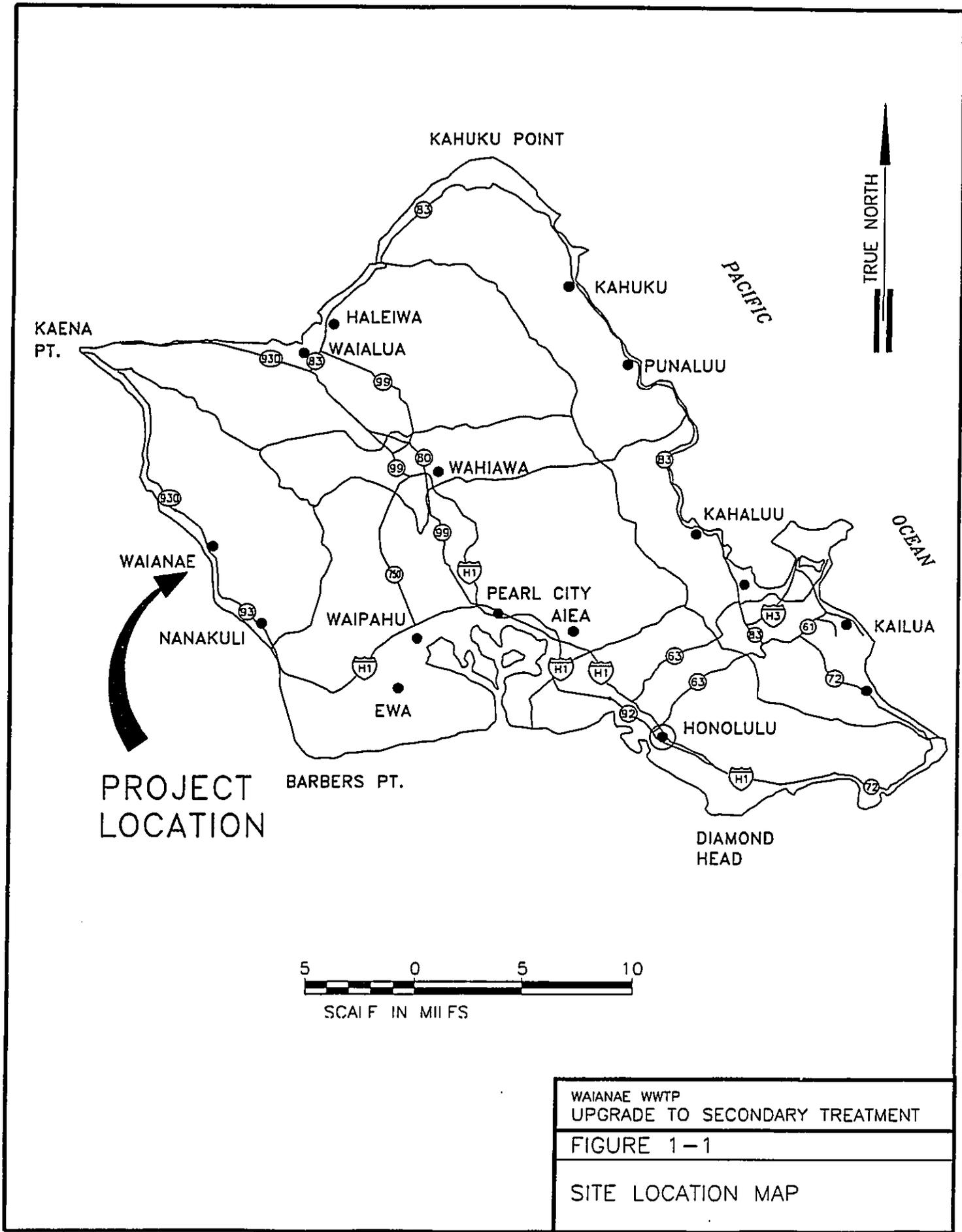
## 1.2 PURPOSE

The purpose of this Environmental Assessment (EA) is to determine if the proposed project has potential significant environmental impacts. This EA has been prepared pursuant to Chapter 343 of the Hawaii Revised Statutes (HRS) and is a supplement to the following Environmental Impact Statements (EIS):

- ▶ Environmental Impact Statement on the Expansion and Upgrading of the Waianae Wastewater Treatment Plant, M&E Pacific, Inc., November 1977.
- ▶ Final Supplemental Environmental Impact Statement for the Expansion and Upgrading of the Waianae Wastewater Treatment and Disposal System, M&E Pacific, Inc., August 1983.

## 1.3 PROJECT LOCATION AND OWNERSHIP

The project site is located in Waianae, on the western coast of the island of Oahu (see Figure 1-1). The Waianae WWTP occupies an 18-acre parcel of land on Farrington Highway near Lualualei Beach Park (TMK: 8-6-01:44). This property is owned by the City and County of Honolulu.



The area designated for the construction of the additional treatment facilities is located within the boundaries of the existing plant. The proposed secondary treatment facilities will not require additional land area or changes in land use designation.

**SECTION 2**  
**DESCRIPTION OF PROJECT SITE AND PROPOSED ACTIONS**

**2.1 PAST LAND USE**

The Waianae WWTP was first placed in operation in 1967 as a primary treatment facility. Aerial photographs of the area taken during the late 1950's and early 1960's show that the plant site was formed from the clearing of the slopes of Puu Maililii. The photographs show a large rectangular building in the center of the plant site and trees along the boundary with Farrington Highway. The Waianae Corporation Yard bordering the plant site to the south suggests that the building could have been used for maintenance or storage purposes. Two roads led to a large active quarry to the northeast of the project site. Other areas surrounding the plant site were undeveloped and covered with vegetation during the late 1950's and early 1960's.

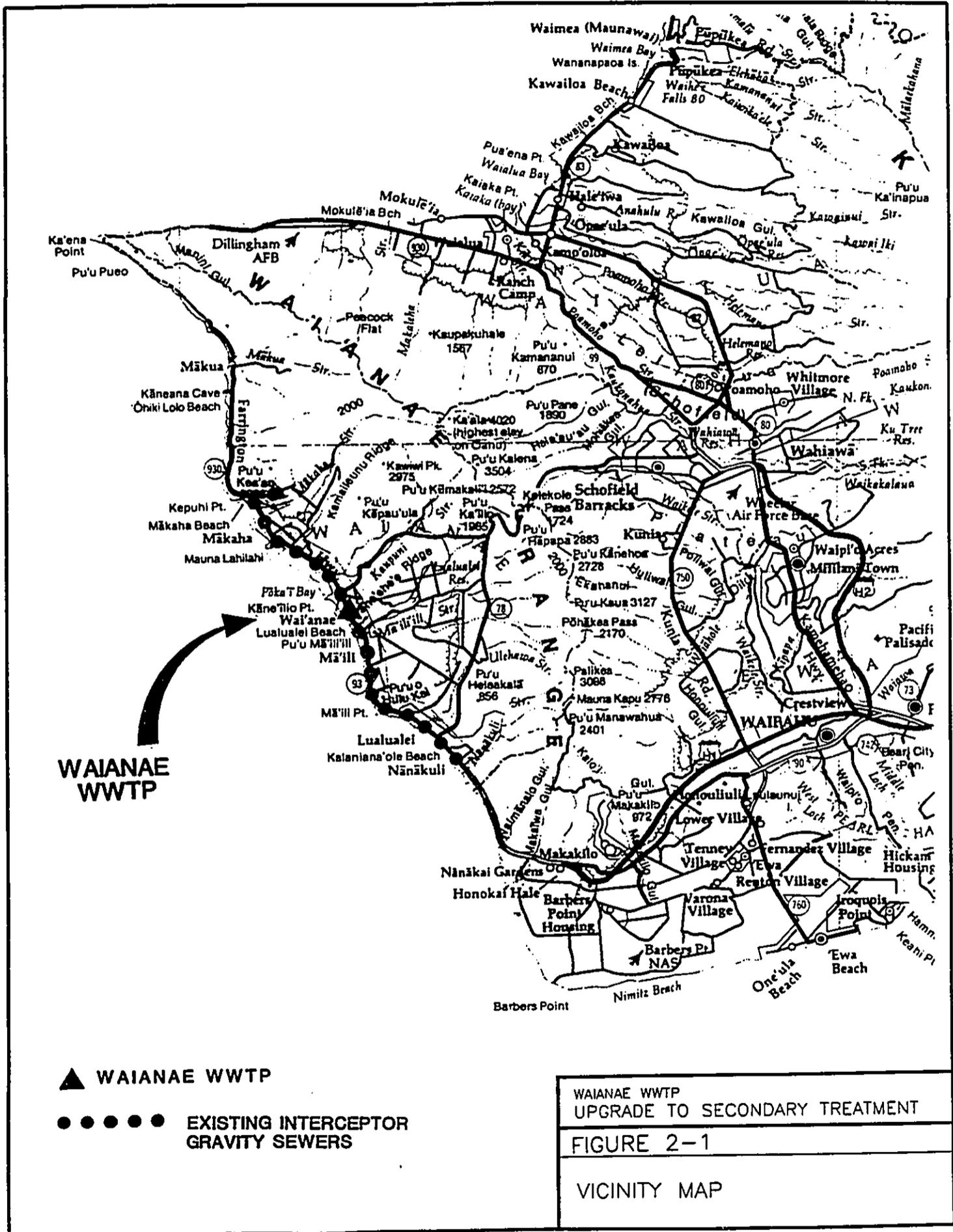
**2.2 EXISTING FACILITIES**

The Waianae WWTP is a primary treatment facility serving the area from Makaha to Nanakuli, along the Leeward coast of Oahu (see Figure 2-1). The plant is designed for an average wastewater flow of 5.2 million gallons per day (mgd). Currently the daily plant flow averages about 2.7 mgd.

The existing facility contains the following liquid stream treatment processes:

- ▶ Influent pumping
- ▶ Mechanical screening
- ▶ Aerated grit removal
- ▶ Preaeration
- ▶ Primary clarification
- ▶ Chlorination
- ▶ Disposal by ocean outfall

Treated effluent is discharged through a 6,180 ft. long ocean outfall located at a mean depth of 100 ft.



In addition, solids handling processes at the existing facility include:

- ▶ Anaerobic digestion
- ▶ Dewatering on sand drying beds
- ▶ Sludge disposal at the Waimanalo Gulch Landfill

### 2.3 PROPOSED NEW FACILITIES

In order to achieve secondary treatment at Waianae WWTP, the following candidate processes were considered:

- ▶ Activated Sludge Process with Selector Control
- ▶ Sequencing Batch Reactor Process (SBR)
- ▶ Trickling Filter Process/Solids Contact Reaeration (TF/SCR)
- ▶ Trickling Filter Process (TF)

All four alternative processes for providing secondary treatment would be able to meet treatment requirements. However, when comparisons were made with respect to cost, site, design, operation, and aesthetic considerations, the TF process was selected for the following key reasons:

- ▶ Familiarity with the operating process by City and County personnel.
- ▶ High resistance to hydraulic and organic shock loadings.
- ▶ High degree of operational flexibility to meet treatment requirements.

The design of the new facilities is based on the following parameters:

▶ Flow	
Average Daily Design Flow	5.2 mgd
Peak Wet Weather Flow	13.8 mgd
▶ Influent Wastewater Characteristics	
BOD - Monthly Average	198 mg/l
SS - Monthly Average	216 mg/l
▶ Secondary Treatment Requirements	
Effluent BOD - Weekly Average	30 mg/l maximum
Effluent SS - Weekly Average	30 mg/l maximum
BOD Removal	85% minimum
SS Removal	85% minimum

The proposed facilities that will be required to achieve secondary treatment with the TF process at Waianae WWTP are listed in Table 2-1. The unit process diagram, which shows the major flow streams, for the TF process is shown in Figure 2-2.

The proposed site layout for the new facilities, as well as the existing structures, is presented in Figure 2-3. As discussed in Sections 2.3 and 4.1.4, the project site lies within the Special Management Area, and portions of the site lie within a flood hazard zone. The facility design is to comply with the accessibility requirements per HRS 103-50 and is to be reviewed by the State Commission on Persons with Disabilities.

The individual treatment units and proposed facilities for the TF process are discussed in the following subsections.

### 2.3.1 Trickling Filters

Instead of being discharged directly to the ocean outfall, the primary clarifier effluent would be pumped to the new trickling filters. The trickling filters consist of a bed of plastic media on which a thin film of microorganisms reside. Wastewater would be distributed over the top of the bed by a rotary distributor and trickled through the filter. The organic material present in the wastewater would adsorb onto and be biologically treated by the layer of microorganisms. The treated wastewater would be collected in an underdrain system and directed to the next unit process, the final clarifiers. Typically, a fraction of the treated wastewater would be recycled through the filter in order to dilute the incoming wastewater and maintain moist conditions on the biological film layer.

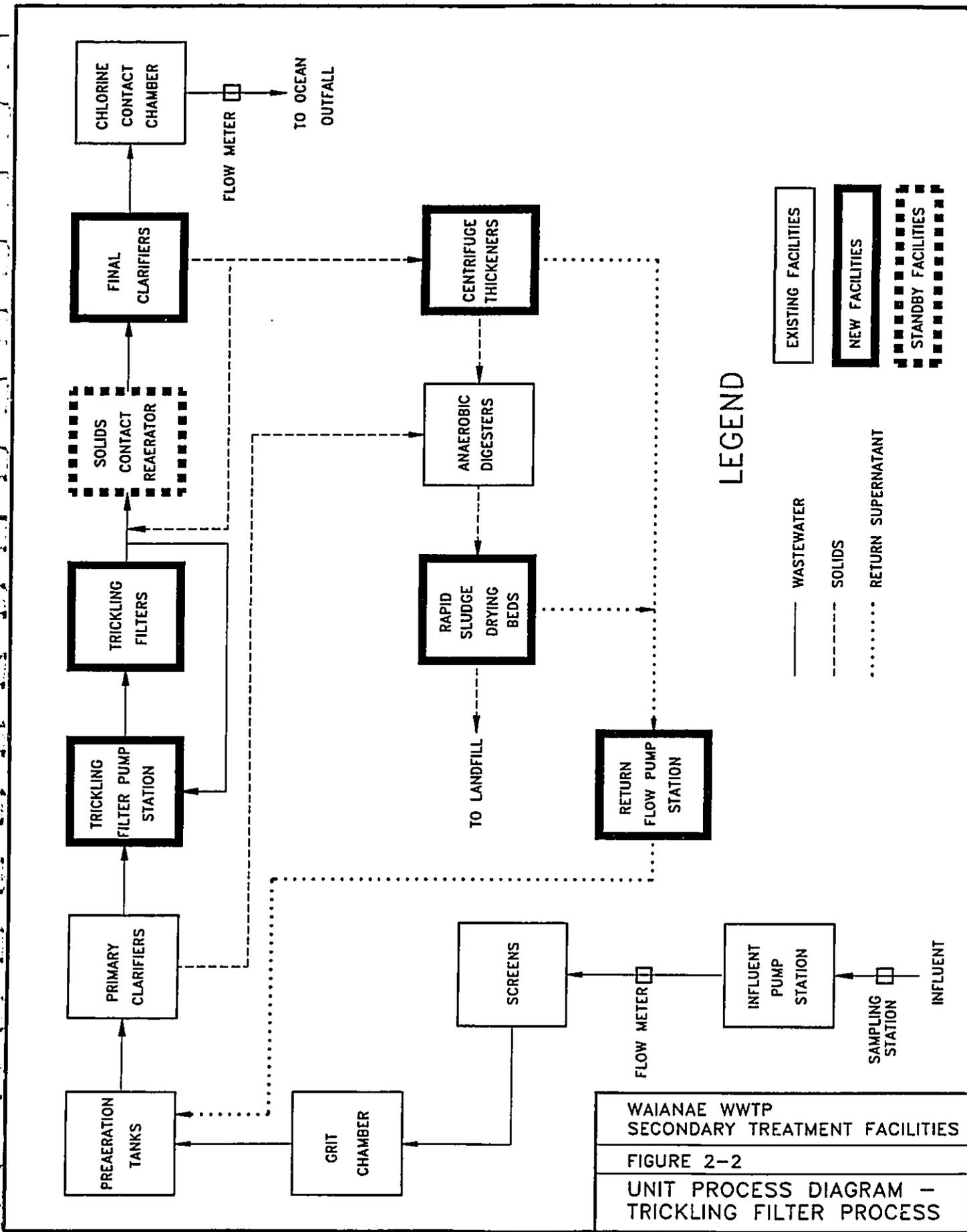
### 2.3.2 Solids Contact Reaeration Basins

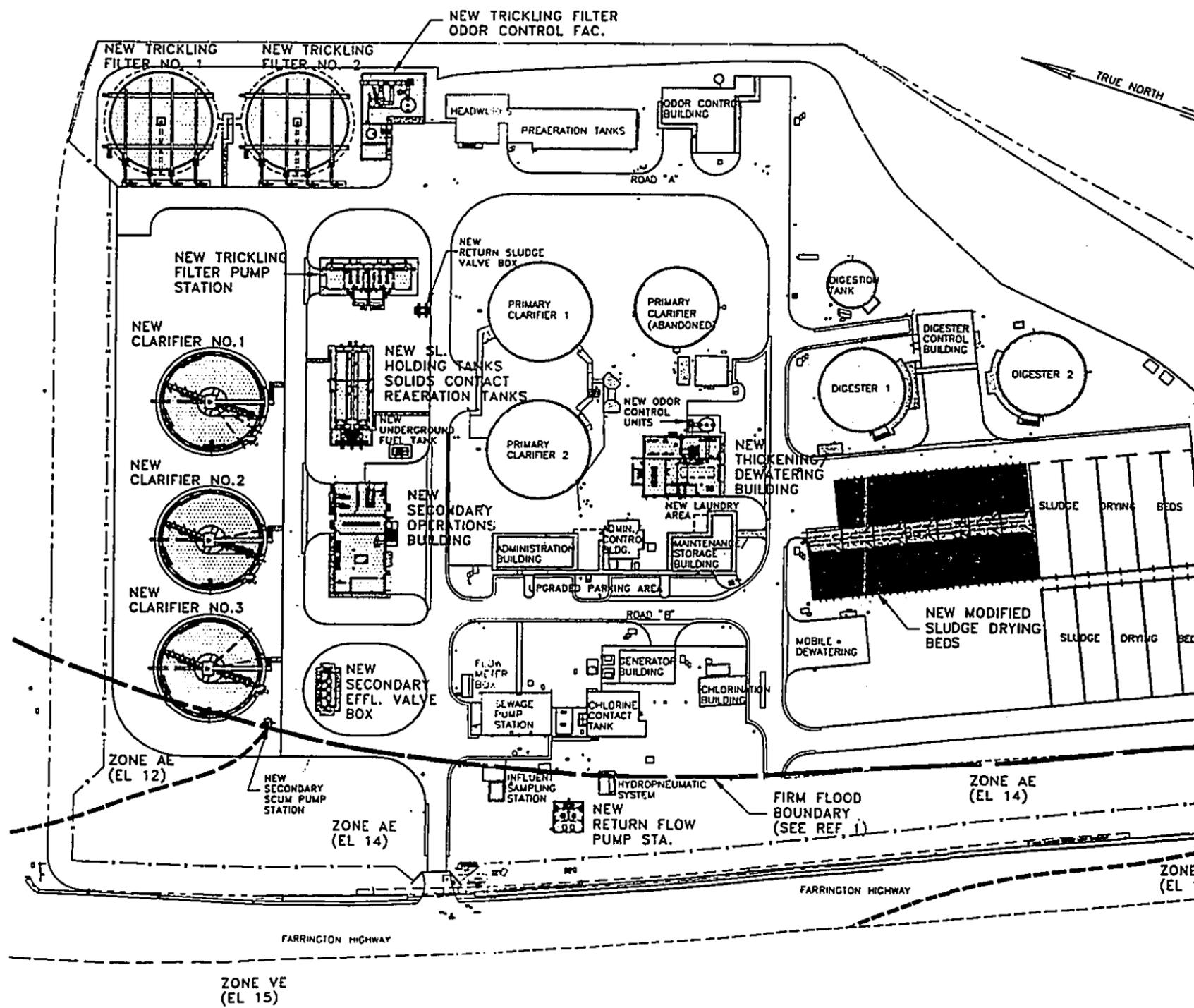
In the proposed process, two solids contact/reaeration basins would serve as the standby unit for the secondary biological treatment, in lieu of a third trickling filter. The solids contact/reaeration basins would be placed on line when one of the trickling filters is taken out of service. In the solids contact basin, the trickling filter effluent would be further treated by flocculation of suspended solids and additional removal of soluble BOD. Prior to entering the solids contact basin, the return secondary sludge from the final clarifiers

TABLE 2-1

ESTIMATED FACILITIES FOR THE  
TRICKLING FILTER PROCESS

<u>LIQUID STREAM</u>		<u>SOLID STREAM</u>	
<u>Trickling Filter Pump Station</u>		<u>Thickening/Dewatering Building</u>	
Number of Pumps	4 + 1 Standby	Number of Stories	3
Width	40 ft	Total Floor Area	10,000 SF
Length	50 ft		
Depth	25 ft	<u>Thickening/Dewatering Building Odor Control System</u>	
		Slab Length	60 ft
		Slab Width	20 ft
<u>Trickling Filters</u>		<u>Rapid Sludge Drying Beds</u>	
Number of Tanks	2 + Standby SCR Tanks	Total Available Area	14,000 SF
Tank Diameter	84 ft		
Overall Tank Height	45 ft		
Media Depth	20 ft		
<u>Trickling Filter Odor Control System</u>			
Slab Length	50 ft		
Slab Width	40 ft		
<u>Solids Contact Reaeration (SCR) Tanks</u>			
Number of Tanks	2		
Tank Length	70 ft		
Tank Width	10 ft		
Tank Depth	14 ft		
<u>Secondary Operations Building</u>			
Number of Stories	2		
Total Floor Area	5,500 SF		
<u>Final Clarifiers</u>			
Number of Units	2 + 1 Standby		
Diameter	85 ft		
Side Water Depth	11.5 ft		
<u>Return Flow Pump Station</u>			
Number of Pumps	1 + 1 Standby		
Width	10 ft		
Length	15 ft		
Depth	25 ft		
<u>Secondary Scum Pump Station</u>			
Number of Pumps	1 + 1 Standby		
Width	10 ft		
Length	15 ft		
Depth	20 ft		

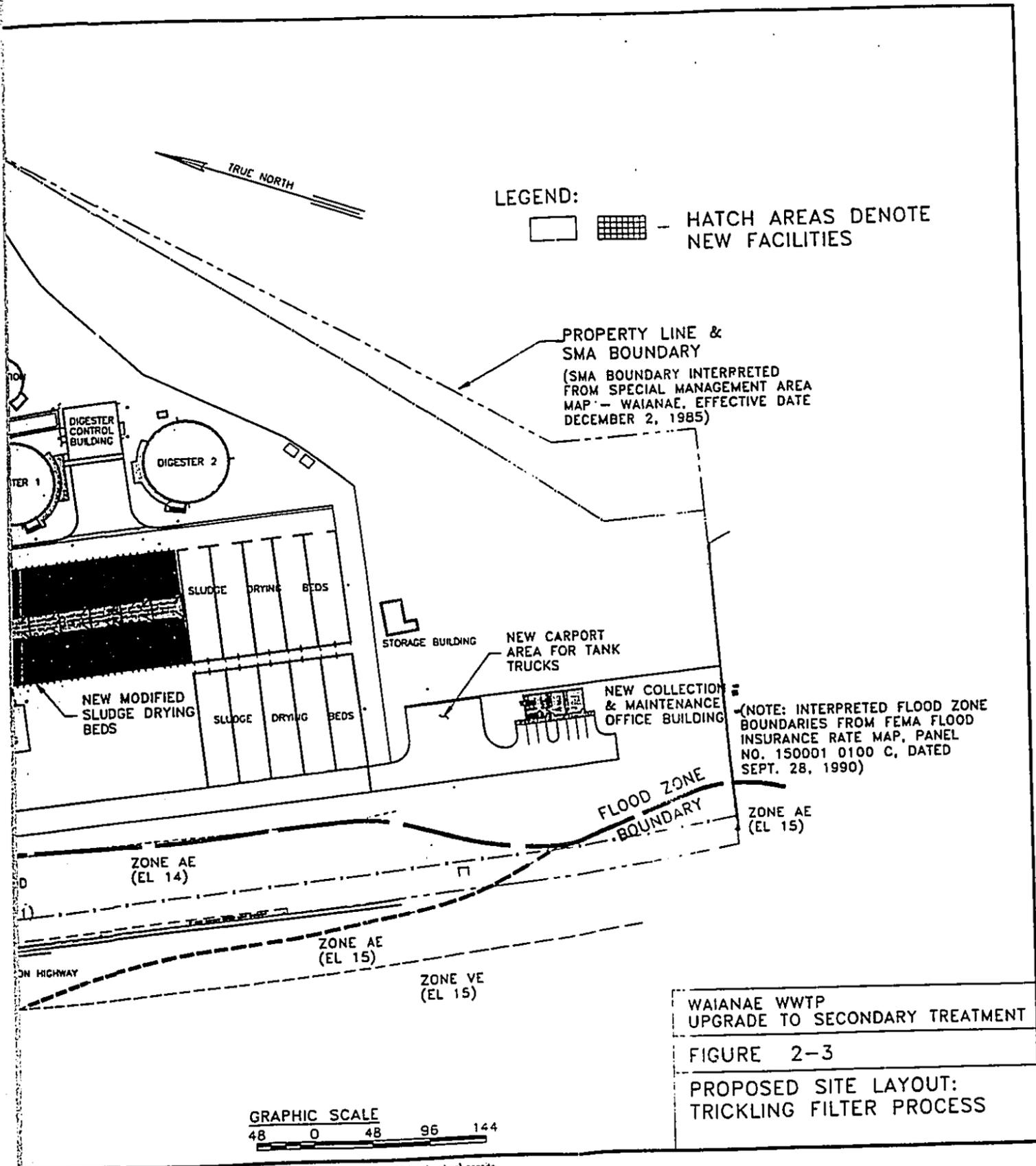




TRUE NORTH

GRAPHIC SCALE  
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LEGEND:

  - HATCH AREAS DENOTE NEW FACILITIES

PROPERTY LINE & SMA BOUNDARY  
(SMA BOUNDARY INTERPRETED FROM SPECIAL MANAGEMENT AREA MAP - WAIANAЕ, EFFECTIVE DATE DECEMBER 2, 1985)

(NOTE: INTERPRETED FLOOD ZONE BOUNDARIES FROM FEMA FLOOD INSURANCE RATE MAP, PANEL NO. 150001 0100 C, DATED SEPT. 28, 1990)

WAIANAЕ WWT  
UPGRADE TO SECONDARY TREATMENT  
FIGURE 2-3  
PROPOSED SITE LAYOUT:  
TRICKLING FILTER PROCESS

GRAPHIC SCALE  
48 0 48 96 144

04/07/83 \en\col\pansite

would be aerated in the solids reaeration basin. The reaeration process would serve to keep the sludge "fresh" and to improve its flocculation characteristics.

### 2.3.3 Final Clarifiers

The final clarifiers would receive wastewater from the trickling filters and would be designed to settle the biological solids from the TF process and produce a clear effluent. After clarification, effluent would then enter the chlorine contact tank and would be ultimately discharged through the ocean outfall. Sludge withdrawn from the final clarifiers would be pumped to the thickening/dewatering building, where it would be thickened by centrifugation.

### 2.3.4 Thickening Process

The purpose of sludge thickening is to increase the solids content of the sludge in order to reduce the volume of sludge to be treated downstream. Centrifugal thickening is a physical process in which sludge, conditioned with polymer, is fed to a centrifuge and separated into a thickened sludge and a dilute centrate by centrifugal forces. The thickened sludge would then be pumped to the existing anaerobic digesters for stabilization.

### 2.3.5 Dewatering Process

Following anaerobic digestion, the sludge would then be dewatered by application onto rapid drying beds, which consist of interlocking high-density polyurethane filter panels. Dewatering would occur primarily by drainage and also by evaporation. The dewatered sludge cake would then be taken to a landfill for disposal, while the filtrate would be recycled through the plant.

### 2.3.6 Auxiliary Facilities

Since odor control is a primary concern, provisions would be made to collect and treat foul air generated from the existing primary clarifier weirs, new trickling filters, and new thickening/dewatering building. Foul air from the trickling filters would be treated first in a packed bed scrubber, in which the odorous compounds in the foul air stream would be oxidized by sodium hydroxide. The gas stream exiting the caustic scrubber would then be

treated in an activated carbon adsorber, as a polishing step to remove other odorous substances that may be present. Foul air from the existing primary clarifier weirs and the new thickening/dewatering building would be treated in an activated carbon adsorber.

In addition to the odor control facilities described above, other facilities proposed for the trickling filter process include: a trickling filter pump station to pump primary effluent to the trickling filters, a return flow pump station to recycle secondary process return flows to the preaeration tanks, a secondary operations building which would house equipment such as blowers and pumps, an emergency generator and fuel tank to provide emergency power to the secondary facilities, and valve boxes as necessary.

#### 2.4 POTENTIAL POLLUTANTS

The proposed construction activity may introduce pollutants into storm water runoff, such as silt from excavation activities. Since the project site has been used as a public works facility since the 1960's and possibly earlier, there may also be the possibility of hydrocarbons present in the soil from operation and maintenance activities.

Control of pollutants will be covered in detail under the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit. The permit would cover the following types of discharges: storm water associated with construction activity, hydrotesting water, and construction activity dewatering.

#### 2.5 REQUIRED PERMITS

According to the Special Management Area Map for Waianae (December 2, 1985), the project site lies within the Special Management Area. Therefore, a Special Management Area Use Permit would be required.

The project site lies within the I-2 Intensive Industrial District, which has a maximum height limit of 40 feet (Land Use Ordinance, Section 5.100-1). Based on the 70% design, it appears

that three of the proposed structures, the thickening/dewatering building and the two trickling filters, would exceed the maximum height limit. A Public Use/Utilities Waiver would be required to exceed the maximum height limit.

Part of the project site lie within Flood Hazard Zone AE, which is an area prone to inundation by a 100-year flood. The design and construction of structures within the flood zone are to conform to the Development Standards in the Land Use Ordinance. Section 4.1.4 contains a more detailed discussion of the impacts of flooding on the project site.

A summary of permits that would be required in order to construct the new secondary facilities follows:

<u>Permit</u>	<u>Concern</u>	<u>Approving Agency</u>
Special Management Area Use Permit	Coastal scenic & open space resources	Honolulu City Council
Public Use/Utilities Waiver	Maximum height limit	Dept. of Land Utilization, City & County of Honolulu
Grubbing, Grading & Stockpiling Permit	Soil erosion	Division of Engineering, Dept. of Public Works, City & County of Honolulu
NPDES General Permit	(1) Discharge of hydrotesting waters (2) Discharge of construction activity dewatering (3) Stormwater	Clean Water Branch, Department of Health, State of Hawaii

SECTION 3  
**ALTERNATIVES TO THE PROPOSED ACTION**

**3.1 NO ACTION**

The "no action" alternative is not possible as this project is needed to fulfill the EPA/DOH requirements for secondary treatment at the Waianae WWTP to meet Federal and State Water Quality Standards. In addition, the City and County of Honolulu must comply with a State DOH Consent Order, dated February 16, 1984, which establishes a compliance schedule for implementing secondary treatment at Waianae WWTP. Failure to comply with the Consent Order could result in enforcement action against the City and County of Honolulu.

**3.2 ACTIVATED SLUDGE PROCESS WITH SELECTOR CONTROL**

In this alternative, the secondary treatment would be accomplished by a conventional activated sludge system, modified by biological selectors in order to control the growth of filamentous bacteria. Physically, the selectors would be located at the influent end of the activated sludge tanks and would be separated by walls and baffles to have its own compartments. This alternative would require the following new unit processes: activated sludge with selector control, final clarification, sludge thickening by centrifuge, sludge dewatering by rapid drying beds, return flow pumping, and odor control facilities.

**3.3 SEQUENCING BATCH REACTOR PROCESS**

The sequencing batch reactor (SBR) is a batch system which combines the processes of primary clarification, activated sludge aeration, and secondary clarification into a single unit process. The cycles within a batch system may vary, but in general include the following periods in each cycle for each tank:

<b>ANOXIC FILL</b>	Allow inflow while not aerating the tank.
<b>AERATED FILL</b>	Allow inflow while aerating the tank.

REACT	Inflow stops when tank reaches full height and is diverted to another tank. Aeration continues.
SETTLE	Aeration stops. Allow quiescent period for settling of activated sludge.
DECANT	Effluent is withdrawn from near the surface of the tank with either fixed or floating decanters.
IDLE	Cycle completed. Remove waste sludge from tank bottom. Wait for remaining tank(s) to complete cycle and go back to anoxic fill.

The SBR alternative would require the following new unit processes: sequencing batch reactor system, chlorine contact chamber, sludge thickening by centrifuge, sludge dewatering by rapid drying beds, return flow pumping, and odor control facilities.

#### 3.4 TRICKLING FILTER/SOLIDS CONTACT REAERATION PROCESS

This alternative is similar to the proposed TF process, except that the solids contact reaeration basin would be a part of the normal process train, instead of a standby unit as in the TF process. The following new unit processes would be required for the TF/SCR process: trickling filter influent pumping, trickling filters, solids contact reaeration basins, final clarification, sludge thickening by centrifuge, sludge dewatering by rapid drying beds, return flow pumping, and odor control facilities.

**SECTION 4**  
**ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION**

**4.1 PHYSICAL ENVIRONMENT**

**4.1.1 Climate**

The project site is located along the semiarid Waianae coast, which averages 20 inches of rain per year. Average temperatures for the Waianae area range from 72 degrees F in the winter to 80 degrees F in the summer. The lowest temperature on record is 45 degrees F, while the highest recorded temperature is 96 degrees F.

The closest location to the project site for which wind data is available is Barbers Point Naval Air Station (NAS), located approximately ten miles south of Waianae WWTP. Based on data collected at Barbers Point NAS, typical wind conditions at the project site are tradewinds from the northeast at speeds of 3 to 20 knots.

**4.1.2 Topography**

The Waianae WWTP is located on the coastal plain formed by the Waianae Range in the area between Pokai Bay and Maili. The grade elevation varies from +10 feet MSL on the ocean side to +34 feet MSL on the mountain (mauka) side of the plant. The mauka side of the property is partially bordered by steep hills. The area under consideration for the new facilities is located at the north end of the existing property. Currently the area is overgrown and contains kiawe and kamani trees.

The proposed project will have short-term aesthetic impacts due to the presence of construction activities and the storage of equipment and materials. Long-term visual impacts due to the additional facilities will be minimized by proper architectural and landscaping design.

**4.1.3 Geology and Soils**

The project site lies on the western (leeward) side of the Waianae Range, which is the weathered and eroded remnant of the Waianae Volcano.

Soils on the project site are predominantly of the Mokuleia Series, which consists of well-drained soils along the coastal plains of Oahu and Kauai. The specific soil type found at the site is Mokuleia clay (Mtb). The surface layer of this soil is very dark grayish-brown clay about 16 inches thick. This soil type has slow permeability, very slow runoff, and a slight erosion hazard (Soil Conservation Service, August 1972).

The proposed project is not expected to have any impacts upon the site's geologic and soil conditions.

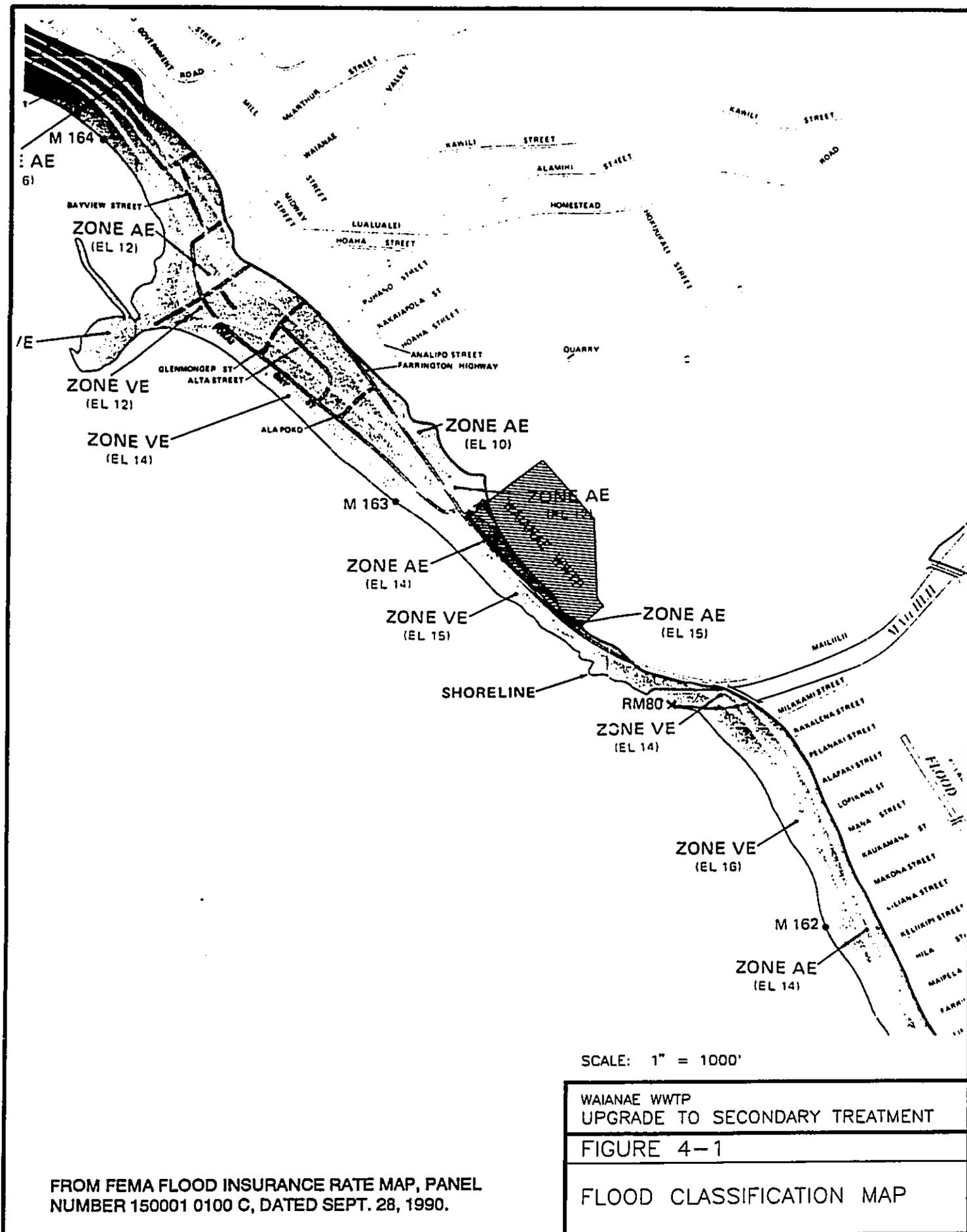
#### 4.1.4 Flooding

The area of the proposed facilities ranges in elevation from +10 to +34 feet above mean sea level. As shown in Figures 2-3 and 4-1, part of the project site lies within Flood Hazard Zone AE, which is an area prone to inundation by a 100-year flood, with base flood elevations ranging from +12 to +15 feet above mean sea level.

The remaining portions of the site, lying outside of Flood Hazard Zone AE, lie in an area designated as Zone D. There is no information on potential flood hazards for areas within Zone D. However, since this area of the site consists of moderate slopes, no flooding is expected and only local drainage requirements need to be addressed.

Some of the new secondary facilities may be located within the flood hazard area. In that event, mitigation measures that would be taken include:

- ▶ Designing the ground level floors of at-grade buildings to be at least 1 foot above the regulatory flood level, which ranges from +12 ft. to +15 ft.
- ▶ Designing structures to be adequately anchored to resist flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads, including effects from buoyancy caused by the regulatory flood.
- ▶ Using construction materials and equipment that are resistant to flood damage caused by the regulatory flood.
- ▶ Using construction methods and practices that will minimize damage caused by the regulatory flood.



- ▶ Protecting any electrical and mechanical equipment from damage caused by the regulatory flood.
- ▶ Providing drainage to minimize damage by the regulatory flood in accordance with the Storm Drainage Standards of the Department of Public Works.

#### 4.1.5 Flora and Fauna

Based on the results from the two previous EIS, no endangered flora or fauna exist on site. The project area consists of roadways, landscaping, and grassed areas, and is surrounded by a 6-foot high chain link fence. Access to the property can only be accomplished through the 20-foot wide main gate off of Farrington Highway.

#### 4.1.6 Coastal Water Environment

Implementation of the proposed facilities at Waianae WWTP will result in a reduction of the amount of BOD, suspended solids, and coliforms present in the plant effluent. In addition, the new facilities will use the existing 6,180 ft. long ocean outfall, which was extended in 1986. Therefore, the proposed project should have no negative impact and/or result in an improvement to the ocean environment.

#### 4.1.7 Wetlands

There are no wetlands in the project area, implying that the Protection of Wetlands Executive Order is not applicable to this project.

#### 4.1.8 Rivers

There are no rivers in the project area, indicating that the Wild and Scenic Rivers Act is not applicable to this project.

#### 4.1.9 Air Quality

Although there will be temporary effects due to construction activities and equipment, the proposed action is not expected to significantly affect air quality in the Waianae area. In order to mitigate the impacts during construction, the Contractor will be required to follow State and County regulations regarding dust control and notify the surrounding neighborhood

of the construction schedule.

In order to minimize the long-term impacts upon air quality, odor control measures will be implemented, including operational control and installing odor control equipment to collect and treat foul air from the treatment plant. The operation of the facility and construction activities will comply with the Clean Air Act.

#### 4.1.10 Noise

Short term noise impacts are primarily related to construction activities, especially the use of heavy equipment. To mitigate short term impacts associated with construction, specific start and curfew times will be established for construction activities. In addition, the Contractor will be required to follow State and County regulations regarding noise control.

Long term noise impact on the area surrounding the new facilities would generally be attributed to process equipment, such as blowers, fans, and pumps. Mitigative measures include the enclosure of noise-generating machinery and the use of acoustical walls, in order to maintain noise levels within allowable limits.

According to Hawaii Administrative Rules, Title 11, Chapter 43 Community Noise Control for Oahu, the allowable noise level in dBA at the property line of the site depends on the zoning district. In addition, if the allowable noise level between two adjacent zoning districts are different, the lower allowable noise level should be used. According to Zoning Map No. 15 (October 22, 1986), the project site lies within the I-2 Intensive Industrial District. Zoning districts adjacent to the project site include B-2 Community Business District along the northern boundary of the site, P-1 Restricted Preservation District along the plant's southeast boundary, and P-2 General Preservation District along the coast across Farrington Highway from the project site.

According to paragraph 11-43-3, Chapter 43 of Title 11, Hawaii Administrative Rules, the allowable noise levels for the four zoning districts are listed on the following page:

<u>Zoning District</u>	<u>Allowable Noise Levels in dBA</u>	
	<u>Daytime</u>	<u>Nighttime</u>
Preservation (P-1)	55	45
Business (B-1 through B-5)	60	50
Industrial (I-1 through I-3)	70	70

Daytime hours are defined as the time period from 7:00 a.m. to 10:00 p.m. of the same day, while nighttime means the time period from 10:00 p.m. of one day to 7:00 a.m. of the next day.

Therefore, the allowable noise levels at the plant's north boundary are 60 dBA (daytime) and 50 dBA (nighttime). In addition, the allowable noise levels at the plant's southeast boundary are 55 dBA (daytime) and 45 dBA (nighttime). The Contractor will be required to notify the surrounding neighborhood of the construction schedule and the potential of noise generation.

#### 4.2 SOCIO-ECONOMIC ENVIRONMENT

##### 4.2.1 Surrounding Land Uses

According to the Development Plan (DP) Land Use Map for the Waianae area dated May 10, 1983, the Waianae WWTP is bordered by lands zoned for commercial, industrial, preservation, residential, and recreational usage. There is no farmland in the immediate area. Currently, surrounding land uses include the Lualualei Beach Park, Waianae Mall Shopping Center, a corporation yard, open space, and residential areas.

Since the proposed project involves improving the wastewater treatment capabilities of the Waianae WWTP and minimizing nuisance odors, the overall impact upon the surrounding areas should be an improvement.

##### 4.2.2 Historic and Archaeological Resources

According to the two previous Environmental Impact Statements, there are no known historic or archaeological sites in the area of the proposed facilities. Therefore, no negative historic or archaeological impacts are expected to occur as a result of the proposed project.

However, if during construction, historic or archaeological resources are uncovered, the State Historic Preservation Office would be notified immediately, and work affecting the resources would be stopped until recommended mitigation measures are implemented.

#### 4.2.3 Coastal Views and Visual Resources

A few of the new facilities on the site will exceed the 40 ft. height limitation by a few feet. The Department of Land Utilization has reviewed the facilities and has indicated that a height waiver will be required.

Views will be mitigated by landscaping and berming. The west side of the site bordering Farrington Highway will consist of landscaping and berms. The facility will be hidden by the view angle of passersby looking over the berm and landscaping. In addition, the north side bordering the shopping center and the east (or mountain) side will also have landscaping. Earth tone colors, similar to the existing facilities, will be used for the structures. An adjacent hill will also help to mitigate the impact of the taller structures.

#### 4.2.4 Recreational Facilities

The following recreational facilities are located along the coast within a mile from the Waianae WWTP:

- ▶ Waianae Kai Military Reservation
- ▶ Pokai Bay Boat Harbor
- ▶ Pokai Bay Beach Park
- ▶ Lualualei Beach Park
- ▶ Maili Beach Park

The proposed project will result in improved effluent quality through reduction in effluent BOD, suspended solids and coliform levels. Therefore, the project should have result in an improvement to the ocean-related recreational facilities located near the plant site.

#### 4.2.5 Population Characteristics

The Waianae WWTP serves the area along the leeward coast of Oahu, which contains the communities of Makaha, Waianae, Maili, and Nanakuli. The present population in the Waianae area is approximately 37,000 (Department of Business, Economic Development,

and Tourism, November 1991). The impact of the additional treatment is not expected to significantly affect the serviceable population in the areas mentioned above.

#### 4.2.6 Economic Characteristics

The City and County of Honolulu is expected to provide funds for construction of the secondary treatment facilities at Waianae WWTP. In addition, the City and County of Honolulu anticipates requesting a loan under the State Revolving Fund Program to contribute additional funds for construction. The availability of State funds is uncertain at this time. Since the operation and maintenance costs will be borne by the City and County of Honolulu alone, these costs may have an impact on the City's sewer user charge program.

The construction cost for the new facilities is estimated at \$25 to \$30 million in 1992 dollars. Additional annual operation and maintenance costs for the new facilities are expected to be in the range of \$0.5 to \$0.7 million in 1992 dollars. In comparison, the operation and maintenance cost for the existing primary treatment facility for the period July 1990 through June 1991 was approximately \$0.7 million in 1992 dollars.

The alternative to mitigating the costs of the facility is to not build the facility. As the project is required by the State Department of Health's Consent Order, the economic and criminal impact would be far greater if this project is not implemented.

### 4.3 INFRASTRUCTURE SYSTEMS AND SERVICES

#### 4.3.1 Traffic and Transportation System

Access to the Waianae WWTP is provided by an access road off of Farrington Highway. The four-lane Farrington Highway is the only major transportation route along the Leeward coast of Oahu, linking Kaena Point to the north with Barbers Point to the south.

Short-term impacts would involve the movement of construction equipment and workers, which could temporarily disrupt traffic along Farrington Highway. Possible mitigation measures include regulating hours of construction to avoid peak traffic periods and using

flagmen and lane coning to regulate traffic flow. The Contractor will notify the surrounding neighborhood of the construction schedule and post signs in the event of necessary minor disruptions to the schedule.

There will be no long-term impacts on roadways or traffic as a result of this project.

#### 4.3.2 Electrical System

The proposed action is not expected to have a significant impact on the electrical system serving the Waianae area. The existing electrical and control system will be integrated with the new electrical and control system associated with the proposed facilities. In addition, emergency power will be provided for the new facilities.

#### 4.3.3 Solid Waste Disposal System

The upgrade to secondary treatment is estimated to produce 50% more solid waste than the existing process. The additional solid waste generated will be disposed of in the same manner as the existing solid waste, which is currently being taken to the Waimanalo Gulch Landfill. According to Mr. John Lee (Acting Chief, Division of Refuse Collection and Disposal, Department of Public Works, City and County of Honolulu), the Waimanalo Gulch Landfill has adequate capacity to accommodate the additional solid waste from Waianae WWTP.

#### 4.3.4 Potable Water System

There are no potable water wells in the area nor developable potable water on the site.

#### 4.4 SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impacts of the proposed project and possible mitigation measures are listed in Table 4-1.

**TABLE 4-1**  
**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

<b>PROBABLE IMPACT</b>	<b>POSSIBLE MITIGATION MEASURES</b>
<b><u>Temporary Impacts:</u></b>	
Dust due to construction	Following State & County regulations
Noise due to construction	Establishing start & curfew times for construction Following State & County regulations
Disruption of traffic	Regulating hours of construction Using flagmen & lane coning
<b><u>Permanent Impacts:</u></b>	
Visual impact due to additional treatment structures	Architectural & landscaping design
Odor due to plant operation	Operational control Installation of odor control systems
Noise due to plant operation	Enclosing noise--generating equipment
Additional solid waste disposal	Approved disposal at Waimanalo Gulch Landfill
Improved water quality in vicinity	None -- beneficial impact to environment
Possible increase in sewer user fees	None

(wn\report\impacts)  
(November 1992)

SECTION 5  
**ENVIRONMENTAL IMPACTS OF ALTERNATIVE ACTIONS**

5.1 NO ACTION

The "no action" alternative would result in the continued discharge of primary treated effluent into the ocean by the Waianae WWTP. According to the State of Hawaii Department of Health, this condition "...would pose an unacceptable risk to public health due to the extensive water recreation activities in the area." (Department of Health news release, October 3, 1989)

5.2 ACTIVATED SLUDGE PROCESS WITH SELECTOR CONTROL

The activated sludge process with selector control was not chosen, because of high energy costs, difficulty in process operation, and susceptibility to hydraulic and organic shock loading. Implementation of this process would have similar impacts on the physical environment, socio-economic conditions, and infrastructure systems as the proposed trickling filter process.

5.3 SEQUENCING BATCH REACTOR PROCESS

The SBR process was not selected, due to its high capital cost, high energy costs, and lack of operational familiarity by City and County of Honolulu personnel. Implementing the SBR process would have similar impacts as the proposed trickling filter process.

5.4 TRICKLING FILTER/SOLIDS CONTACT REAERATION PROCESS

The TF/SCR process was not chosen, because greater operational flexibility is afforded by the TF process. Implementation of the TF/SCR process would have similar impacts as the proposed TF process.

**SECTION 6**  
**DETERMINATION**

The results of this assessment are that the proposed project will not have a significant negative impact on the environment and an Environmental Impact Statement (EIS) is not required. Therefore, in accordance with the provisions of Chapter 343, Hawaii Revised Statutes, a Negative Declaration is determined to be in order.

Reasons supporting this determination are based on the following criteria. The proposed project would not:

- ▶ destroy any archaeological, historic or cultural resources.
- ▶ substantially affect any rare, threatened or endangered species, flora or fauna.
- ▶ conflict with the State's environmental goals or guidelines as expressed in Chapter 344, HRS.
- ▶ substantially affect the economic or social welfare of the community or State.
- ▶ substantially affect public health.
- ▶ detrimentally affect air or water quality or ambient noise levels.
- ▶ involve substantial secondary effects, such as population changes or infrastructure demands.

In addition, the proposed project would:

- ▶ adhere to the compliance schedule for implementing secondary treatment at Waianae WWTP, thereby avoiding enforcement action against the City and County of Honolulu.

SECTION 7

**CONSULTING AGENCIES LIST**

The following is a list of agencies that were consulted for this Environmental Assessment:

FEDERAL

Ms. Karen Evans  
Pacific Islands Office  
Department of the Interior  
Fish and Wildlife Services  
P.O. Box 50167  
Honolulu, Hawaii 96850

Mr. William Meyer, District Chief  
Department of the Interior  
Geological Survey  
677 Ala Moana Boulevard, Room 415  
Honolulu, Hawaii 96813-5412

Mr. Warren M. Lee, State Conservationist  
Soil Conservation Service  
U.S. Department of Agriculture  
P.O. Box 50004  
Honolulu, Hawaii 96850

Mr. Kisuk Cheung, Director of Engineering  
Department of the Army  
Pacific Ocean Division, Building 230  
Ft. Shafter, Hawaii 96858-5440

Mr. Alvin Char, Chief  
U.S. Army Support Command Hawaii  
Directorate of Public Works  
Attn: Environmental Management Office  
Fort Shafter, Hawaii 96858-5000

STATE

Facilities Access Coordinator  
Commission on Persons with Disabilities  
Department of Health  
5 Waterfront Plaza  
500 Ala Moana Blvd., #5-210  
Honolulu, Hawaii 96813

Mr. Mufi Hannemann, Director  
Department of Business, Economic Development and Tourism  
P.O. Box 2359  
Honolulu, Hawaii 96804

Dr. John C. Lewin, Director  
Department of Health  
P.O. Box 3378  
Honolulu, Hawaii 96801

Mr. William W. Paty, Chairperson  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, Hawaii 96809

Brian J. J. Choy, Director  
Office of Environmental Quality Control  
220 South King Street, Fourth Floor  
Honolulu, Hawaii 96813

Mr. Harold S. Matsumoto, Director  
Office of State Planning  
P.O. Box 3540  
Honolulu, Hawaii 96811-3540

Mr. Rex Johnson, Director  
Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii 96813

Dr. John Harrison, Director  
University of Hawaii  
Environmental Center  
2550 Campus Road, Crawford 317  
Honolulu, Hawaii 96822

Dr. Sherwood Maynard, Director  
University of Hawaii  
Marine Option Program  
1000 Pope Road, Room 229  
Honolulu, Hawaii 96822

Dr. Roger Fujioka, Director  
University of Hawaii  
Water Resources Research Center  
2540 Dole Street, Holmes Hall 283  
Honolulu, Hawaii 96822

CITY & COUNTY OF HONOLULU

Mr. Kazu Hayashida, Manager and Chief Engineer  
Board of Water Supply

Mr. Benjamin B. Lee, Chief Planning Officer  
Department of General Planning

Mr. Donald A. Clegg, Director  
Department of Land Utilization

Mr. Walter M. Ozawa, Director  
Department of Parks and Recreation

Mr. Joseph Magaldi, Director  
Department of Transportation Services

Mr. Lionel Camara, Fire Chief  
Fire Department

Mr. Michael Nakamura, Police Chief  
Police Department

GOVERNMENT OFFICIALS

The Honorable James Aki  
State Office Tower  
235 S. Beretania Street  
Honolulu, Hawaii 96813

The Honorable Peter Apo  
State Office Tower  
235 S. Beretania Street  
Honolulu, Hawaii 96813

The Honorable Henry Peters  
State Office Tower  
235 S. Beretania Street  
Honolulu, Hawaii 96813

The Honorable John DeSoto  
City Council  
530 South King Street  
Honolulu, Hawaii 96813

#### UTILITY COMPANIES

Mr. Roy Yoshimoto, Manager  
GASCO, Inc.  
P. O. Box 3379  
Honolulu, Hawaii 96842

Mr. William Bonnet, Manager  
Environmental Department  
Hawaiian Electric Company, Inc.  
P. O. Box 2750  
Honolulu, Hawaii 96840

Mr. Walter M. Matsumoto, Operations Manager  
OSP Engineering  
Hawaiian Telephone Company  
P. O. Box 2200  
Honolulu, Hawaii 96841

Mr. Don Camacho, Engineering Manager  
Oceanic Cablevision  
200 Akamainui St.  
Mililani, Hawaii 96789

#### ORGANIZATIONS AND INDIVIDUALS

Life of the Land  
2500 Pali Highway  
Honolulu, Hawaii 96817

Sierra Club, Hawaii Chapter  
212 Merchant Street, Room 201  
Honolulu, Hawaii 96813

Waianae Library  
85-625 Farrington Highway  
Waianae, Hawaii 96792

Waianae Mall Shopping Center  
86-120 Farrington Highway  
Waianae, Hawaii 96792

Waianae Neighborhood Board No. 24  
P. O. Box 869  
Waianae, Hawaii 96792

## SECTION 8

### INDIVIDUALS, AGENCIES, & DOCUMENTS CONSULTED

#### AGENCIES

During the preparation of the Draft Environmental Assessment, the following agencies provided comments on the proposed project:

1. City and County of Honolulu, Department of Public Works, Division of Refuse Collection & Disposal, Mr. John Lee:

The Waimanalo Gulch Landfill has adequate capacity to accommodate the additional solid waste that would be generated by the secondary treatment process at Waianae WWTP.

2. City and County of Honolulu, Department of Land Utilization, Mr. Mario Siu-Li:

If the proposed project is located within a flood hazard zone, a Flood Hazard Variance will be required.

3. City and County of Honolulu, Department of Land Utilization, Mr. Art Challacombe:

Since the proposed project is located within the Special Management Area, a Special Management Area Use Permit is required.

4. City and County of Honolulu, Department of Land Utilization, Mr. Bob Bannister:

The proposed project site is zoned I-2 (Intensive Industrial District) and has a maximum height allowance of 40 feet. A Public Use/Utilities Waiver will be required to exceed the maximum height allowance.

5. City and County of Honolulu, Department of Land Utilization, Ms. Eileen Mark:

Because the Waianae WWTP is classified as a Utility Installation Type A and is located in an I-2 zone, a Conditional Use Permit is not required.

## DOCUMENTS

The following documents were consulted during the preparation of the Draft Environmental Assessment:

City and County of Honolulu, Department of Land Utilization, Land Use Ordinance, December 1990.

M&E Pacific, Inc., Environmental Impact Statement on the Expansion and Upgrading of the Waianae Wastewater Treatment Plant, November 1977.

M&E Pacific, Inc., Final Supplemental Environmental Impact Statement for the Expansion and Upgrading of the Waianae Wastewater Treatment & Disposal System, August 1983.

Soil Conservation Service, Department of Agriculture, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, August 1972.

State of Hawaii, Department of Business, Economic Development and Tourism, State of Hawaii Data Book 1991: A Statistical Abstract, November 1991.

State of Hawaii, Department of Health, "EPA Denies Treatment Waiver for Plant in Waianae, Hawaii," news release, October 3, 1989.

R. M. Towill Corporation, Supplemental Preliminary Engineering Report for the Waianae Wastewater Treatment Plant Upgrade to Secondary, April 1992.

APPENDIX

APPENDIX  
CONSULTATION PERIOD COMMENTS AND RESPONSES

The following agencies, organizations, and individuals provided comments on the Draft Environmental Assessment during the consultation period. Copies of the comment and response letters are contained in this appendix.

City and County of Honolulu, Board of Water Supply  
City and County of Honolulu, Department of Land Utilization  
City and County of Honolulu, Department of Parks and Recreation  
City and County of Honolulu, Department of Transportation Services  
City and County of Honolulu, Fire Department  
City and County of Honolulu, Planning Department  
City and County of Honolulu, Police Department  
Oceanic Cablevision  
State of Hawaii, Commission on Persons with Disabilities  
State of Hawaii, Department of Business, Economic Development and Tourism  
State of Hawaii, Department of Health  
State of Hawaii, Department of Land and Natural Resources  
State of Hawaii, Department of Transportation  
State of Hawaii, University of Hawaii Environmental Center  
U.S. Army Engineer District, Honolulu

FEB-05-1993 08:16 FROM: MHI-ADMINISTRATION TO: 98421937 P. US

BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU



RECEIVED  
630 SOUTH BERTNERA ST. #1111  
HONOLULU, HAWAII 96840  
JAN 29 8 59 AM '93

FRANK F. FAD MAP  
MILTON D. WATSON JR. CHIEF ENGINEER  
MURPHY H. YAMASHIRO JR. CHIEF ENGINEER  
SYSTEMS DEPARTMENT AND CHECK OFFICER  
KEVIN J. JOHNSON JR.  
WELLSLEY STREET  
C. MICHAEL STREET  
KAZU HAYASHIDA  
Manager and Chief Engineer

DIV. OF WASTE WATER MANAGEMENT  
JANUARY 28, 1993  
93-10328

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU  
430 SOUTH KING STREET  
HONOLULU, HAWAII 96813



February 23, 1993  
MPW 93-178

TO: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

FROM: FOR KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER  
BOARD OF WATER SUPPLY

SUBJECT: YOUR MEMORANDUM OF JANUARY 7, 1993 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR THE PROPOSED WAIANAE WASTEWATER TREATMENT PLANT, SECONDARY TREATMENT FACILITIES. TMK: 8-6-1-44

Thank you for the opportunity to comment on the proposed Waianae Wastewater Treatment Plant Secondary Treatment Facilities project. We have the following comments:

1. There are two water meters one domestic and one fire currently serving the facility.
2. The availability of additional water will be confirmed when the building permit application is submitted for our review and approval. If additional water is made available, the applicant will be required to pay the prevailing Water System Facilities Charges and any applicable meter installation charges.
3. If a three-inch or larger water meter is required, construction drawings showing the meter installation should be submitted for our review and approval.
4. In accordance with Board of Water Supply (BWS) cross-connection control requirements, approved reduced pressure principle backflow prevention assemblies are required on all BWS service connections to wastewater treatment facilities immediately after the property valve and prior to any branch piping.

If you have any questions, please contact Bert Kulioka at 527-5235.

MEMORANDUM

TO: MR. KAZU HAYASHIDA, MANAGER AND CHIEF ENGINEER  
BOARD OF WATER SUPPLY

FROM: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIANAE WASTEWATER TREATMENT PLANT, SECONDARY TREATMENT FACILITIES, OAHU, HAWAII

Thank you for your January 28, 1993 comments on the subject assessment. We will submit construction drawings for your review and approval. In addition, the project will attempt to minimize potable water use through the use of treated effluent. Any applicable Water System Facilities Charges and meter installation charges will be paid.

A copy of your letter will be appended to the Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

CC: R. H. Towill Corporation

*C. Michael Street*  
C. MICHAEL STREET  
Director and Chief Engineer



11:03 FROM ADMINISTRATION TO 98-21937 P.17.

C. MICHAEL STREET  
Page 3  
February 22, 1993

We appreciate the opportunity to review and comment on the DEA. Should you have any questions, please contact Joan Takano of our staff at 527-5038.



DONALD A. CLEGG  
Director of Land Utilization

DAC:smc  
attach.  
gideawep2.jht

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

400 SOUTH KING STREET  
HONOLULU, HAWAII 96813



FRANK P. EARL  
MAYOR

C. MICHAEL STREET  
DIRECTOR AND CHIEF ENGINEER  
P.O. BOX 93  
HONOLULU, HAWAII 96813

April 23, 1993

WPW 93-463

MEMORANDUM

TO: MR. DONALD CLEGG, DIRECTOR  
DEPARTMENT OF LAND UTILIZATION

FROM: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIANA'E WASTEWATER  
TREATMENT PLANT, SECONDARY TREATMENT FACILITIES, OAHU,  
HAWAII

Mr. Donald Clegg - 2 - April 23, 1993

2. A modification to the existing use permit will be filed. Thank you for instructions regarding this matter.
- A copy of your letter will be appended to the final Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

*C. Michael Street*  
C. MICHAEL STREET  
Director and Chief Engineer

cc: R.M. Towill Corporation

Thank you for your February 22, 1993 comments on the subject assessment. We have the following responses to the comments listed in your memorandum:

General Description

1. We have added a definition of terms to Section 1.1 of the final Environmental Assessment.
2. We have updated the general site plan in the final Environmental Assessment to show all proposed structures.

Flood

We have met with Mr. Mario Siu-li of your department on the project. Per his instructions, we have designed the facilities to conform to requirements for the Flood Fringe District. First, we defined where the flood line is. Second, we designed the facilities to withstand buoyant forces in the soil. Lastly, we have elevated the structures and designed them to prevent spillage, inundation and infiltration into the facilities.

Required Permits

1. A discussion on coastal views is added to the final Environmental Assessment. Recreational resources are discussed in the final Environmental Assessment. We anticipate no impact in this area.

DEPARTMENT OF PARKS AND RECREATION

CITY AND COUNTY OF HONOLULU

830 SOUTH KING STREET  
HONOLULU, HAWAII 96813



RECEIVED  
93 FEB 1 5 01 PM '93  
DIV OF WASTEWATER MANAGEMENT

93-0280  
USE Div/Dep Area

FRANK PASK  
MANAGER

WALTER M. OZAWA  
DIRECTOR  
DEPARTMENT OF PARKS AND RECREATION

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

800 SOUTH KING STREET  
HONOLULU, HAWAII 96813



FRANK PASK  
MANAGER

C. MICHAEL STREET  
DIRECTOR  
DEPARTMENT OF PUBLIC WORKS

January 25, 1993

February 23, 1993

NPW 93-181

TO: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

FROM: WALTER M. OZAWA, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR  
WAIANAHE WASTEWATER TREATMENT PLANT  
SECONDARY TREATMENT FACILITIES  
OAHU, HAWAII  
TAX MAP KEY 8-6-01: 44

We have reviewed the draft environmental assessment for the proposed project and have no comment to offer at this time. Should you have any questions, please contact Lester Lai of our Advance Planning Branch at extension 4696.

For WALTER M. OZAWA, Director

WMO:ei

MEMORANDUM

TO: MR. WALTER M. OZAWA, DIRECTOR  
DEPARTMENT OF PARKS AND RECREATION

FROM: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIANAHE WASTEWATER TREATMENT PLANT, SECONDARY TREATMENT FACILITIES, OAHU, HAWAII

Thank you for your January 25, 1993 letter regarding the subject project. We appreciate your review of the subject document.

A copy of your letter will be appended to the Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

*C. Michael Street*  
Director and Chief Engineer

cc: R. M. Towill Corporation

DEPARTMENT OF TRANSPORTATION SERVICES  
CITY AND COUNTY OF HONOLULU

810 SOUTH KING STREET  
HONOLULU, HAWAII 96813



92-0608 ak  
92-0608 ak  
JOSEPH M. MAGALDI, JR.  
DIRECTOR

TE-115  
PL93.1.005

February 23, 1993

MEMORANDUM

TO: C. MICHAEL STREET, DIRECTOR & CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

FROM: JOSEPH M. MAGALDI, JR., DIRECTOR

SUBJECT: FARRINGTON HIGHWAY-WAIAHAE WASTEWATER TREATMENT  
PLANT: SECONDARY TREATMENT FACILITIES  
DRAFT ENVIRONMENTAL ASSESSMENT  
THK: 8-6-01: 44

This is in response to your memorandum dated January 7, 1993 requesting our comments on the subject project.

The access to this site is from Farrington Highway which is under the jurisdiction of the State Department of Transportation. We, therefore, have no objections or comments to offer at this time.

Should you have any questions, please contact Wayne Nakamoto of my staff at local 4190.

JOSEPH M. MAGALDI, JR.

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

810 SOUTH KING STREET  
HONOLULU, HAWAII 96813



C. MICHAEL STREET  
DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

MPW 93-366

April 2, 1993

MEMORANDUM

TO: MR. JOSEPH M. MAGALDI, JR., DIRECTOR  
DEPARTMENT OF TRANSPORTATION SERVICES

FROM: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIAHAE WASTEWATER  
TREATMENT PLANT, SECONDARY TREATMENT FACILITIES,  
OAHU, HAWAII

Thank you for your February 23, 1993 comments on the subject assessment. We appreciate the information you provided regarding the jurisdiction of Farrington Highway.

A copy of your letter will be appended to the Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

C. MICHAEL STREET  
Director and Chief Engineer

cc: R. M. Towill Corporation

FEB-25-1993 14:00 FROM WFT-ADMINISTRATION TO 98421937 P.02

**CITY AND COUNTY OF HONOLULU**  
FIRE DEPARTMENT  
310 SOUTH KING STREET  
HONOLULU HAWAII 96813



FRANK PALL  
CHIEF

RECEIVED  
DIV. OF WASTEWATER MANAGEMENT  
93 FEB 18 12:43

February 10, 1993

TO: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

FROM: FIRE DEPUTY CHIEF RICHARD R. SETO-MOOK

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIANAE WASTEWATER TREATMENT PLANT, SECONDARY TREATMENT FACILITIES, OAHU, HAWAII

*Handwritten notes:*  
82-6524  
93-1099  
2/18/93  
RICHARD R. SETO-MOOK  
FIRE DEPUTY CHIEF

DEPARTMENT OF PUBLIC WORKS  
**CITY AND COUNTY OF HONOLULU**  
490 SOUTH KING STREET  
HONOLULU HAWAII 96813



FRANK PALL  
CHIEF

April 2, 1993

MEMORANDUM

TO: MR. RICHARD R. SETO-MOOK, FIRE DEPUTY CHIEF  
FIRE DEPARTMENT

FROM: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIANAE WASTEWATER TREATMENT PLANT, SECONDARY TREATMENT FACILITIES, OAHU, HAWAII

MPW 93-365

C. MICHAEL STREET  
DIRECTOR AND CHIEF ENGINEER  
FIRE DEPARTMENT  
DEPUTY DIRECTOR

We have reviewed the subject material provided and foresee no adverse impact in Fire Department facilities or services.

Access for fire apparatus, water supply and building construction shall be in conformance to existing codes and standards.

Should you have any questions, please call Assistant Chief Attilio Leonardi of our Administrative Services Bureau at 831-7775.

*Richard R. Seto-Mook*  
RICHARD R. SETO-MOOK  
Fire Deputy Chief

WN:my

Thank you for your February 10, 1993 comments on the subject assessment. Access for fire apparatus, water supply and building construction will conform to existing codes and standards.

A copy of your letter will be appended to the Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

*C. Michael Street*  
C. MICHAEL STREET  
Director and Chief Engineer

cc: R. M. Towill Corporation

DEPARTMENT OF PUBLIC WORKS  
**CITY AND COUNTY OF HONOLULU**  
 520 SOUTH KING STREET  
 HONOLULU, HAWAII 96813



200 WHEEL STREET  
 HONOLULU, HAWAII 96813  
 TEL: 535-6140  
 FAX: 535-6141

HPW 93-179

February 23, 1993

MEMORANDUM

**TO:** MR. ROBIN FOSTER, CHIEF PLANNING OFFICER  
 PLANNING DEPARTMENT

**FROM:** C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
 DEPARTMENT OF PUBLIC WORKS

**SUBJECT:** DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIANA'E WASTEWATER  
 TREATMENT PLANT, SECONDARY TREATMENT FACILITIES, OAHU,  
 HAWAII

Thank you for your February 3, 1993 comments on the subject assessment. We appreciate the information you provided regarding the Waianae Development Plan Public Facilities Map.

A copy of your letter will be appended to the Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

*C. Michael Street*

C. MICHAEL STREET  
 Director and Chief Engineer

cc: /R. M. Towill Corporation

PLANNING DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**  
 520 SOUTH KING STREET  
 HONOLULU, HAWAII 96813



FORMER JAW  
 5200

February 3, 1993

MEMORANDUM

**TO:** C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
 DEPARTMENT OF PUBLIC WORKS

**FROM:** ROBIN FOSTER, CHIEF PLANNING OFFICER  
 PLANNING DEPARTMENT

**SUBJECT:** DRAFT ENVIRONMENTAL ASSESSMENT (DEA) FOR WAIANA'E  
 WASTEWATER TREATMENT PLANT, SECONDARY TREATMENT  
 FACILITIES, OAHU, HAWAII

In response to your department's request of January 7, 1993, we have reviewed the subject DEA and continue to support the proposed project with the following comments:

1. The proposed project site is consistent with the current Public and Quasi-Public (Public Facilities) use designation on the Waianae Development Plan Land Use Map.
2. A portion of the Waianae Development Plan Public Facilities Map was amended on October 27, 1992, by adding a symbol for a publicly funded sewage treatment plant/modification, site determined, within six years, for the proposed secondary treatment facility at the existing Waianae Wastewater Treatment Plant (see attached Ordinance No. 92-114).

Should you have any questions, please contact Matthew Higashida of our staff at 527-6056.

*Robin Foster*

ROBIN FOSTER  
 Chief Planning Officer

RF:lh

Attachment

cc: Office of Environmental Quality Control  
 /R. M. Towill Corporation

FEB-05-1993 08:14 FROM 141-ADMINISTRATION TO 58421937 P.02

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

POLICE DEPARTMENT  
CITY AND COUNTY OF HONOLULU



520 SOUTH KING STREET  
HONOLULU, HAWAII 96813  
TELEPHONE 535-2500

881 SOUTH BRISTOL STREET  
HONOLULU, HAWAII 96813 - AREA CODE (808) 528-2600

FORM NO. 7000  
REV. 10-78

MICHAEL S. MAKAMURA  
CHIEF

MARCOLO M. KAWASAKI  
DEPUTY CHIEF

MPW 93-180

February 23, 1993

January 19, 1993

OUR REFERENCE CS-12

MEMORANDUM

TO: MR. MICHAEL S. MAKAMURA, CHIEF OF POLICE  
HONOLULU POLICE DEPARTMENT

FROM: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIANAЕ WASTEWATER  
TREATMENT PLANT, SECONDARY TREATMENT FACILITIES, OAHU,  
HAWAII

TO: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

FROM: MICHAEL S. MAKAMURA, CHIEF OF POLICE  
HONOLULU POLICE DEPARTMENT

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR WAIANAЕ WASTEWATER TREATMENT  
PLANT, SECONDARY TREATMENT FACILITIES, OAHU, HAWAII

We have reviewed the subject document.

As long as provision is actually made to mitigate operating noise, the proposed project, when it is completed, should have negligible impact on the facilities and services of the Honolulu Police Department. However, we do have the following concerns and would like to offer our comments.

The structure, as well as landscaping, should be designed in a way to discourage vandalism and other criminal acts.

We have noted that problems relative to construction dust, noise and traffic impacts have been addressed in the subject document. The proposed mitigating measures should help in alleviating calls for service that are usually generated by this kind of project. It would also be a good idea for the contractor(s) to notify the surrounding neighborhood of the construction schedule and that there will be some dust and noise and that additional vehicles will be in the area.

Thank you for the opportunity to comment.

MICHAEL S. MAKAMURA  
Chief of Police

By *Michael S. Hughes*  
CHESTER B. HUGHES  
Assistant Chief of Police  
Support Services Bureau

Thank you for your January 19, 1993 comments on the subject assessment. We have the following responses to the three (3) comments listed in your memorandum:

1. Operating noise levels will be maintained within allowable limits by enclosing noise-generating process equipment or using acoustical walls.
2. Access to the Waianae Wastewater Treatment Plant (WWTP) is limited since the facility is enclosed within fences and gates. The landscape of the Waianae WWTP will consist of planting native coastal plants along the highway edge to camouflage the facility to look naturalized and not call attention to itself. This will be accomplished by moving the chain link fence back a few feet and building a series of low mounds in front of the fence. The mounds will not be continuous and allow for security viewing into the facility when necessary. The landscape planting will consist of very thorny plants at the base of the fence to complement the barbed wire at the top, which will discourage getting close to the fence.
3. The proposed measures to mitigate impacts of construction dust, noise and traffic will be followed. In addition, the contractor(s) will provide notification to the surrounding neighborhood of the construction schedule.

Mr. Michael S. Nakamura - 2 - February 23, 1993

A copy of your letter will be appended to the Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

*C. Michael Street*  
C. MICHAEL STREET  
Director and Chief Engineer

cc: /R. M. Towill Corporation

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

January 25, 1993

Memorandum

To: File  
From: Jared Lum  
DWWWM, DPW  
Subject: EA Comments for Waianae WWTP Secondary Facilities

John Lewis of Oceanic Cable called on Jan. 25, 1993 at 10:40 a.m. He said they have no comments on the EA.



FRANK P. BAY  
DIRECTOR

C. MICHAEL STREET  
PROFESSIONAL ENGINEER LICENSE NO. 15043  
1115 S. LUMINAO  
HONOLULU, HAWAII 96813

February 23, 1993

WPH 93-177

Mr. John Lewis  
Oceanic Cablevision  
200 Akamaiui Street  
Mililani, Hawaii 96789

Dear Mr. Lewis:

Subject: Draft Environmental Assessment for Waianae  
Wastewater Treatment Plant, Secondary Treatment  
Facilities, Oahu, Hawaii

Thank you for your January 25, 1993 verbal response that your company has no comments on the subject project. We appreciate your review of the subject document.

If there are any questions, please contact Mr. Jared Lum at 523-4654.

Very truly yours,  
  
C. MICHAEL STREET  
Director and Chief Engineer

cc: / R. M. Towill Corporation

FEB-05-1993 08:15 FROM WWT-ADMINISTRATION TO

98421937 P.17



RECEIVED

COMMISSION ON PERSONS WITH DISABILITIES

95 FINANCIAL PLAZA, Suite 210, 500 Ala Moana Blvd., Honolulu, HI 96813. Ph. 586-1000 (V/TDD) 586-8121 (V/TDD) 586-8129 (FAX)

DIV. OF WASTEWATER MANAGEMENT

January 26, 1993

Department of Public Works  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Attn: Jared Lum (for C. Michael Street)

Re: Draft Environmental Assessment for Waianae Wastewater Treatment Plant  
Secondary Treatment Facilities

CPD #: 93-20

Dear Mr. Lum:

We have reviewed the Draft Environmental Assessment (EA) solely with respect to access for persons with disabilities; we find no factual errors of concern.

We do however, notice an absence of a policy statement with respect to access for persons with disabilities, and note that a policy statement in Section 4.2 Socio-Economic Environment, relating to the above, may be appropriate. When preparing the final version of the Environmental Assessment, the section that will deal with permitting and review process should include a reference to HRS 103-50, mandatory review for accessibility by the Commission on Persons with Disabilities (CPD) of all publicly funded projects.

Whereas the plan does propose purely mechanical functions which may be exempt from being totally accessible according to UFAS (ADA Guidelines, later this year), there are buildings, need for site access, and opportunities for employment that clearly require accessibility.

Sincerely,

Richard R. Bosch, Architect

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

500 SOUTH KING STREET  
HONOLULU, HAWAII 96813



February 23, 1993

MPH 93-174

Mr. Richard R. Bosch  
Architect  
Commission on Persons with Disabilities  
Five Waterfront Plaza, Suite 210  
500 Ala Moana Boulevard  
Honolulu, Hawaii 96813

Dear Mr. Bosch:

Subject: Draft Environmental Assessment for Waianae  
Wastewater Treatment Plant, Secondary Treatment  
Facilities, Oahu, Hawaii

Thank you for your January 26, 1993 comments on the subject project. We have forwarded a copy of the prefinal construction plans to your office for review. The final version of the Environmental Assessment will include a reference to HRS 103-50, mandatory review for accessibility by the Commission on Persons with Disabilities of all publicly funded projects.

A copy of your letter will be appended to the Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

Very truly yours,

C. MICHAEL STREET  
Director and Chief Engineer

cc: /R. M. Towill Corporation

RECEIVED  
DEPT. OF PUBLIC WORKS  
JAN 28 8 21 AM '93

EMW  
01-26-93

MICHAEL STREET  
DIRECTOR AND CHIEF ENGINEER  
CITY AND COUNTY OF HONOLULU

FEB-08-1993 13:35 FROM: WWT-ADMINISTRATION TO: 96421937 P.02



DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

JOHN WARD Director  
MATT HANNEMANN Director  
BARBARA ELLIOTT Director  
JACK FORD Director  
LUCAS KOPPEL Director

RECEIVED DEPT OF PUBLIC WORKS  
ECONOMIC DEVELOPMENT & TOURISM  
93-0367

FRANK PARI

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU



2 MICHAEL STREET  
HONOLULU HAWAII 96813  
TEL: 535-2100  
FAX: 535-2100

MPW 93-175

February 23, 1993

Mr. Mufi Hannemann, Director  
State Department of Business,  
Economic Development and Tourism  
P.O. Box 2359  
Honolulu, Hawaii 96804

Dear Mr. Hannemann:

Subject: Draft Environmental Assessment for Waianae  
Wastewater Treatment Plant, Secondary Treatment  
Facilities, Oahu, Hawaii

Thank you for your January 28, 1993 letter regarding the subject project. We appreciate your review of the subject document. A copy of your letter will be appended to the Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

Very truly yours,  
*Mufi Hannemann*

M. C. MICHAEL STREET  
Director and Chief Engineer

cc: R. H. Towill Corporation

RECEIVED  
FEB -4 93:12  
DIV. OF WASTEWATER MANAGEMENT  
Mr. C. Michael Street  
Director & Chief Engineer  
Department of Public Works  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

January 28, 1993

Dear Mr. Street:  
Thank you for inviting us to comment on the draft environmental assessment for the Waianae Wastewater Plant's secondary treatment facilities.  
The Department of Business, Economic Development & Tourism, as well as the Land Use Commission, have no comments to offer at this time.

Sincerely,  
*Mufi Hannemann*  
Mufi Hannemann

RECEIVED  
93 FEB 24 9 57



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 309  
HONOLULU, HAWAII 96813  
February 18, 1993

RECEIVED  
OFFICE OF PUBLIC INFORMATION  
FEB 23 12 06 PM '93

93-0577  
Director of Environmental Health  
2/23/93  
93-004/epo

Mr. C. Michael Street  
Director and Chief Engineer  
Department of Public Works  
City & County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Street:

Subject: Request for Comments  
Draft Environmental Assessment  
Waianae Wastewater Treatment Plant  
Secondary Treatment Facilities  
Oahu, Hawaii

Thank you for allowing us to review and comment on the subject request. We have the following comment to offer at this time:

The project involves the construction of additional treatment facilities located within the boundaries of the existing plant. The Waianae Wastewater Treatment Plant (WWTP) is a primary wastewater treatment plant and will be implementing secondary treatment. It is further stated that the proposed secondary treatment facilities will not require additional land area or changes in land use designation.

1. If the City and County anticipates requesting a loan under the State Revolving Fund (SRF) Program from the Department of Health and Federal funds are provided, the City will have to comply with the SRF Federal regulations, specifically 40 CFR 35, Subpart K.
  - a. The project must undergo a State Environmental Review Process (SERP);
  - b. The City must assess the impacts of the proposed project on other Federal authorities ("cross-cutting authorities") to include:
    - Archaeological & Historic Preservation Act
    - Clean Air Act
    - Coastal Zone Management Act
    - Endangered Species Act
    - Farmland Protection Policy Act
    - Floodplain Management Executive Order

Mr. C. Michael Street  
February 18, 1993  
Page 2

- Natural History Preservation Act
- Safe Drinking Water Act
- Protection of Wetlands Executive Order
- Wild and Scenic Rivers Act

- c. The project should make efforts to inform and involve public participation as much as possible. There is a Federal requirement for the City to hold at least one public meeting or hearing during the environmental review process.
- d. Prior decision documents (EIS, FMSI, etc.) which have been issued for the Waianae WWTP may be submitted. These documents must contain information applicable or pertinent to the proposed project.
2. The City plans to continue the use of chlorine to disinfect the effluent prior to its release into the ocean. Will there be any change to the disinfection method under the proposed project?
3. In Section 4.1.6, the report states that the proposed project "should have no negative impact and/or result in an improvement to the ocean environment." It would appear that the addition of secondary treatment would result in appreciably cleaner effluent which would improve the ocean environment in the area of the outfall.
4. Similarly, in Section 4.2.3, the improvement of the effluent should improve the ocean-related recreational facilities located near the plant site.

Should you have any questions, please feel free to contact Mr. Dave Gustafson or Ms. Lori Kajiwara of the Wastewater Branch at 586-4290.

Very truly yours,

*John C. Lewin*  
JOHN C. LEWIN, M.D.  
Director of Health

c: Wastewater Branch

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

600 SOUTH KING STREET  
HONOLULU, HAWAII 96813



FRANK P. KAHALANUI  
MAYOR

C. MICHAEL SHURT  
DIRECTOR OF PUBLIC WORKS  
FELIX L. LAMOREAU  
DEPUTY DIRECTOR

HPW 93-464

April 23, 1993

Dr. John C. Lewin  
Director of Health  
State Department of Health  
P.O. Box 3378  
Honolulu, Hawaii 96801

Dear Dr. Lewin:

Subject: Draft Environmental Assessment for Waianae Wastewater Treatment Plant, Secondary Treatment Facilities, Oahu, Hawaii

Thank for your February 18, 1993 comments on the subject assessment. We have the following responses to your comments as identified by the comment and item number:

- 1.a. The project will undergo the State Environmental Review Process (SERP).
- 1.b. The following are responses to each of the mentioned regulatory requirements as existing or added to the Environmental Assessment:
  - i. Archaeological and Historic Preservation Act: The subject material is discussed in Section 4.2.2 of the final Environmental Assessment.  
There are no archaeological or historical sites on the project site.
  - ii. Clean Air Act: The subject material is discussed in Section 4.1.8 of the final Environmental Assessment.
  - iii. Coastal Zone Management: This is not required as we are not entering coastal waters.
  - iv. Endangered Species Act: The subject material is discussed in Section 4.1.5 of the final Environmental Assessment. There are no endangered species.
  - v. Farmland Protection Policy Act: The project site does not have farmland nor do parcels bordering it.

Dr. John C. Lewin

- 2 -

April 23, 1993

vi. Floodplain Management Executive Order: The subject material is discussed in Section 4.1.4 of the final Environmental Assessment. The project will comply with the requirements of construction in flood fringe areas.

vii. Natural History Preservations Act: The subject material is discussed in Section 4.2.2 of the final Environmental Assessment. The subject act is not impacted.

viii. Safe Drinking Water Act: The subject material is discussed in Section 4.3.4 of the final Environmental Assessment. There are no potable water sources in the area and none will be affected by the project.

ix. Protection of Wetlands Executive Order: The subject material is discussed in Section 4.1.7 of the final Environmental Assessment. There are no wetlands in the area.

x. Wild and Scenic Rivers Act: The subject material is discussed in Section 4.1.8 of the final Environmental Assessment. There are no rivers in the area or affected by the project.

1.c. A public meeting will be held to inform citizens about the project so that the City may qualify for a loan from the State Revolving Fund.

2. Regarding disinfection, the City is not currently disinfecting effluent from this plant. Our testing of ocean waters and studies by scientists do not indicate a need for disinfection at this plant.

3. Regarding improvements to the ocean environment, scientists who have studied the Waianae ocean area have so far found no negative impacts on the marine life from the primary treated effluent.

4. Regarding the described ocean-related recreational facilities, initial computer modeling and actual testing of ocean waters have so far given no indication that the effluent is travelling back to the shoreline.

A copy of your letter and this response will be appended to the final Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

Very truly yours,

C. Michael Shurt

C. MICHAEL STREET  
Director and Chief Engineer

cc: R.M. Towill Corporation

RECEIVED  
DIV. OF ENVIRONMENTAL RESOURCES  
FEB 11 4 22 PM '93

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
HONOLULU, HAWAII 96819

Mr. C. Stroet  
-2-  
File No.: 93-370

No concur with the County's assessment that upgrading to secondary treatment could result in less impact to the marine environment than from effluent that receives only primary treatment. In the meantime, we expect water monitoring efforts to continue per the existing CMA conditions.

In addition, the proposed activities should not require a Conservation District Use Application (CMA) amendment if no construction activities, improvements or changes in existing use are proposed within the Conservation District.

Historic Preservation Division Comments:

Our April 23, 1992 comments to Mr. Roland D. Libby, Jr., Planning Department, City and County of Honolulu, concerning the Development Plan Public Facilities Map Amendment for this project are not addressed in this draft environmental assessment. Thus, this draft EA does not adequately cover possible impacts to significant historic sites.

Our comments to Mr. Libby were: A review of our records shows that there are no known historic sites at this parcel, but that the parcel has not been inventoried. Aerial photographs show that a wastewater treatment plant is located on the southern portion of the parcel and that the northern portion is vacant. If this project is implemented our determination of the need for inventory of the parcel will be based on land use history, in particular whether the parcel has been graded or otherwise disturbed.

Since the majority of the proposed secondary treatment facilities will be constructed in the vacant northern portion of the parcel, we will need information on the land use history of that portion of the parcel to complete our review.

Thank you for your cooperation in this matter. Please feel free to call Sam Lemo at our Office of Conservation and Environmental Affairs, at 587-0377, should you have any questions.

Very truly yours,  
John P. Koppala  
JOHN P. KOPPALA, II  
Acting Chairperson

The Honorable C. Michael Street  
Director and Chief Engineer  
Department of Public Works  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Street:

SUBJECT: Draft Environmental Assessment for the Maianas Wastewater Treatment Plant, Secondary Treatment Facilities, Maianas, Oahu, TMK: 8-6-J: 44

Thank you for giving our Department the opportunity to comment on this matter. We have reviewed the draft Environmental Assessment (EA) and have the following comments.

Brief Description:

The existing Maianas WTP uses primary treatment for incoming wastewater. The present diffuser is located 6,180 feet offshore, with the effluent discharged at a mean depth of 100 feet. The outfall's extension required a CMA which had certain water quality monitoring requirements. According to the Department of Public Works, fish tissue, sediments, and effluent were sampled and showed that all priority pollutants were below detectable levels.

Because of a denial of its waiver application, the City and County is now required by the State and the U.S. EPA to upgrade its facilities at Maianas to secondary treatment of incoming wastewater. The City and County expects that there should be much less impacts to coastal water quality because secondary treatment of wastewater reduces parameters such as Biological Oxygen Demand, Suspended Solids, and B. coli concentrations.

03-01-1993  
1/10/93  
FILE NO.: 93-370  
DOC. NO.: 2177  
get Aug 2/10

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

150 SOUTH KING STREET  
HONOLULU, HAWAII 96813



FRANKIE FISH  
MAIL ROOM

C. MICHAEL VINEY  
DIRECTOR AND CHIEF ENGINEER  
DEPARTMENT OF PUBLIC WORKS

MPW 93-367

April 9, 1993

Mr. John P. Keppeler, II  
Acting Chairperson  
State Department of Land  
and Natural Resources  
P.O. Box 621  
Honolulu, Hawaii 96809

Dear Mr. Keppeler:

Subject: Draft Environmental Assessment for Waianae  
Wastewater Treatment Plant, Secondary Treatment  
Facilities, Oahu, Hawaii

Thank you for your February 8, 1993 comments on the subject  
project. The following are our responses to your comments:

1. We would like to clarify our position which you had  
paraphrased by the following statement contained at the  
bottom of Page 1 in your letter: "The City and County  
expects that there should be much less impacts to  
coastal water quality because secondary treatment of  
wastewater reduces parameters such as Biological Oxygen  
Demand, Suspended Solids, and E. coli concentrations."  
We agree that effluent that has received secondary  
treatment contains less biochemical oxygen demand  
(BOD), suspended solids (SS) and coliforms than  
effluent that has received primary treatment. However,  
scientists have not yet found any negative impacts on  
the ocean environment from the primary treated  
effluent.
2. Water quality monitoring per the existing Conservation  
District Use Application (CDUA) conditions will  
continue until secondary treatment is implemented. At  
that time, the City may apply for an amendment of the  
CDUA permit to modify the water quality monitoring.
3. No construction activities, improvements or changes in  
existing use are proposed within the Conservation  
District.

Mr. John P. Keppeler, II  
Page Two  
April 9, 1993

4. A review of the construction drawings for the Waianae  
Wastewater Treatment Plant shows that the entire parcel  
of land has been previously graded or disturbed.  
Copies of the grading plan for the construction of the  
original plant (Sunn, Low, Tom & Hara, Inc.,  
December 22, 1965) and a topographic survey  
(R. M. Towill Corporation, May 23, 1992) are attached.  
In addition, according to the attached site plan  
(H & E Pacific, Inc., November 2, 1983 revised  
January 21, 1986) the northwest portion of the site was  
used as a storage and construction area for the Waianae  
Outfall Sewer Extension project.

Based on the above land use history and the fact that  
there are no known historic sites in the area of the  
proposed facilities, no negative impacts on historic or  
archaeological resources are expected as a result of  
the subject project. As discussed in the Draft  
Environmental Assessment, if historic or archaeological  
resources are uncovered during construction, your  
office would be notified immediately, and work  
affecting the resources would be suspended until  
recommended mitigation measures are implemented. If an  
inventory of the parcel is still required, please  
inform us right away.

A copy of your letter will be appended to the Environmental  
Assessment. If there are any questions, please contact Mr. Jared  
Lum at 523-4654.

Very truly yours,

C. MICHAEL VINEY  
Director and Chief Engineer

Attachments

cc: /R. M. Towill Corporation

FEB-18-1993 15:47 FROM LMI-ADMINISTRATION TO 98-121937 P.02

JOHN WELLS  
DIRECTOR

RECEIVED  
FEB 12 9 23 AM '93  
DIRECTOR'S OFFICE  
ADMINISTRATION



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

February 3, 1993

REP. D. JOHNSON  
DIRECTOR  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813

MINI-MATTERS TO  
STEP 8.5003

*ap/ef*  
*WMM*  
*2/1/93*

Mr. C. Michael Street  
Director and Chief Engineer  
Department of Public Works  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Street:

Subject: Draft Environmental Impact Statement (DEIS)  
Waianae Wastewater Treatment Plant  
Secondary Treatment Facilities

The short-term impacts generated by the proposed improvements to the Waianae Wastewater Treatment Plant should be mitigated by implementing the measures identified on Page 17 of the DEIS. Control of traffic on Farrington Highway must be coordinated and approved by our Highways Division. Any plans for work within the State highway right-of-way must also be approved by the Highways Division

We appreciate this opportunity to provide comments

Sincerely,

*Rex D. Johnson*

Rex D. Johnson  
Director of Transportation

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813



C. MICHAEL STREET  
DIRECTOR AND CHIEF ENGINEER  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

HPW 93-364

April 6, 1993

Mr. Rex D. Johnson, Director  
State Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii 96813

Dear Mr. Johnson:

Subject: Draft Environmental Assessment for Waianae  
Wastewater Treatment Plant, Secondary Treatment  
Facilities, Oahu, Hawaii

Thank you for your February 3, 1993 comments on the subject project. The measures to mitigate short-term impacts on traffic, discussed on Page 17 of the Draft Environmental Assessment, have been incorporated in the Contract Documents. No actual construction work will occur within the State highway right-of-way. An area will be set aside within the plant boundaries for construction staging. Therefore, we do not foresee any adverse impacts to traffic on Farrington Highway.

A copy of your letter will be appended to the Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

Very truly yours,

*C. Michael Street*

C. MICHAEL STREET  
Director and Chief Engineer

cc: R. M. Towill Corporation



RECEIVED

95 FEB -8 40:38

University of Hawaii at Manoa

Environmental Center
A Unit of Water Resources Research Center
WASTE WATER MANAGEMENT
Crawford 317 • 2550 Campus Road • Honolulu, Hawaii 96822
Telephone: (808) 956-7361

February 4, 1993
EA:000015

Mr. Jared Lusa
Division of Wastewater Management
Department of Public Works
City and County
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Lusa:

Draft Environmental Assessment
Maunaloa Wastewater Treatment Plant
Secondary Treatment Facilities
Maunaloa, Oahu

The referenced project involves the construction of secondary treatment facilities to upgrade the performance of the Maunaloa Wastewater Treatment Plant (WWTP) in order to meet Federal and State Water Quality Standards. The proposed facilities are to be constructed within the boundaries of the existing plant and include: trickling filters, a solids contact reactor basin, final clarifiers, a thickening/dewatering building, a secondary operations building, pump stations, valve boxes, modifications to the existing sand drying beds, and odor control facilities.

Our review of the Draft Environmental Assessment (DEA) was prepared with the assistance of Roger Fujioka, Water Resources Research Center; Karl Kin, Urban and Regional Planning; Hans-Jurgen Krock, Ocean Engineering; Stephen Lau, Civil Engineering; Reginald Young, Engineering; and Elizabeth Gordon, Environmental Center.

General Comments

Pursuant to the EIS Rules (Section 11-200-9; 11-200-10; 11-200-12; 11-200-25, H.A.R.), Environmental Assessments are intended to provide sufficient information to evaluate the significance of potential impacts. Our reviewer's have major concerns that the project will significantly affect air quality as defined in Section 11-200-12 b(10), H.A.R. This project will also have a substantial economic impact on the state, not only in initial cost, but in long-term operational cost (ref. 11-200-12 b(4), H.A.R.) Therefore, in accordance with Sections 343-5(b) and 343-5(c), H.R.S., we find that since the proposed action may have a significant effect on the environment, a full Environmental Impact Statement (EIS) is required.

Mr. Jared Lusa
February 4, 1993
Page 2

Proposed New Facilities (Section 2.3)

We are generally concerned with the lack of substantive justifications for choosing the Trickling Filter Process (TF) over the proposed alternatives. For example, what are specific reasons for not using the Activated Sludge Process? We are particularly concerned whether anaerobic digestion is viable from a functional standpoint. A major problem which has not been addressed in the DEA is the high salinity of water in the infiltration collection system which will significantly limit anaerobic digestion of sludge. The proposed design does not account for the high sulfate content that will be produced from the process, and which will create an odor and air pollution (hydrogen sulfide) problem. The proposed design also does not take in account the amount of sludge that will also have to be handled.

SUMMARY

Given the sensitivity of the environment and the significance of the potential impacts, we suggest that a Draft EIS should be prepared to more fully examine the characteristics and consequences of this action. Only then can decision making be rationally undertaken with a full appreciation of potential impacts and of options which the presently proposed action may foreclose.

Sincerely,

Jacquelin N. Miller

Jacquelin Miller
Associate Environmental Coordinator

- cc: OEDC
R.M. Powell Corporation
Roger Fujioka
Karl Kin
Hans-Jurgen Krock
Stephen Lau
Reginald Young
Elizabeth Gordon

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU

400 SOUTH KING STREET  
HONOLULU, HAWAII 96813



FRANK P. YAM  
DIRECTOR

2 MICHAEL STREET  
HONOLULU, HAWAII 96813  
ELIUB B. LUKHARD  
SUPERVISOR

WPW 93-176

February 23, 1993

Ms. Jacquelin Miller  
Associate Environmental Coordinator  
Environmental Center  
University of Hawaii at Manoa  
2550 Campus Road, Crawford 317  
Honolulu, Hawaii 96822

Dear Ms. Miller:

Subject: Draft Environmental Assessment for Waianae  
Wastewater Treatment Plant, Secondary Treatment  
Facilities, Oahu, Hawaii

Thank you for your February 4, 1993 comments on the subject  
project. The following are our responses to your comments:

1. The subject project is not expected to significantly  
affect air quality in the vicinity. The design of the  
secondary treatment facilities includes provisions for  
collecting and treating foul air from the new trickling  
filters, new thickening/dewatering building, and  
existing primary clarifier weirs.
2. Regarding economic impacts, the subject project is  
needed to fulfill the Federal Water Pollution Control  
Act's requirements for secondary treatment by publicly-  
owned treatment works. In addition, the City and  
County of Honolulu must comply with the State  
Department of Health's Consent Order, dated  
February 16, 1984, which establishes a compliance  
schedule for implementing secondary treatment at the  
Waianae Wastewater Treatment Plant (WWTP). Failure to  
comply with the Consent Order would result in  
enforcement action against the City and County of  
Honolulu. Therefore, noncompliance would have a more  
significant economic impact than complying with the  
Consent Order.

Ms. Jacquelin Miller - 2 - February 23, 1993

3. Section 5 of the subject document describes the reasons  
for not selecting the alternative treatment processes  
for the Waianae WWTP. A more detailed evaluation of  
the selection process is presented in the Preliminary  
Engineering Report (PER).

4. The anaerobic digesters shown in the proposed site  
layout (Figure 2-3) are existing treatment units.  
Since 1967, the Waianae WWTP has been successfully  
using its anaerobic digesters for sludge stabilization.  
Salinity conditions are not impacting current  
performance. Since the secondary treatment facilities  
will use the existing digestion process, which has over  
25 years of proven performance, it is expected that the  
continued use of anaerobic digestion is a viable method  
of sludge stabilization.

5. Sections 2.3.4, 2.3.5, and 4.3.3 of the subject  
document discuss sludge treatment and disposal. The  
PER contains data on the amount of sludge to be  
generated by the secondary treatment facility and  
facilities added to accommodate it.

A detailed analysis of the environmental impacts of the existing  
facility can be found in the Environmental Impact Statement on  
the Expansion and Upgrading of the Waianae Wastewater Treatment  
and Disposal System (November 1977) and Supplemental  
Environmental Impact Statement for the Expansion and Upgrading of  
the Waianae Wastewater Treatment and Disposal System (August  
1983).

A copy of your letter will be appended to the Environmental  
Assessment. If there are any questions, please contact Mr. Jared  
Lum at 523-4654.

Very truly yours,

*C. Michael Street*

C. MICHAEL STREET  
Director and Chief Engineer

cc: R. M. Towill Corporation/

FEB-05-1993 08:15 FROM WPT-ADMINISTRATION TO

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DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DISTRICT, HONOLULU

BUILDING 320  
FT. SHAFTER, WAIKANAHE, HAWAII

RECEIVED  
JAN 30 9 04 AM '93

DIV. OF  
WASTEWATER  
MANAGEMENT

REPLY TO  
ATTENTION OF:

Planning Division

Mr. Michael Street  
Director and Chief Engineer  
Department of Public Works  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Street:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the Waianae Wastewater Treatment Plant, Secondary Treatment Facilities, Oahu (TKR 8-6-01: 44). The following comments are provided pursuant to Corps of Engineers authorities to disseminate flood hazard information under the Flood Control Act of 1960 and to issue Department of the Army permits under the Clean Water Act, the Rivers and Harbors Act of 1899, and the Marine Protection, Research and Sanctuaries Act.

- a. The project does not involve work in waters of the U.S.; therefore, a DA permit will not be required.
- b. The flood hazard information provided on page 12, paragraph 4.14 is correct.

Sincerely,

*Kisuk Cheung*  
Kisuk Cheung, P.E.  
Director of Engineering

DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU  
590 SOUTH KING STREET  
HONOLULU HAWAII 96813



FRANK'S CASE  
SECTION

C. MICHAEL STREET  
DIRECTOR AND CHIEF ENGINEER  
PUBLIC WORKS SECTION  
HONOLULU HAWAII

February 23, 1993

WPW 93-173

Mr. Kisuk Cheung  
Director of Engineering  
Department of the Army  
U.S. Army Engineer District, Honolulu  
Fort Shafter, Hawaii 96858-5440

Dear Mr. Cheung:

Subject: Draft Environmental Assessment for Waianae Wastewater Treatment Plant, Secondary Treatment Facilities, Oahu, Hawaii

Thank you for your January 25, 1993 comments on the subject project. We appreciate your review of the flood hazards of the subject project.

A copy of your letter will be appended to the Environmental Assessment. If there are any questions, please contact Mr. Jared Lum at 523-4654.

Very truly yours,

*C. Michael Street*  
C. MICHAEL STREET  
Director and Chief Engineer

cc: R. M. Towill Corporation