Old Hilo Wastewater Treatment Plant Conversion

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August 18, 1998

Mr. Gary Gill, Director
Office of Environmental Quality Control
235 South Beretania Street, Room 702
Honolulu, HI 96813

Subject: Notice of Determination: Finding of No Significant Impact (FONSI)
Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii
TMK: 3-2-1-11: parcel 4

The County of Hawaii Department of Public Works (DPW) is the proposing and accepting agency for the above referenced project. The DPW reviewed and responded to comments related to the conversion of the Old Hilo Wastewater Treatment Plant. The 30-day review period began June 23, 1998 and ended July 23, 1998. The Department determined that the implementation of this project will not have any significant environmental effects as defined by HAR 11-200-12. Therefore, the agency is issuing a Finding of No Significant Impact (FONSI). Please publish this notice in the September 8, 1998 issue of *The Environmental Notice*. We have enclosed a completed OEQC Bulletin Publication Form and four copies of the final EA.

Identification of the Proposing Agency:
The County of Hawaii, Department of Public Works

Identification of the Accepting Agency:
The County of Hawaii, Department of Public Works

Brief Description of Proposed Action:
A recently constructed wastewater treatment facility, located near the General Lyman Airport in Hilo replaced the prior facility located at Puhi Bay in Keaukaha. The prior facility known as Old Hilo Wastewater Treatment Plant (WWTP) is now idle and underutilized with the exception of a new and functioning pump station located on site. It is proposed to convert Old Hilo WWTP into an aquacultural center. The conversion will involve the demolition and removal of most of

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the mechanical and electrical equipment on site along with the retention and renovation of most of the existing structures. As part of the conversion, the parcel will be divided into two sections with the largest portion going to the aquacultural center while the remaining portion will be retained by the County of Hawaii to continue their pumping operations. This Environmental Assessment is principally concerned with the demolition and removal portions of the conversion process.

Determination:
Finding of No Significant Impact (FONSI)

Reasons Supporting Determination:
This determination is based on the significance criteria listed in HAR 11-200-12 of the Environmental Impact Statement Rules. Specifically, these significance criteria are addressed in Section 10.0 DETERMINATION of the EA.

Contact Persons for Further Information:

Proposing Agency: Mr. Peter Boucher, Chief Division of Wastewater
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Enclosures

cc: Peter Boucher, WWD
Bruce Wade, M&E Pacific

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1998-09-08-HI-FEA-Old Hilo Wastewater Treatment Plant Conversion

FINAL ENVIRONMENTAL ASSESSMENT

Old Hilo Wastewater Treatment Plant Conversion
Kalanianaole Avenue and Pua Avenue
Hilo, Hawaii

TMK: 3-2-01-011:004

Prepared for

County of Hawaii
Department of Public Works
Division of Wastewater Management

by

M&E Pacific, Inc.
Honolulu, Hawaii

September, 1998

Stephen K. Yamashiro
Mayor

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1.0 APPLICANT

The applicant for the proposed modifications to the Old Hilo Wastewater Treatment Plant (WWTP) is the County of Hawaii, Department of Public Works. The abandoned sewage treatment plant site is owned by the State of Hawaii. According to §343-5 of the Hawaii Revised Statutes (HRS), the preparation of an environmental assessment (EA) is required due to the use of state lands and county funds [§343-5(1)]

2.0 APPROVING AGENCY

The approving agency for a determination of significance for this EA is the County of Hawaii, Department of Public Works.

3.0 CONSULTATION LIST

The following parties have been either contacted or their guidelines consulted for the preparation of this environmental assessment:

Federal Government:
- US Army Corps of Engineers

State of Hawaii:
- Department of Lands and Natural Resources
  - Historic Preservation Division
  - Forestry and Wildlife Division
  - Aquaculture Development Program
  - Land Division
- University of Hawaii at Hilo
  - College of Agriculture
  - Sea Grant College Program

County of Hawaii:
- Department of Public Works

Community:
- Keaukaha Hawaiian Homelands Community Association

4.0 PROJECT OBJECTIVE AND NEED

The County of Hawaii, Department of Public Works constructed a new wastewater treatment facility for Hilo, located approximately one mile east of the Hilo airport. The new facility replaces the prior facility located at Puhi Bay in Keaukaha (Figures 1 and 2). The prior facility, the Old Hilo WWTP, is proposed for conversion into an aquaculture center, Pacific Aquaculture and Coastal Resources Center (PACRC). This conversion will involve the demolition and removal of most of the old mechanical and electrical equipment on site, and the retention and renovation of most of the existing structures. This EA is principally concerned with the demolition and removal components of the total effort required.

The conversion of the Old Hilo WWTP and the development of PACRC are proposed by the University of Hawaii at Hilo (UHH) and the University of Hawaii Sea Grant College Program (UHSGCP) in cooperation with the County of Hawaii (COH), the Aquaculture Development Program of the Department of Lands and Natural Resources (DLNR), the Department of Public Works and the local Hawaiian community. The primary goal of PACRC is to provide a focus for the sustainable development of entire Keaukaha coastline. The Keaukaha coastal area is located on the eastern side of island of Hawaii, stretching about eight (8) miles from Hilo Bay to Kings Landing. Since the closure of the last sugar plantation in 1996, economic activity in this area has been severely depressed with high unemployment rate. Although the area is rich of natural, human, cultural and educational resources, and various infrastructure, many of these resources are currently under utilized. One opportunity for the community to revitalize itself is provided by the decommissioning the Old Hilo WWTP and the development of PACRC. Joined with the abundant resources available in Keaukaha and its adjacent areas, PACRC will benefit the local communities. Furthermore, the technologies developed and tested at the PACRC can be applied to enhance the vitality of other coastal areas and communities.

The development of PACRC will be accomplished through several phases with an approximate duration of seven (7) years. The conversion with basic renovation of the Old Hilo WWTP is the Phase 1. Most buildings and facilities at site will be converted with basic renovation into classrooms, laboratories, offices, hatchery facilities and aquaculture tanks. The subject property will become the physical core of the PACRC, and serve as a teaching, research and demonstration facility for aquaculture and marine science programs of the University of Hawaii at Hilo (UHH) and the University of Hawaii Sea Grant extension program. In the remaining phases, the Center is expected to be expanded onto adjacent vacant land, and the Center's facilities and activities increased as funds become available.

5.0 GENERAL DESCRIPTION OF THE PROPOSED ACTION

5.1 Technical Characteristics

Details of the existing site layout are shown in Figure 3. The County of Hawaii will retain the land on which the new Pua Street pumping station is located, while the abandoned treatment plant site to the west of the pumping station will be relinquished for transfer to the University of

Hawaii. A small parcel on the east side of the property was offered to the Department of Hawaiian Home Lands (DHHL) for expansion of the beach park. The DHHL respectfully declined the offer due to concerns over parcel size and maintenance. (Refer to DHHL letter in the Appendix.) The portion of land offered to the DHHL is shown in Figure 3 as the stippled area on the east side of the subject property.

The County will also retain existing easements and establish new easements for their sewer lines, drainage and access to the pumping station, as shown on Figure 4. This figure also shows a planned layout of the PACRC facilities on the abandoned treatment plant site.

The proposed project will focus on equipment demolition and removal in preparation for converting the decommissioned wastewater treatment plant into a teaching and research facility for aquaculture and marine science. Buildings and treatment facilities at the site will be stripped of the old plant equipment and renovated for the Center's use. Unwanted structures will be demolished and removed, as described below. Future connections are planned to a HIG deep seawater well on the adjacent land parcel to the west to provide cold seawater. Two wells with their pumping facilities are also planned to be installed on site to provide cool seawater and freshwater for the Center. The tentative locations of the two wells are shown in Figure 4.

Conversion of this facility will not impact existing public viewplanes or shoreline access. The site is landscaped presently from the street to disguise the nature of the existing facility (that of a wastewater treatment plant). No new structures are intended for the site. In addition, public access to the site will not be hindered by the proposed conversion. The existing treatment plant sits back from the shoreline above the highwater mark. Shoreline access from the beach park located directly to the east will remain unchanged.

The structures proposed for removal or conversion as part of this project are:

Administration Building

The administration building will be kept and renovated. This building consists of a water quality laboratory, a rest room, a chemical storage room, an administration office, and a pump control-panel room. The building is in a moderately good condition. Small quantities of lab chemicals were left in the storage room. Asbestos containing materials may exist in the floor tiles of the control-panel room.

Due to its generic nature, basic renovation will be needed for this building, including the removal of asbestos containing materials, chemicals and electrical control equipment, refurbishment of the administration office, the laboratory and the control-panel room for the Center's use. The restroom and storage room inside the building may accommodate the Center users in its present form, or with moderate modifications to satisfy the Center's requirements.

Screen, grit and distribution chambers, and aerated channel

The concrete screen, grit, and distribution chambers and the aerated channel were for wastewater preliminary treatment and conveyance to the succeeding treatment facilities (Figure 3). The screen, grit channel and other machinery will be removed. All chambers and the channel will demolished to a depth of at least 3 feet below ground level. It is planned to construct a greenhouse at this location, with aquaculture demonstration tanks proposed to be put both inside and outside the greenhouse.

Clarifiers

Two clarifiers on-site remain as the most visually identifiable structures of the sewage treatment function. These substantial structures are 80 feet in diameter, and constructed of 12-inch thick concrete with footings and piers up to 24-inch thickness. Although they are more than 10 feet deep, only one-third of the tank bodies are above the ground. Each clarifier has approximate 375,000 gallons of storage capacity. The sludge scrapers inside and the catwalks on the top are corroded and close to collapse.

The two clarifiers are proposed to be converted into two large outdoor aquaculture tanks, one for seawater organisms and the other for freshwater organisms. The scrapers, the catwalks and the clarifier center well will be dismantled and removed, and the tanks cleaned. Some of the inlet and outlet features may be modified in anticipation of the requirements of their new use.

Digestion Tanks

The anaerobic digestion tanks are two 60-foot-diameter concrete cylinder tanks located makai of the primary clarifiers. Approximately two-thirds of the tank structures, which are about 29 feet deep, are above ground. Both tanks have sludge, supernatant and gas piping systems, and floating covers. Each tank was able to contain approximately 300,000 gallons of sludge and supernatant. Significant amounts of sludge still remain inside the digesters. Following sludge removal and tank emptying, demolition will include dismantling and removal of the covers, piping systems, and tank internals. The empty tanks will be thoroughly cleaned in preparation for their modification. Sludge disposal will follow DOH approved practices.

Chlorination Building and Chlorine Contact Tank

The chlorination building is located immediately makai of the administration building. It is primarily an open concrete structure with a chlorinator room attached, and a concrete crane-rail supporting frame crossing the driveway. The enclosed areas of the structure can be adapted to provide storage space and the covered area is to be converted into an outdoor classroom after the walls and roof are refurbished. The machinery inside will be removed except for most of the existing 2-ton rail crane which may be retained for the Center's use. A portion of the rail extending past the building along with its support column will be dismantled and removed as they are on the land to be retained for Pua Street Pump Station (Figure 3).

The open chlorine contact tank outside the chlorination building is a channelized concrete box, 50-foot long and 40-foot wide with two concrete sluices inside. The structure is below the ground, and has a capacity of approximately 60,000 gallons. A broken flume is left in the tank, and vegetation has grown at the bottom of the tank. The tank is proposed for use as a fish waste treatment unit. The sluices and the flume will be dismantled and removed, and the vegetation cleaned out in preparation for refurbishing the tank for its new function.

Sludge Pump, Sludge Control and Sludge Centrifuge Buildings

The sludge pump building is located next to the primary clarifiers, and the sludge control building is located next to the digestion tanks. Both buildings are of similar structure, a ground-level platform, and a lower-level pump room with concrete walls and jalousie windows. Four (4) abandoned sludge pumps, motors, piping and a hand crane system are located in the pump room of the sludge pump building. A sludge heater, two (2) heat exchangers, pumps and various piping, and a crane system are in the sludge control building. The sludge centrifuge building makai of the chlorine contact tank is a larger structure compared to the sludge pump and control buildings. It has concrete walls with sheet metal roof and sidings. The building is filled with abandoned motors, pipes, and sludge dewatering equipment.

All machines, equipment and pipelines inside the buildings will be dismantled and removed in preparation for the buildings being refurbished, including repair of the damaged walls of the sludge centrifuge building. The sludge pump building and sludge control building are planned to be refurbished as machinery rooms, and also for storage and shop use. A wet lab, approximately twenty feet by eighty-four feet (20' × 84'), is planned to be installed between the sludge pump building and the sludge control building. Another greenhouse for use as a shrimp hatchery, approximately thirty-two feet by eighty-four feet (32' × 84'), is planned to be added the makai side of the sludge control building. A fish hatchery will be installed in the sludge centrifuge building.

Pump Station Building and Its Associated Structures

The abandoned pump station next to the Pua Street Pump Station is a three-floor concrete structure, with two of the three levels below ground. The existing facilities inside include electrical panels, overhead cranes, ventilation fans, three (3) sewer pumps and seven (7) large valves. A wetwell with four (4) hatch covers is outside the building. Other miscellaneous underground structures near the pump station include two (2) emergency pumpout pits, and sewer manholes. The pumping station is on the land which will be retained for the Pua Street Pump station (Figure 4), and will be demolished along with the associated structures. An entry road with a double wide chain-link gate will provide dedicated access from Kalanianaole Avenue to the Pua Avenue Pump Station. Another double wide chain-link gate will provide alternate access from the parking lot in front of the Administration building to the Pua Avenue Pump Station. (Figure 4)

Underground Storage Tank

An abandoned underground storage tank (UST) is located near the entrance to the Sludge Control Building, at the mauka corner of the structure. This UST will be sampled to determine contents, emptied, cleaned and removed per DOH guidelines and requirements. If any of the tank contains have leaked into the ground, appropriate spill response actions will be taken.

5.2 Economic Characteristics

The funds initially designated by COH for demolition and landscaping of the subject property will be used primarily for the demolition and removal of the unwanted components and structures, and the cleaning and coating of facilities to be retained for the proposed conversion. Funding in excess of this amount will be provided by the University of Hawaii.

The preliminary project cost for the demolition and conversion is estimated to be in the range of $700,000 to $1,500,000, much of which will be spent on local labor and for contracts with local contractors and suppliers.

5.3 Social Characteristics

Aside from Pua Street Pump Station at the site, the community will gain an aquaculture center in the place of the abandoned sewage treatment plant. Benefits resulting from the conversion of the wastewater treatment plant include:

Benefits to the Keaukaha Hawaiian Community

- The community members will be trained in various aspects of aquaculture. The Center will be a resource of information and guidance for the development of small and medium scale aquaculture farms. This can improve both nutrition and income within the community.
- The Center will support the development of the local aquaculture industry by providing juvenile fish for sale at nominal cost to local fish farmers until such time that the local aquaculture industry is developed sufficiently to produce their own juvenile fish. Emphasis will be on local species, particularly those requiring large tanks. Examples include moi, mullet, mahimahi, milkfish, pearl oysters and possibly big-eye tuna. Later, small scale demonstration facilities will be constructed at the Center. The Center is not intended to be a production facility. Only the minimum number of fish needed for training and research will be kept on-site.
- Information related to sustainable development of coastal resources will be available to the local community.
- Jobs will be created in the local community through construction, renovation and operation of the Center, plus any aquaculture farms which start up as the result of the Center's activities.

Benefits to the University of Hawaii

- Teaching facilities for the UHH undergraduate programs in aquaculture and marine science will be substantially expanded.
- Research Facilities of the UHH for aquaculture and marine science will be improved. The Center will enable the UHH to conduct laboratory studies on locally-important saltwater fishes and shellfish.
- It will become possible for the University personnel to conduct cold-water aquaculture research in cooperation with researchers at National Environmental Laboratory Hawaii Associates.
- Office facilities for the Sea Grant Pacific Program, which has activities throughout the US-affiliated Pacific islands, will be consolidated and enhanced.

Benefits to the Surrounding Community

- Services provided by the Center to the Keaukaha Hawaiian community will also be available to other communities throughout the State.
- The Center's technical services will be available to state and federal agencies involved in fisheries management.
- Five to ten permanent jobs will be created at the Center. Contract research will also result in at least two to four temporary jobs at the Center.
- The local economy will benefit from the creation of temporary jobs for the Center renovation and development.

Benefits to other Coastal Areas

- Via training programs, internships and conferences, Sea Grant's Pacific Program will link their cooperative coastal development activities, including aquaculture in the US-affiliated Pacific area, to the Center.
- The Center will conduct aquaculture feasibility studies on potential culture species in cooperation with Center for Tropical and Subtropical Aquaculture, the Hawaii Aquaculture Association, the Pacific Aquaculture Association, and other Pacific aquaculture efforts.
- Pacific island students attending UHH will be able to utilize the Center for studies and learning activities focused on sustainable coastal development that will be transferable to their home island situations.

5.4 Environmental Characteristics

Conversion of the old wastewater treatment plant to an aquaculture center will positively impact the environment. Most of buildings and facilities on the subject property are in a state of disrepair. Abandoned equipment are rusted and broken, some of them on the verge of collapse. The old plant is, in short, an eyesore with no useful purpose. To convert the treatment plant to the Center, the abandoned equipment will be removed from the site, most buildings and treatment facilities will be renovated and the old pump station building superstructure will be demolished. The new

PACRC after renovation and development will provide a more attractive view of the Puhi Bay area at that location. In addition, knowledge and technologies provided by the Center will enhance the local community's abilities of rationally utilizing and managing the coastal resources and benefit the coastal and marine environment.

6.0 SUMMARY OF THE AFFECTED ENVIRONMENT

6.1 Location and Access

Figure 1 shows the regional location of the Old Hilo Wastewater Treatment facility. It is located at 1079 Kalanianaole Avenue on Puhi Bay in the Keaukaha section of Hilo on the island of Hawaii. The site is identified on Figure 2 as the 4.194 acre parcel Tax Map Key 3rd division 2-1-11:4. The site is makai of Kalanianaole Avenue and can be accessed through a gate facing Kalanianaole Avenue.

6.2 Topography and Climate

The city of Hilo lies at the base of the lower southeastern slopes of Mauna Loa at elevations ranging from sea level at Hilo bay to 600 feet above mean sea level (MSL) along the urban fringe. The wastewater facility lies along the shoreline of Hilo Bay. Land slopes in this area are nearly flat.

Orographic rainfall predominates in Hilo as wind currents force moisture-laden clouds to condense as they move upward along the mountain slopes. Rainfall averages approximately 130 inches per year along the shore. Average temperatures range between 65 and 80 degrees, and persistent tradewinds average seven miles per hour with diurnal shifts in wind direction.

6.3 Infrastructure

Electrical power, telephone communication utilities, sewer and water lines are tied into the subject property.

6.4 Land Use Zoning

The project site is classified as Urban, and zoned as Open area. It is a government exempt parcel owned by State of Hawaii, and made available for use by the County of Hawaii by Executive Order. The facilities on the project site are currently out of service, except the new Pua Street Pump Station and associated sewers and outfall pipelines that are located on the site and which will be retained by the County (Figures 3 and 4).

The entire project site is located within the County of Hawaii's Special Management Area (SMA). Any construction within the SMA will require an application and review of an SMA permit prior

to any improvements to the property. Demolition of structures and renovation of the other structures is exempt from the SMA permitting process. The erection of a chain link fence between the two subdivided portions and construction of an dedicated access road to the new Pua Pump Station will cost than $125,000, therefore, only an SMA minor use permit will be necessary for this project.

The entire Big Island of Hawaii is within the Coastal Zone Management (CZM) Area. Conversion of this property from a sewage treatment plant into an aquacultural research and training facility is consistent with the Department of Business, Economic Development and Tourism Office of Planning's CZM policies. Specific areas of the policy met include: economic uses, public participation and marine resources. Coastal development will permit economic development of new industries such as fish farms, while permitting public participation by disseminating information on coastal management issues and developing skills for an aquaculture industry. The research and training facility will assist in the stewardship and development of marine resources.

Kalanianaole Avenue borders the project site to the southeast. The remainder of the property is surrounded by the state owned undeveloped Hawaiian homelands to the southwest, Puhi Bay and beach park to the north and Keaukaha Beach Park to the northeast. The nearest residential areas are located across Kalanianaole Avenue. The nearest business facility is Texaco Bulk Plant which is next to the west side of the state owned undeveloped Hawaiian homelands.

6.5 Soil

The soil at the project site is classified as a Keaukaha series, extremely rocky muck (USDA, 1973). It is a well drained, thin organic soil that overlies pahoehoe lava bedrock. This soil generally follows the topography of the underlying pahoehoe lava. The topsoil is a layer of dark brown mulch that is highly permeable and strongly acidic. Due to high permeability, runoff from the soil is medium and the erosion hazard is slight. Average annual soil temperature ranges from seventy two (72) °F to seventy four (74) °F.

6.6 Water Bodies

Groundwater beneath the project site is identified as the Hilo aquifer system within the Northeast Mauna Loa aquifer sector (Mink, 1993). The aquifer system is a voluminous basal lens that extends at least four miles inland from the shoreline. The aquifer is noted for having an enormous groundwater flux. The flux from fresh water springs has been measured at 150 mgd. The hydraulic gradient has been measured at 5 feet per mile, or 1 per mil.

The Hilo aquifer system is classified as an irreplaceable source of fresh drinking water. The aquifer system is currently used as a drinking water source, and the vulnerability to contamination is high (Mink, 1993). The groundwater flow direction in the area is towards the ocean. The fresh groundwater discharge along the coast is many times larger than surface flow.

The subject property lies on the shoreline of Puhi Bay. The area has vast ocean water resources. The average temperature of surface seawater 75 °F. The seawater at a hundred feet below the ground is 68 °F, and at 3400 feet deep is about 40 °F.

6.7 Natural Hazards

The Old Hilo WWTP facility is susceptible to various types of hazards including coastal flooding, tsunami inundation, volcanic activity and earthquakes.

The site lies in a special flood hazard area inundated by floods from 100 year storm events. The site is designated by FEMA to be Zone "VE" (Figure 5). This means that the property is subject to coastal flooding combined with wave action. Base flood elevations range from 18 to 20 feet on the property.

Hilo, with its exposure to a crescent shaped bay and orientation towards the Pacific seismic belt is very susceptible to tsunamis. Forty-three destructive tsunamis have reached Hilo since 1819. Frequency analysis by the US Army Corps of Engineers led to development of a frequency analysis curve and tsunami inundation zones. Figure 5 reveals that while inundation of 25 feet at the shoreline may only happen once or twice every hundred years, waves of two feet may occur 20 times in a hundred year time span. The abandoned treatment facility lies on the shoreline within the inundation zone.

The most common volcanic hazard in Hawaii comes from lava flows. Generally, there is very little direct risk to human life, but risk to property can be great. The greatest danger from volcanic activity for the Hilo area is from the northeast rift zone of Mauna Loa. Since 1880, most lava flows from Mauna Loa stopped prior to reaching the urban areas of Hilo. However, the danger of future lava flows reaching and destroying any part of Hilo is present at all times.

The entire island of Hawaii lies in seismic zone 3. The risk of damage from earthquakes is considerable for all areas of the island. Earthquakes may be expected in the Hilo area in the future.

6.8 Archaeological and Historic Sites

The existing wastewater facilities are not significant historic structures. Due to the development of the subject parcel, it is unlikely that any significant historic sites would be present on the parcel.

6.9 Flora and Fauna

The 1980 "Wastewater Facilities Plan, Hilo District" issued by the Department of Public Works listed all the birds and mammals found in the Hilo area. This report noted that endangered species of birds are found in either forested uplands or near ponds such as the Waiakea, Kionakapuha or Lokoaka. These endangered birds included Dark-Rumped Petrel (*Pterodroma phaeophygia*

sandwichensis), Hawaiian Hawk (*Buteo solitarius*), Hawaiian Gallinule (*Gallinula chloropus sandwichensis*) or the Hawaiian Coot (*Fulica americana alai*). The only endangered mammal, the Hawaiian Bat (*Lasiurus cinereus semotus*) is generally found throughout the Hilo area. Based on this report and a visual observation, no endangered animal species are expected to be found on the site.

7.0 MAJOR IMPACTS AND MITIGATION MEASURES

7.1 Short-term Renovation Related Impacts

All proposed demolition and renovation activities will be conducted within the project property boundaries. Most of the abandoned machines and equipment will be removed from the property. There are no major earth moving operations associated with this project.

The dust, noise and traffic are expected to be the main conversion related impacts, since all conversion activities will be in the vicinity of residents. However, these nuisances are temporary and abatement measures will be undertaken during renovation. Dewatering is not anticipated for renovation.

Routine operations at the Center are not expected to materially effect the existing level of traffic and noise in the area. The Center's operations will take place 24 hours per day, just as was the case for the Old Hilo WWTP and the new Pua Street Pumping Station.

A Phase I environmental site assessment (ASTM practice E1527) of the subject property has been performed which determined that no hazardous substance contamination exists that may affect the demolition, renovation and conversion. Possible underground contamination from the abandoned UST will be investigated, as a part of the UST removal activity. If the UST has leaked, the appropriate spill response activities will be undertaken, per DOH guidelines and requirements.

7.2 Freshwater and Seawater Management

The Center will approximately need total of 1.5 mgd freshwater and seawater pumped from the wells installed at site and the deep seawater well of the adjacent Institute of Geology. It will also discharge approximately 1.5 mgd of used freshwater and seawater effluent from its aquaculture and marine science facilities. The discharges will contain mainly organic waste products and high salinity.

Despite the organic discharges, the proposed facility will not be a concentrated aquatic animal production facility as defined by 40 CFR 122(C). Fish production will be less than 100,000 pounds per year thereby exempting the proposed facility from NPDES discharge requirements. In an attempt to encourage fish farmers to utilize modern water treatment technologies, the Center proposes to use both sedimentation and microscreen filtration (approximately 50 to 100 micron) to reduce solids discharge by 80%. The former chorine contact tank will be major component of

the fish waste treatment unit processing holding tank effluents containing fish fecal matter and excess feed.

The groundwater beneath the project site is the Hilo aquifer system which has an enormous groundwater flow. The site is in the shoreline of Puhi Bay, and is rich with seawater resources. The intakes of 1.5 mgd groundwater and seawater will not have substantial impact on either the groundwater or the seawater resources.

The Center is proposed to have less than 23,000 pounds of fish on site at any one time. Rotary microscreens are proposed for removing solid fish wastes from the used freshwater and seawater discharged from the Center. It is estimated that the Center will produce a total wastewater volume of 1.5 mgd. On-site treatment will be provided by the Center. All applicable permitting requirements and procedures will be followed for this wastewater discharge. Fish production will be less than 100,000 pounds per year thereby exempting the proposed facility from NPDES discharge requirements.

7.3 Economic

Approximately five million dollars ($5,000,000) will be brought into the local economy through the renovation and development of the PACRC. This is a one-time infusion of funds. The recurring PACRC operations and maintenance, including research and training, will bring six hundred and fifty thousand dollars ($650,000) per year into the economy.

8.0 ALTERNATIVES TO THE PROPOSED ACTION

8.1 No Action

The project property is no longer in service, except Pua Street Pump Station at the site. If no action is taken, the buildings and facilities will continue to decompose and rust away. The land where the plant is located will be left idle.

As expressed in the Environmental Impact Statement for the new Hilo Wastewater Treatment Plant, the structures in the old treatment plant were to be demolished and the site to be converted into a community park.

8.2 Alternate Sites and Actions

The proposed Center is an alternative to the initial plan of demolishing certain structures at the project property. Selection of an alternative site will have negative economic consequences. There are no extra funds budgeted for building such a Center. The funds originally designated for demolition of the plant are an important financial source for building the Center at the project property.

Aside from the original plan of demolishing the treatment plant and converting to a park, there were a number of other options of improving the site. These options include:

- Demolition of all structures except the administration building with operation and maintenance by the Department of Parks and Recreation;
- Demolishing all structures except the administration building, which would be turned over to the Department of Hawaiian Home Lands;
- Offer remaining portion of site not used for wastewater management purposes to the Department of Hawaiian Home Lands.

The proposed plan of developing an aquaculture center at the project site is deemed as the best option based on the following factors:

- The funds originally designated for demolition will be used as well to prepare the site for conversion and renovation to the Center. In addition, funding from other sources such as UHH is also available for the Center development.
- The Center will be used by UHH. The operation, maintenance and related funds will be provided by UHH.
- Joined with the resources available at the area, the Center will benefit the local Hawaiian community, the University of Hawaii, the surrounding community and other coastal areas.

9.0 LIST OF PERMITS

This planning effort recognizes the eventual need of project proposals to obtain proper permits before construction. These will include:

State of Hawaii:

Well Construction Permit (Commission on Water Resource Management)
Pump Installation Permit (Commission on Water Resource Management)
Water Use Permit (Commission on Water Resource Management)
NPDES Permit to Discharge into Ocean (DOH Clean Water Branch, if necessary)
NPDES Permit Construction Dewatering Permit (DOH Clean Water Branch, if necessary)

County of Hawaii:

Building Permit (Department of Public Works, Building Division)
Demolition Permit (Department of Public Works, Building Division)
Sewer Discharge Permit (Department of Public Works, Wastewater Management Division, if necessary)
SMA Minor Use Permit (County of Hawaii Planning Department)

10.0 DETERMINATION

In accordance with Chapter 343, Hawaii Revised Statutes, this Environmental Assessment has characterized the technical and environmental nature of the project, identified potential impacts, and evaluated the potential significance of these impacts.

It is anticipated that the proposed project will not significantly impact the environment. Therefore, a Negative Declaration is anticipated, and an Environmental Impact Statement will not be required for this project. This determination is based on the significance criteria listed in §11-200-12 of the Environmental Impact Statement Rules. Specifically, these significance criteria are *addressed below:*

1. The site is already developed to serve its previous function of wastewater treatment and now sits idle due to the decommissioning of the plant. The conversion of the site to an aquaculture research and educational facility will expand natural and cultural resources by enhancing the University of Hawaii - Hilo's marine science program and providing employment opportunities.

2. Rather than curtail the range of beneficial uses, the conversion will expand the use of the site to provide educational and employment opportunities. No additional structures will be erected on the site and in fact several will be demolished.

3. The proposed conversion is consistent with the Environmental Policies established in Chapter 344, HRS.

4. The project actually increases the economic and social welfare of the community by providing economic and educational facilities for the sustainable development of coastal resources in historic and traditional areas such as aquaculture.

5. As an educational and research facility, public health will not be adversely affected. The small quantity of discharges will be exempt from NPDES requirements.

6. Conversion of the wastewater treatment plant will not create substantial secondary impacts such as population growth. Five to ten permanent jobs are expected to be created along with two to four temporary positions. These new employment opportunities along with the creation of new industries such as fish farming and indirect service related industries will generate new sources of revenue.

7. There will not be a substantial degradation of the environmental quality. There will be no air or noise pollution and liquid discharges from the plant are not large enough to fall under NPDES requirements.

8. The discharges from the proposed facility will not have considerable cumulative environmental effects and will be much less than surrounding non-point sources such as urban runoff.

9. The site is already developed and will not be modified. Therefore destruction of habitats is not a relevant concern. For the same reason, no significant adverse effects to flora or fauna are expected.

10. The proposed conversion mainly will consist of holding tanks for fish and water. These will not affect air quality or noise levels. Any pumping equipment used for these purposes will be either low noise or submersible. The waste treatment unit will settle and filter organic solids. These solids will be removed for compost on a regular basis and will not accumulate on site and be allowed to degrade air quality.

11. The project is located in flood areas subject to wave action and tsunamis. It is subject to threats by volcanic activity and earthquakes. However, the proposed project converts existing facilities already on site. The entire island of Hawaii lies in seismic zone 3 and is subject to the same threat of earthquakes. Hilo itself is subject to lava flows from rift zones on Mauna Loa.

12. The proposed project will have minimal impact on public viewplanes. The site is already landscaped on the street side to disguise the previous nature of the site (that of a wastewater treatment plant).

13. When compared to the site's prior use as a sewage treatment plant, establishment of an education and research facility will consume much less energy due to the fact that fewer and smaller pieces of equipment will be utilized.

12.0 REFERENCES

Documents reviewed during preparation of this Environmental Assessment:

Department of Public Works, 1980. *Wastewater Facilities Plan, Hilo District.*

Federal Emergency Management Agency, 1988, *Flood Insurance Rate Map, Hawaii County, Hawaii*, Community-Panel Number 885 of 1900.

Federal Register. July 1, 1988. *Secondary Treatment Regulation.* 40 CFR Part 133.

Foote, D.E., Hill, E.L., Nakamura, S., Stephens, F., 1973, *Soil Survey of island of Hawaii, State of Hawaii*: US Dept. of Agriculture, Soil Conservation Service.

Mink, J.F., Lau, L.S., 1993, *Aquifer Identification and Classification for the Island of Hawai'i: Groundwater Protection Strategy for Hawai'i.*

APPENDIX

Draft EA Public Comments and Responses

SIERRA CLUB, HAWAI'I CHAPTER

P.O. Box 2577,
Honolulu, Hawai'i 96803
(808) 538-6616

July 6, 1998

Peter Boucher
Department of Public Works, Wastewater Division
108 Railroad Avenue
Hilo, HI 96720

Dear Mr. Boucher,

We have reviewed the draft Environmental Assessment to convert the old Hilo Wastewater Treatment Plant into an aquacultural center. At first glance, it appears to be a creative use of an existing idled facility.

The Sierra Club, Hawai'i Chapter, requests that the Environmental Assessment for the Old Hilo Wastewater Treatment Plant address the following issues:

1) Aquaculture facilities tend to discharge nutrient rich effluent into coastal waters. What impact will such discharges have on nearby swimming areas and fisheries? This issue must be addressed in the environmental assessment rather than waiting for the facility to be built and then considering the issue when applying for an NPDES permit from DOH.

2) Will public access along the shoreline be provided to extend lateral access for people who want to fish or walk along the coastline?

3) Will views be opened up from the road to the ocean?

All three issues will need to be addressed in processing the special management area permit and shoreline setback variance that this facility will need. The DEA neglects to address any of the issues it is required to under HRS chapter 205A.

Sincerely,

David Kimo Frankel
Director

RECEIVED
98 JUL -9 P12:32

CORRECTION

THE PRECEDING DOCUMENT(S) HAS
BEEN REPHOTOGRAPHED TO ASSURE
LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

SIERRA CLUB, HAWAI'I CHAPTER

P.O. Box 2577,
Honolulu, Hawai'i 96803
(808) 538-6616

July 6, 1998

Peter Boucher
Department of Public Works, Wastewater Division
108 Railroad Avenue
Hilo, HI 96720

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1) Aquaculture facilities tend to discharge nutrient rich effluent into coastal waters. What impact will such discharges have on nearby swimming areas and fisheries? This issue must be addressed in the environmental assessment rather than waiting for the facility to be built and then considering the issue when applying for an NPDES permit from DOH.

2) Will public access along the shoreline be provided to extend lateral access for people who want to fish or walk along the coastline?

3) Will views be opened up from the road to the ocean?

All three issues will need to be addressed in processing the special management area permit and shoreline setback variance that this facility will need. The DEA neglects to address any of the issues it is required to under HRS chapter 205A.

Sincerely,

David Kimo Frankel
Director

Stephen K. Yamashiro
Mayor

Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii

DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

August 18, 1998

Mr. David Kimo Frankel, Director
Sierra Club, Hawaii Chapter
PO Box 2577
Honolulu, HI 96803

Dear Mr. Frankel:

Subject: Response to the Sierra Club's comments regarding Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii TMK: 3-2-1-11: parcel 4

The Department received your letter dated July 6, 1998 on the above subject and thanks you for your concerns on the proposed project. We will address your concerns point by point.

1. NUTRIENT RICH EFFLUENT DISCHARGES: The facility will not be a concentrated aquatic animal production facility as defined by 40 CFR Part 122-C. Fish production will be less than 100,000 pounds per year thereby exempting the proposed facility from NPDES discharge requirements. However, in an attempt to encourage fish farmers to utilize modern water treatment technologies, the Center has advised the County that they will utilize both sedimentation and microscreen filtration to reduce solids discharge by 80%. The former chlorine contact tank will be a major component of the fish waste treatment unit processing tank effluents containing fish fecal matter and excess feed.

2. SHORELINE ACCESS: Public access to the shoreline fronting the facility is not hindered as the present facility sits back from the shoreline well above the highwater mark. Shoreline access is from the DHHL park located to the east of the decommissioned treatment plant.

3. PUBLIC VIEWPLANES: Conversion of the facility will not alter public viewplanes. The site is landscaped presently from the street side to disguise the prior nature of the site (that of a wastewater treatment facility). No new structures are planned for the existing site.

We anticipate completing this final environmental assessment in time to be included in the September 8, 1998 edition of the OEQC's *The Environmental Notice.*

Donna Fay K. Kiyosaki
Chief Engineer

cc: Peter Boucher, WWD
Bruce Wade, M&E Pacific

Stephen K. Yamashiro
Mayor

Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii

DEPARTMENT OF PUBLIC WORKS

25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

July 8, 1998

MR BRUCE D WADE
M&E PACIFIC INC
1001 BISHOP STREET
HONOLULU HAWAII 96813

SUBJECT: **DRAFT ENVIRONMENTAL ASSESSMENT**
OLD HILO WASTEWATER TREATMENT PLANT CONVERSION
Keaukaha, Waiakea, South Hilo, Hawaii
TMK: 3 / 2-1-11: 04

We acknowledge receipt of your letter concerning the subject matter, and provide you with our comments as follows:

1. The subject property is found within Flood Zone "VE", according to the Flood Insurance Rate Map dated September 16, 1988. Any new construction or substantial improvements within Parcel 04 will be subject to the requirements of Chapter 27 - Flood Control, of the Hawaii County Code. A flood study or variance maybe necessary to allow any type of construction.

2. Improvements shall be located beyond the future road widening setback established by the Planning Department.

3. The application should be submitted to the Planning Department for their review and comments.

Should there be any questions concerning this matter, please feel free to contact Mr. Casey Yanagihara in our Engineering Division at (808)961-8327.

Galen M. Kuba, Division Chief
Engineering Division

CKY

Stephen K. Yamashiro
Mayor

Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii
DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

August 18, 1998

Mr. Galen M. Kuba, Division Chief
Engineering Division
Department of Public Works
25 Aupuni Street, Room 202
Hilo, HI 96720-8630

Subject: Response to DPW comments regarding Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii
TMK: 3-2-1-11: parcel 4

The Department received your letter dated July 8, 1998 on the above subject and thanks you for your concerns on the proposed project. We will address your concerns point by point.

1. **FLOOD ZONE "VE"**: The Department notes that the subject property is located within the Flood Zone "VE" and that flood studies or variances may be required to allow any new construction. Plans for the erection of new structures is deleted and the final EA and its Figures will be revised to reflect this.
2. **ROAD-WIDENING SETBACK**: The road widening setback for Kalanianaole Avenue is on the mauka side of the road and not the makai side. Any improvements to the subject parcel will be beyond all easements and setbacks.
3. **APPLICATION**: An SMA minor use permit will be filed with the County of Hawaii Planning Department.

We anticipate completing this final environmental assessment in time to be included in the September 8, 1998 edition of the OEQC's *The Environmental Notice*.

pp Donna Fay K. Kiyosaki
Chief Engineer

cc: Peter Boucher, WWD
Bruce Wade, M&E Pacific

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813-5249
PHONE (808) 594-1888
FAX (808) 594-1865

July 16, 1998

Mr. Bruce LD. Wade
Project Engineer
M&E Pacific, Inc.
1001 Bishop Street, Suite 500 Pauahi Tower
Honolulu, Hawai'i 96813

EIS Doc.No.198

Re: Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Conversion, Plant, TMK (3) 2-1-11:4, Hilo, Hawai'i

Dear Mr. Wade:

Thank you for the opportunity to review the Draft Environmental Assessment for the Old Hilo Wastewater Treatment Plant Conversion. The Office of Hawaiian Affairs has no concerns with the proposed project or the Draft Environmental Assessment at this time.

If you wish to contact OHA concerning this project, please contact Colin Kippen, Land and Natural Resources Division Officer or Lynn Lee EIS Planner at 594-1936.

Sincerely

Randall Ogata
Administrator

Collin Kippen
Land and Natural Resources Division

Stephen K. Yamashiro
Mayor

Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii

DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

August 18, 1998

Mr. Randall Ogata, Administrator
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, HI 96813

Dear Mr. Ogata:

Subject: Response to OHA comments regarding Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii TMK: 3-2-1-11: parcel 4

The Department received your letter dated July 16, 1998 on the above subject. We note that you have no comments and thank you for your time spent considering this project.

We anticipate completing this final environmental assessment in time to be included in the September 8, 1998 edition of the OEQC's *The Environmental Notice.*

Sincerely,

pp Donna Fay K. Kiyosaki
Chief Engineer

cc: Peter Boucher, WWD
Bruce Wade, M&E Pacific

Stephen K. Yamashiro
Mayor

Virginia Goldstein
Director

Russell Kokubun
Deputy Director

County of Hawaii

PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

July 17, 1998

Mr. Bruce D. Wade
Project Engineer
M&E Pacific, Inc.
Suite 500 Pauahi Tower
1001 Bishop Street
Honolulu, HI 96813

Dear Mr. Wade:

Draft Environmental Assessment for the Old Hilo Wastewater Treatment Plant
Conversion to the Pacific Aquaculture and Coastal Resource Center
TMK: 2-1-11: 4; Waiakea, South Hilo, Hawaii

Thank you for your letter dated July 2, 1998, transmitting a copy of the above-described draft environmental assessment for our review and comment. We have completed our review and have the following comments to offer:

1. Section 6.4 - Land Use Zoning. Should make some reference within this section that the project site is situated within the County's Special Management Area (SMA). Proposed improvements must be reviewed against the County's SMA regulations.

2. Section 9.0 - List of Permits. Due to its location within the SMA, the proposed project will require, at the very least, a detailed review of the proposed improvements by this office. A determination must then be made whether a Special Management Area Use Permit will be required.

   Prior to the construction or renovation of any facilities, the applicant must secure Final Plan Approval from this office. The purpose of this review is to ensure that all aspects of the proposed project is in compliance with the requirements of the Zoning Code.

COH PLANNING - PG 2

Thank you for the opportunity to comment. Please contact Daryn Arai of this office at 961-8288 should you have any questions.

Sincerely,

VIRGINIA GOLDSTEIN
Planning Director

DSA:jc
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c: Mrs. Donna Fay Kiyosaki, DPW
Office of Environmental Quality Control

Stephen K. Yamashiro
Mayor

Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii

DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

August 18, 1998

Ms. Virginia Goldstein, Planning Director
Planning Department
25 Aupuni Street, Room 109
Hilo, HI 96720-4252

Subject: Response to Planning Department comments regarding Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii TMK: 3-2-1-11: parcel 4

The Department received your letter dated July 17, 1998 on the above subject and thanks you for your concerns on the proposed project. We will address your concerns point by point.

1. LAND USE ZONING: Section 6-4 will be modified and expanded to show that the project site is within the County's Special Management Area (SMA) and that the application and review of permits are necessary before any improvements are made in the SMA.

2. LIST OF PERMITS: An SMA permit will be added to the list of permits in this section. Final plan approval will be obtained from the Planning Department prior to any construction or renovation of the subject property.

We anticipate completing this final environmental assessment in time to be included in the September 8, 1998 edition of the OEQC's *The Environmental Notice.*

PB Donna Fay K. Kiyosaki
Chief Engineer

cc: Peter Boucher, WWD
Bruce Wade, M&E Pacific

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

BENJAMIN J. CAYETANO
GOVERNOR
SEIJI F. NAYA
DIRECTOR
BRADLEY J. MOSSMAN
DEPUTY DIRECTOR
RICK EGGED
DIRECTOR, OFFICE OF PLANNING

OFFICE OF PLANNING
235 South Beretania Street, 6th Flr., Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Tel.: (808) 587-2846
Fax: (808) 587-2824

Ref. No. P-7584

July 20, 1998

Mr. Bruce D. Wade
Project Engineer
M&E Pacific, Inc.
Suite 500 Pauahi Tower
1001 Bishop Street
Honolulu, Hawaii 96813

Dear Mr. Wade:

Subject: Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Plant Conversion, TMK (3)-2-1-11: Parcel 4, Hilo, Hawaii

We offer the following comments on the draft environmental assessment.

The document should provide additional information on the project's location relative to the County's Special Management Area (SMA). From the general map provided, given the project's proximity to the shoreline, it appears that it may be situated in the SMA. If this is so, the list of permits on page 12 should include the SMA permit.

In accordance with the Office of Environmental Quality Control's administrative rule, the document needs to incorporate an assessment of the project's consistency and compliance with the Coastal Zone Management (CZM) objectives and policies, Chapter 205A, Hawaii Revised Statutes. This is important since all lands and waters of the State are in the CZM area, and uses and activities in the CZM area are required to comply with the CZM objectives and policies.

If there are any questions, please contact Steve Olive of our CZM Program at 587-2877.

Sincerely,

Rick Egged
Director
Office of Planning

cc: Seiji F. Naya

Stephen K. Yamashiro
Mayor

Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii

DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

August 18, 1998

Mr. Rick Egged, Director
Office of Planning
Department of Business, Economic Development & Tourism
PO Box 2359
Honolulu, HI 96804

Dear Mr. Egged:

Subject: Response to DBEDT's Office of Planning comments regarding Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii TMK: 3-2-1-11: parcel 4

The Department received your letter dated July 20, 1998 on the above subject and thanks you for your concerns on the proposed project. We will address your concerns point by point.

1. SMA: The Department acknowledges that the subject property is located within the County of Hawaii's Special Management Area (SMA). Section 6-4 of the final EA will be expanded to explain this. The list of permits in Section 9.0 of the final EA will be amended to include the requirement of an SMA minor use permit.
2. CZM: An assessment of the proposed project's compliance with the Coastal Zone Management's (CZM) objectives and policies will be developed in the final EA. Specific discussion will center around the following objectives: economic uses, public participation and marine resources.

We anticipate completing this final environmental assessment in time to be included in the September 8, 1998 edition of the OEQC's *The Environmental Notice.*

Pb Donna Fay K. Kiyosaki
Chief Engineer

cc: Peter Boucher, WWD
Bruce Wade, M&E Pacific

BENJAMIN J. CAYETANO
GOVERNOR

GARY GILL
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

July 23, 1998

Mr. Peter Boucher
County of Hawai'i, Department of Public Works, Wastewater Division
108 Railroad Avenue
Hilo, Hawai'i 96720

Dear Mr. Boucher:

We submit for your response the following comments on a draft environmental assessment (DEA) entitled "Old Hilo Wastewater Treatment Plant Conversion, Kalaniana'ole Avenue and Pua Avenue, Hilo, Hawai'i, TMK: 3-2-01-011-004."

1. ECONOMIC IMPACTS: Page 6 of the DEA notes that the Center will provide juvenile fish for sale at nominal cost to local fish farmers. Please discuss whether other aquaculture operations of this project will be for profit (i.e., will the facility set up a fee schedule for its various services to help support its operations?).

2. INTAKE PIPE: Page 3 of the DEA mentions that a future connections are planned to a "HIG" deep seawater well on the adjacent parcel to the west to provide cold seawater. Please indicate what the acronym "HIG" means. Also, please discuss what if any means of providing seawater to the facility will be made in the interim. Please indicate where the intake pipe will be and discuss the quality of the water being used.

3. PUBLIC VIEWPLANES/SHORELINE ACCESS: Please provide current photographs of the site, along with renderings of what the project will look like from various directions. Analyze any impacts this project will have on public views from various public areas. Please discuss the provision of public access to the shoreline fronting the facility.

4. FISH WASTE TREATMENT UNIT: Page 4 of the DEA notes that the chlorine contact tank is proposed to be used as a "fish waste treatment unit." Please clarify as to the nature of this unit (i.e., will the unit contain fecal matter from fishes, or, will the unit hold dead fish or fish parts?) along with its related direct, indirect and cumulative impacts on the environment.

5. DESCRIPTION OF CULTURED SPECIES: Please disclose the various species of aquatic organisms to be cultured at the facility.

6. DETAILED DISCUSSION OF THE THIRTEEN SIGNIFICANCE CRITERIA IN RELATION TO THE PROJECT: Please discuss each of the thirteen significance criteria (see Section 11-200-12, Hawai'i Administrative Rules) as they relate to the project. A sample discussion is enclosed for your information.

Please include copies of this letter, your response to it and other comment letters/responses in the final environmental assessment and notice of determination for this project. If there are any questions, please call Les Segundo of my staff at 586-4185.

Sincerely,

GARY GILL
Director

Enclosure

c: Mr. Bruce D. Wade, M&E Pacific

Stephen K. Yamashiro
Mayor

Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii
DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

August 18, 1998

Mr. Gary Gill, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Dear Mr. Gill:

Subject: Response to OEQC's comments regarding Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii
TMK: 3-2-1-11: parcel 4

The Department received your letter dated July 23, 1998 on the above subject and thanks you for your concerns on the proposed project. We will address your concerns point by point.

1. ECONOMIC IMPACTS: The economic impact of the proposed facility will consist of the direct contributions to the economy from construction and facility operations and the indirect benefits resulting from increased enrollment at the University, the encouragement of fish farm development, public education and tourism potential.

   The estimated capital costs for conversion of the Old Hilo wastewater treatment plant into the core of the Pacific Aquaculture and Coastal Resources Center is approximately $1.9 million (exclusive of the value of the land and existing structures). Total operating costs are expected to be approximately $650,000 per year when the Center is in full operation. Approximately 75% of these operational expenses will come from out-of-state sources with the remainder from state general funds. Occasional sales of fish, etc. produced as a by-product of the education, research and training programs will provide a small amount of additional funds.

   Approximately $2 million will be brought into the local economy by the initial renovation and development of the Center. This will be a one-time infusion of funds. Recurring Center operations, including research and training, will bring $650,000 per year into the economy. Indirect returns are much more difficult to quantify but preliminary estimates are that Center

activities would lead to approximately $1.5 million of additional income to the local economy.

2. INTAKE PIPE: The acronym "HIG" stands for Hawaii Institute of Geophysics. Their well will be used to provide cold seawater (40°F) to the Center. There is no alternate provision for supply of deep well cold seawater to the Center and therefore no interim supply. On-site well locations for both freshwater and cool seawater (each about 68°F) are indicated in Figure 4 of the EA.

3. PUBLIC VIEWPLANES/SHORELINE ACCESS: Figure 4 of the EA provides the best idea of what the project site will resemble. No new structures other than two new wells are anticipated for the site. Conversion of the facility will not block public viewplanes. The site is landscaped presently from the street side to disguise the prior nature of the site (that of a wastewater treatment facility). Public access to the site is not hindered as the present facility sits back from the shoreline well above the highwater mark. Access to the shoreline fronting the facility is from the DHHL park located to the east of the decommissioned treatment plant.

4. FISH WASTE TREATMENT UNIT: According to The University of Hawaii, the facility will not be a concentrated aquatic animal production facility as defined by 40 CFR Part 122-C. Fish production will be less than 100,000 pounds per year thereby exempting the proposed facility from NPDES discharge requirements. However, in an attempt to encourage fish farmers to utilize modern water treatment technologies, the Center intends to utilize both sedimentation and microscreen filtration to reduce solids discharge by 80%. The former chlorine contact tank will be a major component of the fish waste treatment unit processing tank effluents containing fish fecal matter and excess feed.

5. DESCRIPTION OF CULTURED SPECIES: Emphasis will be on local species, particularly those species requiring large tanks. Examples include: moi, mahimahi, mullet, milkfish, pearl oysters and possibly big-eye tuna. In addition, small scale demonstration facilities for freshwater ornamental fish will be constructed at the Center. The Center is not intended to be a production facility, therefore only the minimum number of fish needed for training and research will be kept on-site.

6. DISCUSSION OF 13 SIGNIFICANT CRITERIA: The discussion of the 13 significant criteria included in the draft EA will be expanded for the final EA.

(1) **Adverse commitment, loss or destruction of natural or cultural resources.**

The site is already developed to serve its previous function of wastewater treatment and now sits idle due to the decommissioning of the plant. The conversion of the site to an aquaculture research and educational facility will expand natural and cultural resources by enhancing the University of Hawaii - Hilo's marine science program and providing employment opportunities.

(2) **Curtail the range of beneficial uses.**

Rather than curtail the range of beneficial uses, the conversion will expand the use of the site to provide educational and employment opportunities. No additional structures will be erected on the site and in fact several will be demolished.

(3) **Conflicts with State's long-term environmental policies in HRS §344.**

The proposed conversion is consistent with the Environmental Policies established in Chapter 344, HRS.

(4) **Substantially and adversely affects economic or social welfare.**

The project actually increases the economic and social welfare of the community by providing economic and educational facilities for the sustainable development of coastal resources in historic and traditional areas such as aquaculture.

(5) **Substantially and adversely affects public health.**

As an educational and research facility, public health will not be adversely affected. The small quantity of discharges will be exempt from NPDES requirements.

(6) **Involves substantial secondary impacts.**

Conversion of the wastewater treatment plant will not create substantial secondary impacts such as population growth. Five to ten permanent jobs are expected to be created along with two to four temporary positions. These new employment opportunities along with the creation of new industries such as fish farming and indirect service related industries will generate new sources of revenue.

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

There will not be a substantial degradation of the environmental quality. There will be no air or noise pollution and liquid discharges from the plant are not large enough to fall under NPDES requirements.

(8) **Individually limited but cumulatively considerable environmental effects.**

The discharges from the proposed facility will not have considerable cumulative environmental effects and will be much less than surrounding non-point sources such as urban runoff.

(9) **Substantially affects a rare or endangered species or its habitat.**

The site is already developed and will not be modified. Therefore destruction of habitats is not a relevant concern. For the same reason, no significant adverse effects to flora or fauna are expected.

(10) **Detrimentally affects air or water quality or noise levels.**

The proposed conversion mainly will consist of holding tanks for fish and water. These will not affect air quality or noise levels. Any pumping equipment used for these purposes will be either low noise or submersible. The waste treatment unit will settle and filter organic solids. These solids will be removed for compost on a regular basis and will not accumulate on site and be allowed to degrade air quality.

(11) **Affects or is likely to suffer damage by being in an environmentally sensitive area.**

The project is located in flood areas subject to wave action and tsunamis. It is subject to threats by volcanic activity and earthquakes. However, the proposed project converts existing facilities already on site. The entire island of Hawaii lies in seismic zone 3 and is subject to the same threat of earthquakes. Hilo itself is subject to lava flows from rift zones on Mauna Loa.

(12) **Substantially affects scenic vistas or viewplanes.**

The proposed project will have minimal impact on public viewplanes. The site is already landscaped on the street side to disguise the previous nature of the site (that of a wastewater treatment plant).

(13) **Requires substantial energy consumption.**

When compared to the site's prior use as a sewage treatment plant, establishment of an education and research facility will consume much less energy due to the fact that fewer and smaller pieces of equipment will be utilized.

We anticipate completing this final environmental assessment in time to be included in the September 8, 1998 edition of the OEQC's *The Environmental Notice.*

Sincerely,

Donna Fay K. Kiyosaki
Chief Engineer

cc: Peter Boucher, WWD
Bruce Wade, M&E Pacific

BENJAMIN J. CAYETANO
GOVERNOR
STATE OF HAWAII

KALI WATSON
CHAIRMAN
HAWAIIAN HOMES COMMISSION

JOBIE M. K. M. YAMAGUCHI
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P. O. BOX 1879
HONOLULU, HAWAII 96805

July 23, 1998

Mr. Bruce D. Wade, Project Engineer
M&E Pacific, Inc.
Suite 500 Pauahi Tower
1001 Bishop Street
Honolulu, HI 96813

Dear Mr. Wade:

Following are Department of Hawaiian Home Lands (DHHL) comments concerning the Draft Environmental Assessment (EA) for the Old Hilo Wastewater Treatment Plant Conversion, TMK (3)-2-1-11:04, Hilo, Hawaii:

1. The DHHL supports conversion of the property into an aquaculture center to provide a focus for the sustainable development of the entire Keaukaha coastline. [4.0 Project Objective and Need, Page 2]

2. The DHHL owns the adjacent Puhi Beach Park parcel (TMK 2-1-11: 5) located toward the East. A field inspection on the east side of the pumping station revealed that part of an existing building intrudes into the small area proposed to be relinquished to the DHHL, and the area is now overgrown with fairly large trees and weeds. After considering the small size (about 5,000 s.f.), the benefits of maintaining the existing fenced and vegetated boundary, and the cost to adjust for park use, the DHHL finds that it would be better to retain the area as a vegetated buffer within the Pua St. Pump Station boundary fence. The DHHL therefore declines the offer of the area as an addition for park use. [5.1 Technical Characteristics, Page 3]

3. With 438 homestead households in our Keaukaha Residential neighborhood across Kalanianaole Avenue, the DHHL is concerned about any degradation of environmental quality. Night-time noise and stench from the old treatment plant was a nuisance in the area for many years. Please assure that "the project will not detrimentally affect air or water quality or ambient noise levels." [10.0 Determination, Page 13] Please include the DHHL as a consulted party when preparing plans and environmental assessments for subsequent phases leading to the actual development of the Pacific Aquaculture and Coastal Resources Center.

Thank you for the opportunity to review and comment. If you have any questions, call Land Agent Linda Chinn at 587-6432.

Aloha,

Kali Watson

KALI WATSON, Chairman
Hawaiian Homes Commission

Stephen K. Yamashiro
Mayor

Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii

DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

August 18, 1998

Mr. Kali Watson, Chairman
Hawaiian Homes Commission
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, HI 96805

Subject: Response to DHHL comments regarding Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii
TMK: 3-2-1-11: parcel 4

The Department received your comments dated July 23, 1998 on the above subject and thanks you for your concerns on the proposed project. We will address your concerns point by point.

1. **DHHL SUPPORTS CONVERSION**: Noted. The Department thanks you for your support of the conversion.
2. **DHHL DECLINES OFFER OF LAND**: Noted. The final EA and its Figures will be modified to reflect your wishes.
3. **ENVIRONMENTAL QUALITY**: With the exception of the construction period, the proposed project will not detrimentally affect air or water quality or ambient noise levels. Odors in particular should be reduced as the existing large microbial reactors (digesters) will be converted to water reservoirs. The University has been made aware of your concerns over noise and stench and has been advised to consult the DHHL during subsequent phases of the Center's development.

We anticipate completing this final environmental assessment in time to be included in the September 8, 1998 edition of the OEQC's *The Environmental Notice.*

PP Donna Fay K. Kiyosaki
Chief Engineer

cc: Peter Boucher, WWD
Bruce Wade, M&E Pacific

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 621
HONOLULU, HAWAII 96809

AQUACULTURE DEVELOPMENT PROGRAM
AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND DIVISION
STATE PARKS
WATER RESOURCE MANAGEMENT

JUL 28 1998

Ref.:LD-PEM

LD Ref.:HILOWWTP.COM

Mr. Bruce D. Wade
Project Engineer
M & E Pacific, Inc.
Suite 500 Pauahi Tower
1001 Bishop Street
Honolulu, Hawaii 96813

Dear Mr. Wade:

Subject: Request for Comments - Draft Environmental Assessment, Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii, Tax Map Key: 2-1-11:4

We have reviewed the subject Draft Environment Assessment for the above project and would like to offer the following comments:

Land Division - Hawaii District Land Office

1. The proper reference on the Consultation List in Section 3.0, should be "Land Division" instead of "Land Use Division" under the Department of Land and Natural Resources.

2. Various references are made to the expansion of the project into the adjacent parcel. The adjacent parcel to the west is currently unencumbered and any set-aside of this area would be subject to the approval of the Board of Land and Natural Resources. The University of Hawaii would be responsible for any further Chapter 343, HRS compliance requirements for the expansion. The University of Hawaii would also be responsible for all necessary permits and approvals in connection with the use of the drilling of the any new wells as well as the use of the existing well on the adjacent parcel.

3. Based on the project description and subject to the approval of the Board of Land and Natural Resources, there would need to be a request by the County of Hawaii to cancel the existing Governor's Executive Order No. 2382 for the Hilo Sewage Treatment Plant Site. There would also need to be a concurrent request from the County of Hawaii, the University of Hawaii and the Department of Hawaiian Home Lands for the set-aside of the various areas as described in the Draft Environmental Assessment. This request should also include the establishment of the various easements associated with the Pua Street Pump Station Site referenced in the DEA.

DLNR-PG 2

4. Between the three agencies, the property would have to be subdivided in accordance with the requirements of the County of Hawaii. All engineering, surveying and other costs associated with the subdivision as well as various easements referenced in the DEA would be the responsibility of the applying agencies.

5. Prior to the cancellation of the existing Governor's Executive Order No. 2382, it is recommended that the County of Hawaii provide a hazardous waste assessment of the property and complete the appropriate abatement as necessary.

Land Division - Engineering Branch

We recommend that mitigative measures be implemented to prevent groundwater contamination.

We confirm that the proposed project site is located in Zone VE. This is an area within the 100-year flood plain subject to coastal flooding with velocity hazard (wave action), and base flood elevations of 18 to 20 feet.

Thank you for the opportunity to review the Draft Environmental Assessment for the subject project, we have no further comments to offer at this time. Should you have any questions, please contact Patti Miyashiro of our Land Division at 587-0430.

Very truly yours,

Dean Y. Uchida
Administrator

c: Hawaii Land Board Member
Hawaii District Land Office
LD-Engineering Branch

Stephen K. Yamashiro
Mayor

Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii
DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

August 18, 1998

Mr. Dean Uchida, Administrator
Land Division
Department of Land and Natural Resources
PO Box 621
Honolulu, HI 96809

Dear Mr. Uchida:

Subject: Response to DLNR's comments regarding Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii
TMK: 3-2-1-11: parcel 4

The Department received your letter dated July 28, 1998 on the above subject and thanks you for your concerns on the proposed project. We will address your concerns point by point.

Land Division - Hawaii District Land Office

1. **PROPER REFERENCE**: The proper reference on the Consultation List in Section 3.0 will be changed to "Land Division" from "Land Use Division" under the Department of Land and Natural Resources.
2. **EXPANSION INTO ADJACENT PARCEL**: The Department appreciates that the adjacent parcel is unencumbered and any set-asides are subject to the Board of Land and Natural Resources. The University of Hawaii will be responsible for all permits and approvals.
3. **CANCELING EXISTING EXECUTIVE ORDER**: The Department is currently working on a request to cancel Executive Order No. 2382 for the Hilo Sewage Treatment Plant. Concurrently, the Department is working with the University of Hawaii to request a set-aside as described in the draft EA. Please note that the Department of Hawaiian Home Lands declined the offer of the eastern portion of the parcel and as such are not included in the new set-aside request.

4. PROPER SUBDIVISION OF PARCEL: The property will be subdivided in accordance with the requirements of the County of Hawaii. All costs associated with the subdivision and granting of various easements will be borne by the responsible agencies.
5. HAZARDOUS WASTE ASSESSMENT: The Department currently is in the process of developing an Environmental Site Assessment (ESA) for the property. Any appropriate abatements will be completed as necessary.

Land Division - Engineering Branch

1. PREVENT GROUNDWATER CONTAMINATION: The two wells planned for the parcel will withdraw fresh groundwater and seawater. These are not injection wells and groundwater contamination is not expected.
2. FLOOD ZONE "VE": The Department notes that the subject property is located in the flood zone designated "VE". This is described in Section 6.7 of the draft EA.

We anticipate completing this final environmental assessment in time to be included in the September 8, 1998 edition of the OEQC's *The Environmental Notice.*

Sincerely,

pb Donna Fay K. Kiyosaki
Chief Engineer

cc: Peter Boucher, WWD
Bruce Wade, M&E Pacific

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 621
HONOLULU, HAWAII 96809

July 29, 1998

LD-NAV
Ref.:HILOWWTP.2RC

Mr. Bruce D. Wade
Project Engineer
M & E Pacific, Inc.
Suite 500 Pauahi Tower
1001 Bishop Street
Honolulu, Hawaii 96813

Dear Mr. Wade:

SUBJECT: Review : Draft Environmental Assessment
Project : Old Hilo Wastewater Treatment Plant Conversion
Location : Kalanianaole Avenue and Pua Avenue Hilo, Island of Hawaii, Hawaii
TMK : 3rd/ 3-2-01: 011-004

This is a follow-up to our correspondence to you dated July 28, 1998 (Ref: HILOWWTP.COM), regarding our review of the subject matter.

Attached herewith is a copy of our Commission on Water Resource Management's comments related to water resources for the proposed project.

Should you have any questions, please feel free to contact Mr. Ryan Imata of the Commission on Water Resource Management at 587-0255 or Nick Vaccaro of the Land Division Support Services Branch at 587-0438.

Very truly yours,

DEAN Y. UCHIDA
Administrator

c: Hawaii Land Board Member
Hawaii District Land Office

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

July 24, 1998

TO: Mr. Dean Uchida, Administrator
Land Division

FROM: Timothy E. Johns, Deputy Director
Commission on Water Resource Management (CWRM)

SUBJECT: Draft EA - Old Hilo Wastewater Treatment Plant Conversion

FILE NO.: HILOWWTP.COM

Thank you for the opportunity to review the subject document. Our comments related to water resources are marked below.

In general, the CWRM strongly promotes the efficient use of our water resources through conservation measures and use of alternative non-potable water resources whenever available, feasible, and there are no harmful effects to the ecosystem. Also, the CWRM encourages the protection of water recharge areas which are important for the maintenance of streams and the replenishment of aquifers.

[x] We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan.

[x] We are concerned about the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

[x] A Well Construction Permit and/or a Pump Installation Permit from the CWRM would be required before ground water is developed as a source of supply for the project.

[ ] The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit from the CWRM would be required prior to use of this source.

[x] Groundwater withdrawals from this project may affect streamflows. This may require an instream flow standard amendment.

[ ] If the proposed project diverts additional water from streams or if new or modified stream diversions are planned, the project may need to obtain a stream diversion works permit and petition to amend the interim instream flow standard for the affected stream(s).

[x] If the proposed project performs any work within the bed and banks of a stream channel, the project may need to obtain a stream channel alteration permit and a petition to amend the interim instream flow standard for the affected stream(s).

[x] We recommend that no development take place affecting highly erodible slopes which drain into streams within or adjacent to the project.

[ ] OTHER:

If there are any questions, please contact Mr. Ryan Imata at 587-0255.

Stephen K. Yamashiro
Mayor

Donna Fay K. Kiyosaki
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii

DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 • Hilo, Hawaii 96720-4252
(808) 961-8321 • Fax (808) 961-8630

August 18, 1998

Mr. Timothy Johns, Deputy Director
Commission on Water Resource and Management
Department of Land and Natural Resources
PO Box 621
Honolulu, HI 96809

Dear Mr. Johns:

Subject: Response to the Commission's comments regarding Draft Environmental Assessment (EA) for Old Hilo Wastewater Treatment Plant Conversion, Hilo, Hawaii TMK: 3-2-1-11: parcel 4

The Department received your letter dated July 24, 1998 on the above subject and thanks you for your concerns on the proposed project. We will address your concerns point by point.

1. WATER USE AND DEVELOPMENT PLAN: The University will be responsible for the coordination of this project with the County's Water Use and Development Plan.
2. DEGRADATION OF GROUND OR SURFACE WATER: In accordance with 40 CFR 122 Appendix C item (b)(2), the proposed facility is not a concentrated aquatic facility and therefore is exempt from treatment and disposal regulations. However, treatment processes such as sedimentation and filtration are under consideration by the future facility as part of this project to mitigate organic discharges.
3. WELL CONSTRUCTION/PUMP INSTALLATION PERMITS: Well construction permits and the subsequent pump installation permits will be obtained before the development of either well mentioned in the draft EA. The need for these permits is recognized and indicated in Section 9.0 *List of Permits* of the draft EA.
4. INSTREAM FLOW STANDARD AMENDMENT: There are no surface waters flowing through the subject property that will be affected by groundwater withdrawal.
5. STREAM CHANNEL ALTERATION PERMIT: There are no surface waters flowing through the subject property requiring a stream channel alteration permit.

6. **HIGHLY ERODIBLE SLOPES**: There are no surface waters flowing through the subject property and the property is flat with no highly erodible slopes.

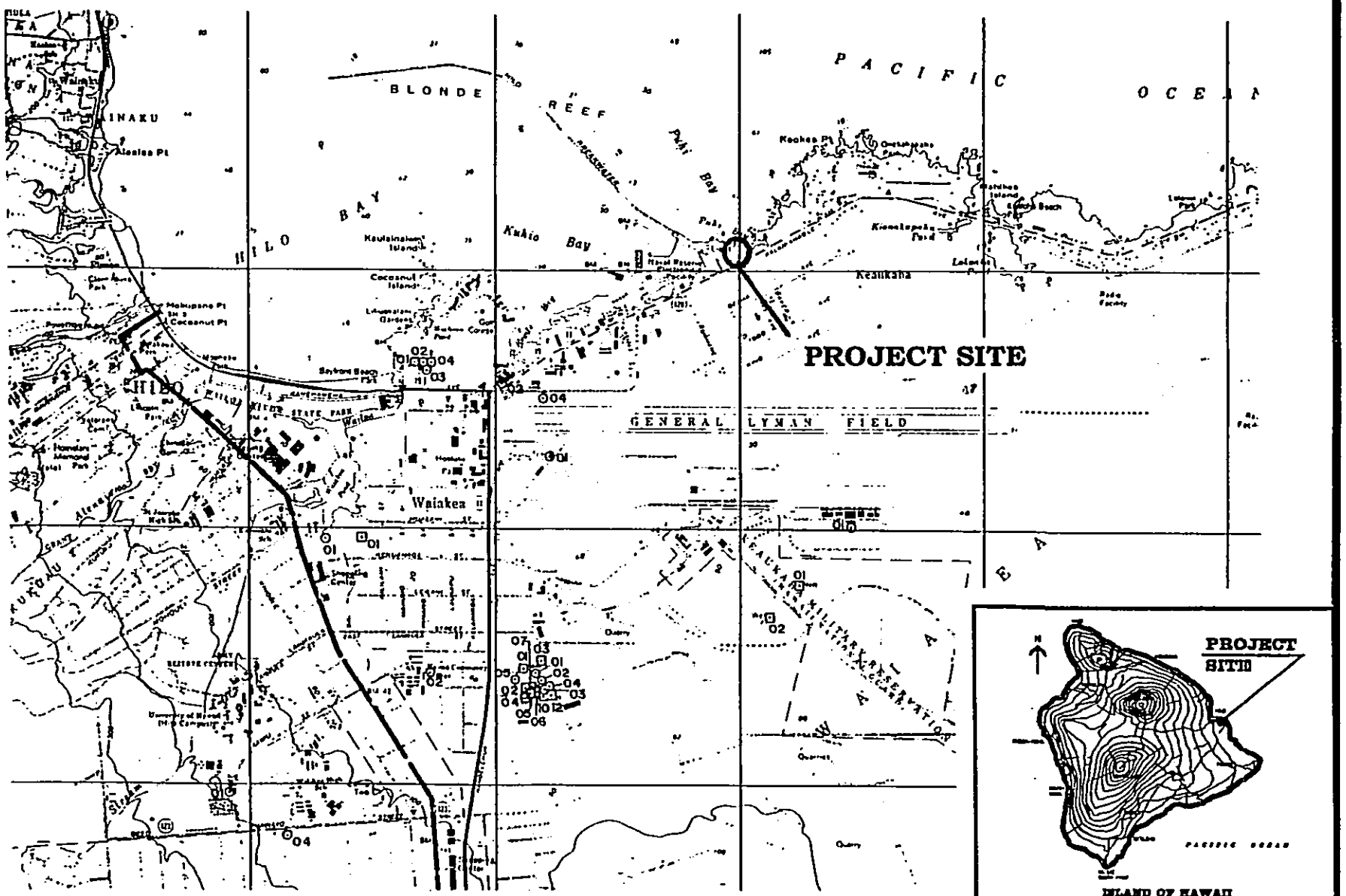
We anticipate completing this final environmental assessment in time to be included in the September 8, 1998 edition of the OEQC's *The Environmental Notice.*

Sincerely,

Donna Fay K. Kiyosaki
Chief Engineer

cc: Peter Boucher, WWD
Bruce Wade, M&E Pacific

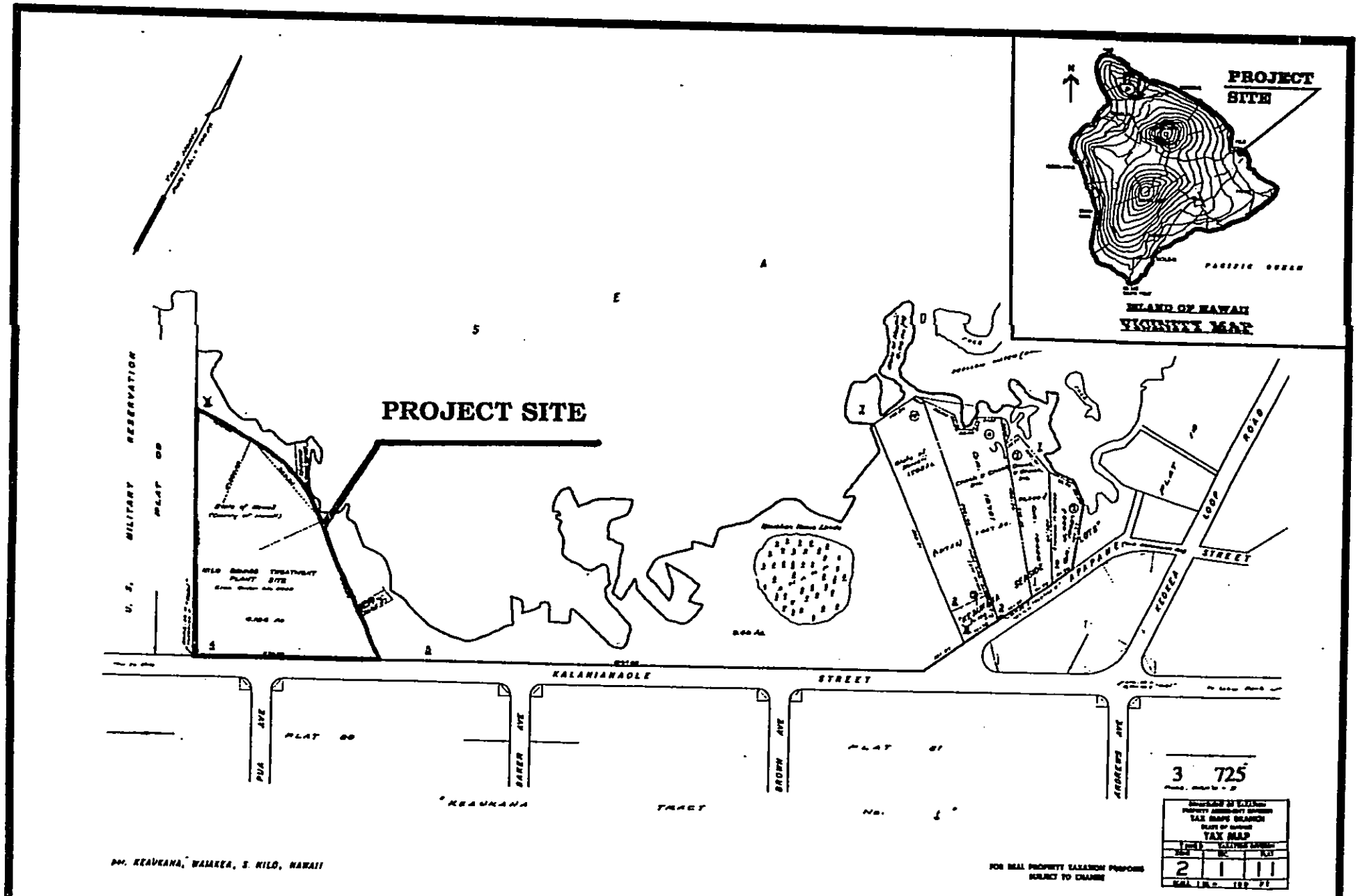
FIGURES



M&E Pacific, Inc.

Old Hilo Wastewater Treatment Plant
Environmental Assessment
T.M.K.: 3-2-01-011: 004

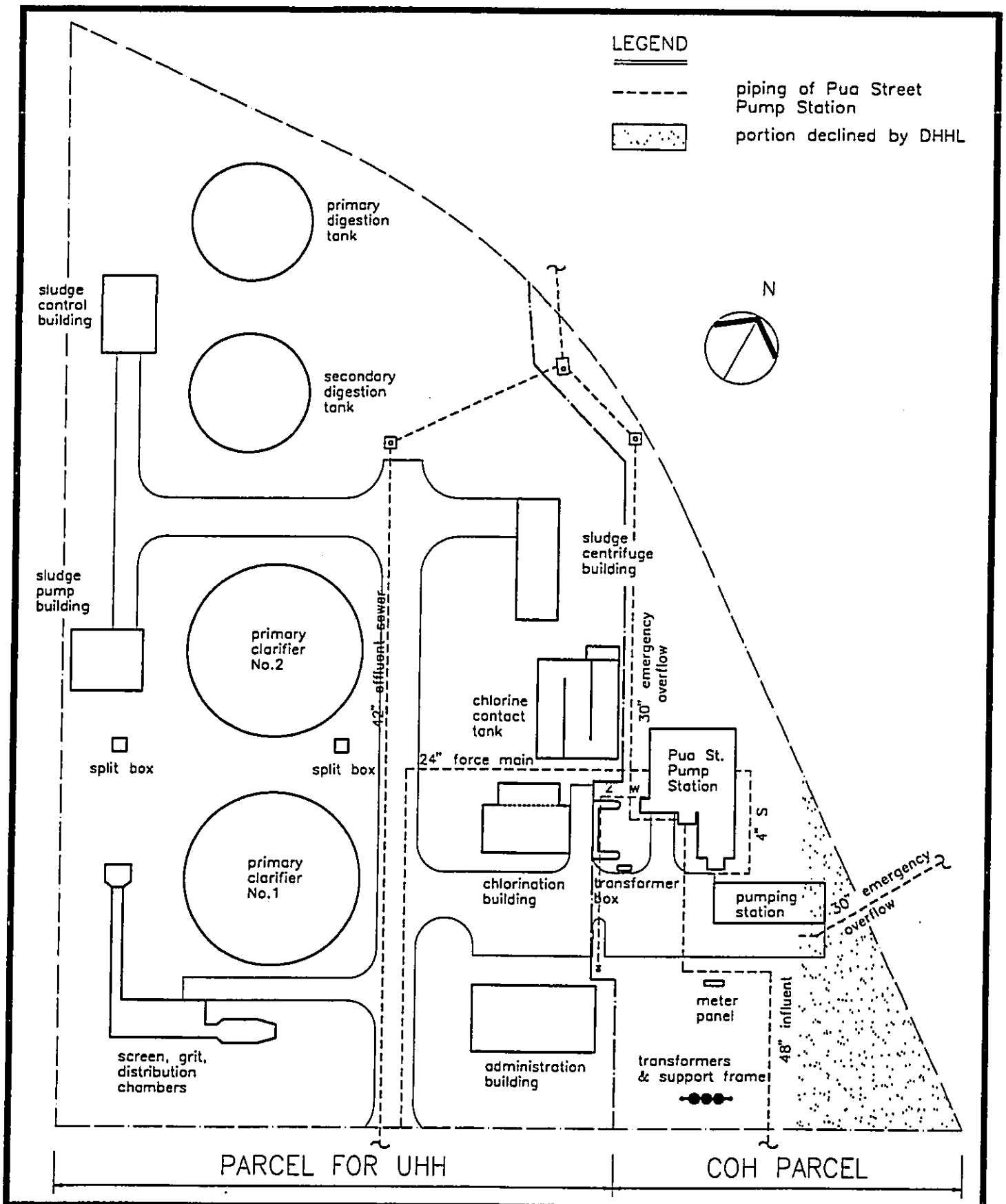
FIGURE 1
REGIONAL LOCATION MAP



M&E Pacific, Inc.

Old Hilo Wastewater Treatment Plant
Environmental Assessment
T.M.K.: 3-2-01-011: 004

FIGURE 2
T.M.K. LOCATION MAP



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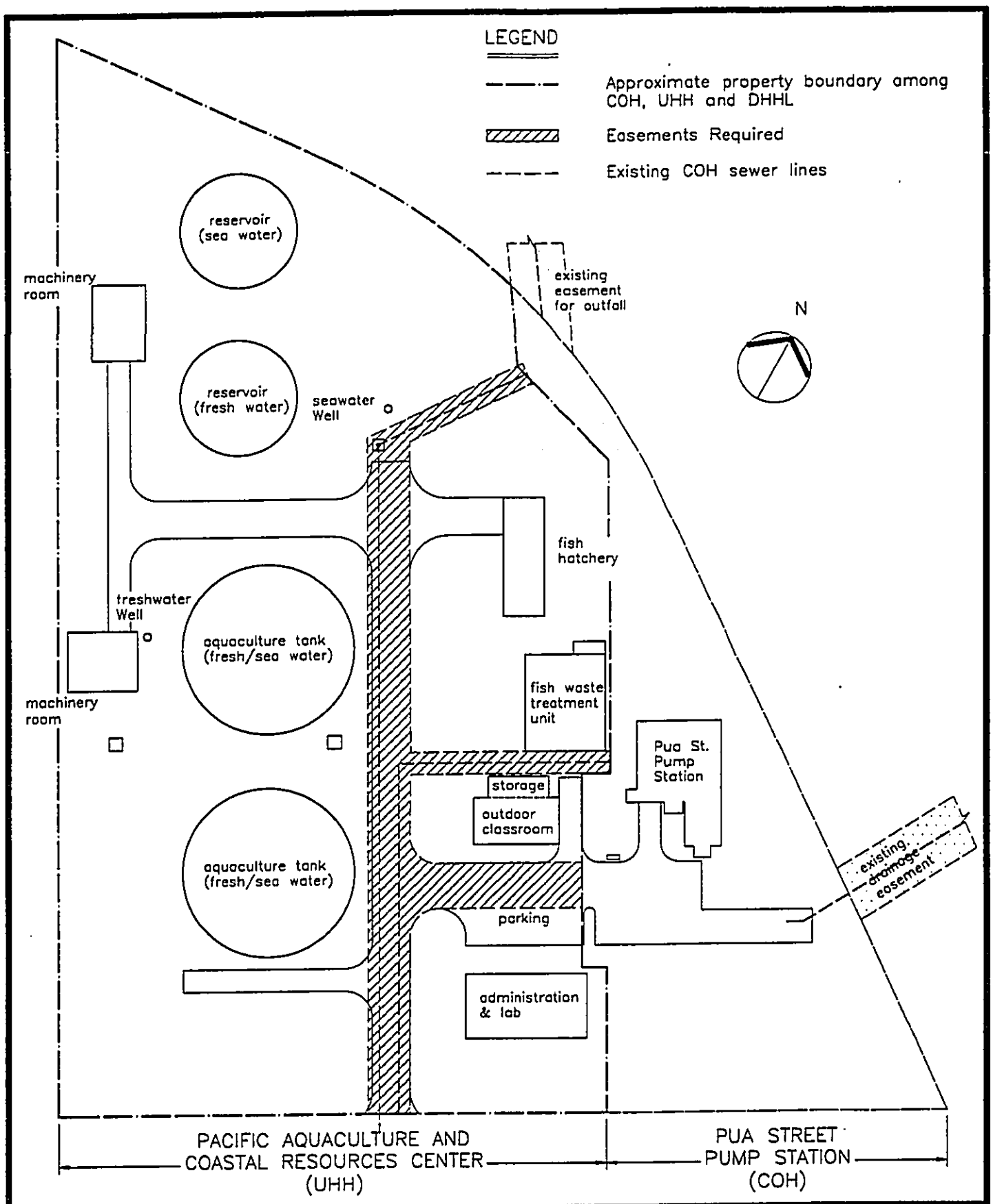
T.M.K.: 3-2-01-011: 004

FIGURE 3
SITE MAP
(not to scale)



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Old Hilo Wastewater Treatment Plant
Environmental Assessment
T.M.K.: 3-2-01-011: 004

FIGURE 4
Center Location & Plan Map
(not to scale)

LEGEND

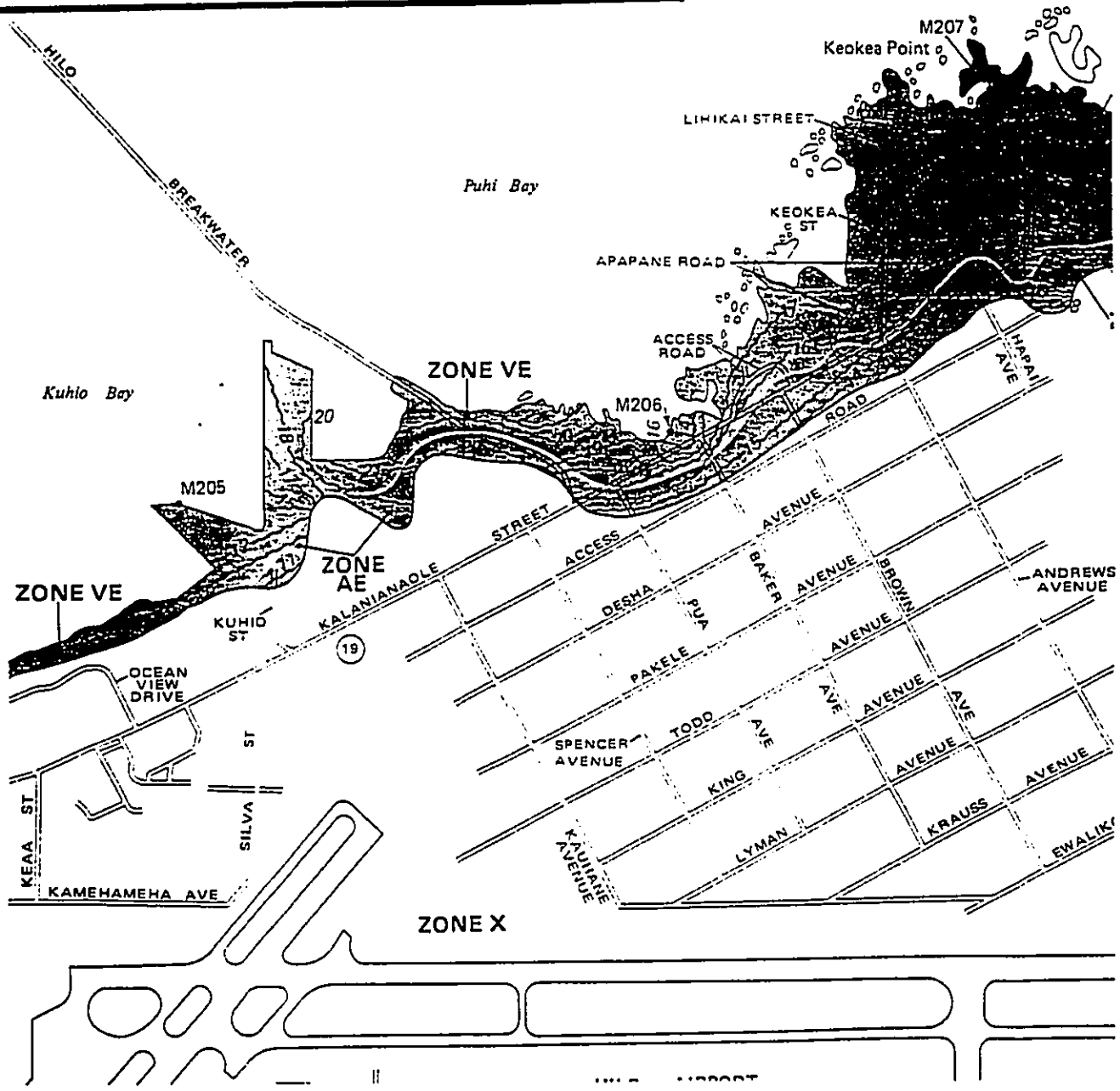
SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

ZONE VE — Coastal flood with velocity hazard (wave action); base flood elevations determined.

Flood Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

513 — *Base Flood Elevation Line; Elevation in Feet*



M&E Pacific, Inc.	Old Hilo Wastewater Treatment Plant Environmental Assessment T.M.K.: 3-2-01-011: 004	FIGURE 5 FLOOD INSURANCE RATE MAP