



RECEIVED  
DEPARTMENT OF WATER SUPPLY  
COUNTY OF MAUI  
P.O. BOX 1108  
WAILUKU, MAUI, HAWAII 96793-7108  
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OFC. OF ENVIRONMENTAL  
QUALITY CONTROL

March 1, 1990

Mr. Marvin Miura, Director  
Office on Environmental Quality  
Control  
465 South King Street, #115  
Honolulu, Hawaii 96813

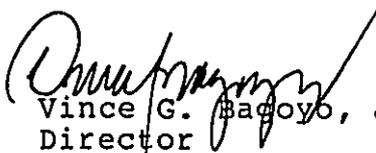
Dear Mr. Miura:

Re: HAIKU-KOKOMO ROAD WATERLINE PN 89-400  
TMK 2-7-03 Makawao, Maui, Hawaii

In accordance with the requirement of Chapter 343, HRS and Chapter 200 of Title 11, Administrative Rules, we hereby notify you that an Environmental Impact Statement will not be required for the subject project.

As the proposing agency, we are forwarding herewith one copy of the OEQC form for publication of EIS Documents in the OEQC Bulletin and four (4) copies of an Environmental Assessment (negative declaration) for the subject project showing that there will be no significant impact on the environment as a result of the project. These are respectfully submitted for your consideration.

Sincerely,

  
Vince G. Bagoyo, Jr.  
Director

Enclosures

*"By Water All Things Find Life"*

1990-03-23-MA-FEA

FILE COPY

COUNTY OF MAUI  
DEPARTMENT OF WATER SUPPLY

ENVIRONMENTAL IMPACT ASSESSMENT  
AND  
NEGATIVE DECLARATION  
FOR

HAIKU-KOKOMO ROAD WATERLINE  
JOB NO. PN 89-400

AT  
HAIKU, MAUI  
STATE OF HAWAII

This environmental document was prepared pursuant to Chapter 343,  
Hawaii Revised Statutes.

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

  
\_\_\_\_\_  
Vincent Bagbyo, Jr.  
Director

2-16-90  
Date

PREPARED BY: Akinaka & Associates, Ltd.  
250 North Beretania Street, Suite 300  
Honolulu, Hawaii 96817

FEBRUARY 1990

ENVIRONMENTAL IMPACT ASSESSMENT  
AND  
NEGATIVE DECLARATION  
HAIKU - KOKOMO ROAD WATERLINE

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EXHIBITS

1. LOCATION MAP
2. VICINITY MAP
3. WATER MAP
4. STATE LAND USE MAP
5. PAIA-HAIKU COMMUNITY PLAN

## I. INTRODUCTION

### A. Project Scope

The proposed project is a planned facility of the Makawao Water System for the Department of Water Supply, County of Maui. The proposed project is the link between existing water facilities of the Makawao Water System and consists of:

1. Construction of approximately 1400 feet of 12-inch ductile-iron waterline along Kokomo Road, connecting an existing 12-inch waterline at the lower end to the tank discharge waterline located at the entrance of the tank site on Kokomo Road, at the upper end; and
2. Construction of necessary valves, fittings, and appurtenances, and a fire hydrant assembly connected to an existing 8-inch waterline.

### B. Project Location

EXHIBIT 1: LOCATION MAP shows the general location of the project on the northwestern slope of Haleakala. The project site is along the Haiku-Kokomo Road as shown in EXHIBIT 2: VICINITY MAP. Exhibit 2 is based on the 1"=2000' USGS "Haiku" Quad Map. The waterline will be located on TMK: (2nd Division) 2-7-03, 21, 33.

### C. Project Objectives

The objectives of the proposed project are:

1. Connect the water source (tank) with the distribution system (pipeline). Provide an route for water transmission to consumers of the Makawao Water System.
2. Provide a new waterline which meets the standards of planning within the "Water System Standards" of the Department of Water Supply.
3. Conform to the objective and policies of the Maui County General Plan to provide an adequate supply of domestic and agricultural water. This project meets the objective based on the following policies:
  - a. Support water supply services to an area which historically experienced critical water problems.

- b. Creates a system to provide improved fire protection.
- c. Minimizes moratoriums on water supply in areas used for residential housing.

## II. DESCRIPTION OF PROPOSED PROJECT

### A. Background and Existing Conditions

The new waterline will be an alternate to the existing 8-inch waterline along Haiku-Kokomo Road. The 12-inch pipeline will be part of the Makawao Water System as shown in EXHIBIT 3: WATER MAP. Exhibit 3 is a portion of the County of Maui Water Distribution Map - "Haiku - Pauwela, Makawao District" and further identifies the project.

Makawao Water System service area includes the communities of Makawao, Pukalani, Hailemaile, Kokomo, Kuiaha, Kaupakulua, Haiku, Ulumalu, Pauwela, and Peahi. This project will serve a portion of the service area, that is, the lots along Kokomo, Pauwela, Haiku Roads and Hana Highway. Direct service from this waterline will be restricted to lots below Lowrie Ditch for pressure regulations. Lots above Lowrie Ditch along Kokomo Road and adjacent streets will be serviced by the existing 8-inch pipeline.

### B. Proposed Improvements

The waterline will be constructed in road right-of-ways owned by the County of Maui. Ground elevation will vary between 745 and 815 feet.

Waterline construction will require no grading as the pipeline will reside in the existing 20-ft wide asphalt concrete road.

Piping to connect to the existing water main will include valving to isolate the system. Connections to the existing facilities have been provided by previous projects.

### C. Project Funding

Funding for this project will be provided by the Department of Water Supply, County of Maui. The preliminary construction cost estimates for this project is \$120,000.00

III. RELATIONSHIP TO EXISTING LAND USE PLANS AND CONTROLS

A. State Land Use Plans

The State Land Use Commission designates properties in four categories: Agricultural, Rural, Urban, and Conservation. The proposed project will service lands under all categories. (See EXHIBIT 4: STATE LAND USE MAP).

B. County of Maui General Plan

The General Plan for the County of Maui, adopted June 24, 1988 mandated the formulation of the Paia-Haiku Community Plan. This community plan provides a relatively detailed scheme for implementing the objective and policies of the County General Plan relative to the Paia-Haiku region.

The proposed project will service lands designated for agricultural, business, single family and light industrial uses as shown in EXHIBIT 5: PAIA - HAIKU COMMUNITY PLAN.

#### IV. ENVIRONMENTAL SETTING

##### A. Topography

The project is located 2.5 miles above Maliko Bay on the northern coastline of Maui. Maliko Gulch is adjacent to the project site. Topographic information is available on the Haiku Quadrangle Map published by the U.S. Geological Survey (See EXHIBIT 2).

##### B. Geology/Soils

The water tank site is located on the northwest flank of Haleakala, which is a dormant volcano. Haleakala and West Maui were the two major volcanos that formed the island of Maui.

Rock formations belonging to the original Haleakala Volcanic shield are part of the Honomanu Volcanic series which was subsequently overlain by the Kula Volcanic Series. The Kula series is composed mostly of hawaiite with lesser amounts of alkalie olivine basalt and ankaramite

Soils at the site are classified in the Haiku series (HbC) which are well-drained soils found on the uplands on the island of Maui. These soils developed in material weathered from basic igneous rock. HbC soils are clayey with moderately rapid permeability (2.0-6.3 in/hr). These soils are used for pineapple, pasture, and homesites.

##### C. Climate

The climate of Maui is comfortably uniform and is characterized by the northeast tradewinds generated by regions of high pressure to the north. Uniform temperatures result from the tempering affect of the surrounding ocean. The average monthly temperatures in Makawao are within the range of 66°F in August and 61°F in December. The mean temperature decreases about 3°F for every 1,000 foot increase in elevation.

The consistent approach of the tradewinds from the northeast distinguishes the island into windward and leeward sides. Windward Maui receives larger amounts of rainfall as the result of the condensation of water vapor as it is forced up into the atmosphere by the mountain mass. The Haiku - Kokomo Road Waterline site, located in the windward side of the island at an elevation of approximately 800', receives an average of 40 inches of rainfall per year.

D. Biology

The site is an improved asphalt-concrete road with grassed shoulders. The surrounding area consists of homesites and pasture lands with introduced flora species such as eucalyptus, guava, christmas berry and kikuyu and bermuda grasses.

No threatened or endangered birds are known to inhabit the area. Common urban birds, such as mynahs, doves, ricebirds and sparrows were observed in the project area. Wildlife inhabiting the area include stray cats, mongoose, and rats which are common in open agricultural areas.

E. Air Quality

Although no information on air quality at the project site was obtained, it is generally assumed that the air is relatively clear and low in pollution. This is because of the elevation and distance from the major urban centers.

F. Noise

Noise levels were not measured at the project site. The noise levels are basically normal rural road traffic and agricultural activities of the adjacent areas.

G. Archaeology

There are no identified historic or archeologically significant locations at the site or immediate vicinity. However, should any unanticipated sites, artifacts or remains, such as shell, bone or charcoal deposits, be discovered during construction, the work will be halted and the State Historic Preservation Office will be contacted.

H. Flood Hazard

Flood hazard data was not obtained for the project site. As the site is on high grounds flooding is not expected. Base flood elevation and flood hazard factors are undetermined on the Flood Insurance Rate Map prepared by the Federal Insurance Administration.

V. SOCIO-ECONOMIC SETTING

The residential population of the island of Maui as of 1980 was 71,191. The population of the Haiku-Pauwela census tract (#302) was 3,567 at the same time. Forecasts within the County of Maui Community Plans combines census tract #302 with #305 (Paia) with year 2000 projected at 6,800 people. If the population ratio between the census tracts remain constant, there will be 4,709 people in the Haiku-Pauwela tract in year 2000.

Agriculture is the primary economic activity of the area, particularly sugar cane and pineapple production. Other primary industries for the residential population are service and retail. Household incomes in the northeast Maui area ranged from \$2,000 to \$25,000 or more, with half falling in the \$12,000 to \$25,000 or more category.

The project's service area (See EXHIBIT 3) includes other land uses as well as agriculture. Residential lots are located along Haiku-Kokomo Road and surround the business and light industrial zoned parcels associated with the defunct pineapple cannery. Small businesses remain to service the area's population and tourist activity.

VI. PROBABLE IMPACTS OF THE PROPOSED ACTION ON THE ENVIRONMENT

A. Short Term Impacts

Short term impacts related to construction activities of the proposed project can be anticipated for the duration of the waterline installation. These include impacts on noise, air and water quality, and vehicular traffic.

Noise along the project site will be generated by internal combustion engine vehicles. The work will be limited to daylight hours and restricted to the road right-of-way. Exhaust emissions from construction vehicles will impact the immediate adjoining area.

Dust and erosion from the construction efforts will be insignificant considering the volume of earth manipulated. Conformance to the County's Soil Erosion and Sedimentation Control ordinance should mitigate any adverse effects. Dewatering of the trenches will not be required.

Disruption of vehicular traffic due to construction of the waterline is expected to occur over a 3 month period. Traffic control devices and/or flagmen will control traffic through the construction area. One lane of traffic will be kept open at all times.

B. Long Term Impacts

There are no negative long term impacts from this waterline project. Motorists on Kokomo Road will not notice the completed project after repaving of the trench.

No increase in flood elevations is expected to occur as a result of this project. Current drainage patterns will be maintained, with no increase in storm water generation due to this project.

VII. ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

The noise level will increase during the construction period. This effect will be of short duration, lasting only for the construction phase. The noise level can be reduced by the contractor by ensuring proper functioning of mufflers on all equipment, and conducting construction activity only during daylight hours, between 8:00 a.m. to 5:00 p.m.

Traffic along Kokomo Road will be disrupted for short periods during installation of the pipelines. The disruptions will be short as the work within Kokomo Road right-of-way is not complex nor difficult.

The few Kokomo Road residents along the waterline alignment will be inconvenienced in regards to driveway access and other roadway frontage usage (mail, deliveries, etc.). The inconveniences will occur when construction is directly fronting their lots.

VIII. ALTERNATIVES TO THE PROPOSED ACTION

A. Alternative Route

Consideration of an alternative route would be an inefficient use of public right-of-way. Road right-of-ways are the normal location for domestic waterlines.

B. No Action

This alternative will not allow the Department of Water Supply to meet planning standards for water transmission services.

IX. MITIGATING MEASURES TO MINIMIZE ADVERSE IMPACTS

The short term impacts occurring during the construction work will be minimized by applying current techniques and methods. In addition, restrictions of operational hours will minimize noise impacts to the adjoining area.

Dust generated during trenching activities will be controlled by water sprinkling and compliance with the Air Pollution Control Regulations of the Department of Health and applicable portions of the County ordinances relating to excavation and material handling operations.

The impact of construction activities increasing downstream sedimentation can be mitigated by conforming to strict erosion control measures as specified in the County grading ordinances and the State Department of Health's Water Quality Standards.

To minimize pollutant emissions from internal construction engines, the contractor will be responsible for proper maintenance of all construction equipment and vehicles.

The Contractor will be required to provide proper traffic control devices and/or flagmen to minimize any disruption of traffic flow. Steel plates over open trenches will allow access to driveway and road frontages. Temporary trench paving will serve as a roadway surfacing until the permanent pavement section is constructed.

X. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

The construction of the proposed project will involve the commitment of certain natural and fiscal resources. The commitment of construction materials, manpower, and energy are mostly unrenowable and irretrievable. The impacts of using these resources should, however, be weighed against the benefits to the residents of the County when fire protection and consumptive services are required. There will be no loss of any natural or cultural resources.

XI. DETERMINATION

Based on the preceding paragraphs, it is anticipated that the proposed action will result in no significant adverse impacts other than those described in this assessment. In evaluating the impacts described in this assessment, it appears that the proposed action will not have any significant negative effect on the environment. Consequently, a Negative Declaration is recommended and therefore, an Environmental Impact Statement would not be required.

XII. REASONS SUPPORTING RECOMMENDED DETERMINATION

In considering the significance of potential environmental effects, the applicant has considered the sum of effects on the quality of the environment and evaluated the overall cumulative effects of the proposed action. The applicant has considered every phase of the proposed action, the expected consequences, both primary and secondary and the cumulative as well as the short and long term effects of the proposed action. As a result of these considerations, the applicant has determined that:

- A. The proposed action does not involve an irrevocable commitment or loss of or destruction of any natural cultural resource:

There are no natural or cultural resources associated with the project site. Prior use of the property for road construction has substantially altered the site from its natural condition.

- B. The proposed action does not curtail the range of beneficial uses of the environment:

The proposed project is consistent with the County's General Plan and the Department of Water Supply planning standards and would not curtail beneficial uses of the environment in the area. The proposed project will be compatible with the uses of the surrounding area.

- C. The proposed action is in concert with the State's long-term environmental policies, goals and guidelines as expressed in Chapter 343, HIS, and any revisions and amendments thereto, court decisions and executive orders:

The proposed project is consistent with the State Land Use Plan which is in concert with all applicable policies, goals and guidelines. No long-term environmental conflicts are foreseen.

- D. The proposed action does not substantially affect the economic or social welfare of the community or state:

The economic impact will be affected by the short-term, construction related activities. Cash infusion during the construction phase will be the primary short-term economic impact. Upon completion of the project, economic situation should return to the existing condition.

- E. The proposed action does not involve substantial secondary impacts, such as population changes or effects on public facilities:

The proposed project will not directly result in an increase of population in the area but the project will eliminate restriction to growth due to deficient water systems. The proposed waterline construction, when completed, will allow development of lands in conformance with existing zoning.

- F. The proposed action does not substantially affect public health:

Construction activities will be regulated to minimize noise, dust and erosion concerns.

- G. The proposed action does not involve a substantial degradation of environmental quality:

The existing physical aspects of the surrounding area will be preserved.

- H. The proposed action is individually limited and cumulatively does not have a considerable effect upon the environment nor involve a commitment for larger actions:

The proposed action, either individually or cumulatively, will not have a considerable effect on the environment, nor will it involve a commitment to larger actions.

- I. The proposed action does not substantially affect rare, threatened or endangered species or habitats:

There are no known rare, threatened or endangered species or habitats associated with the project site.

- J. The proposed action does not detrimentally affect air or water quality or ambient noise levels:

No significant detrimental effects on air or water quality or ambient noise levels are anticipated. Because the project area is small, fugitive dust will not be a problem.

Storm runoff will not be increased and the direction of flow will not be altered. At the completion of construction, noise levels will return to levels comparable with existing ambient conditions.

- K. The proposed action does not affect an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary or coastal waters.

The proposed project is not located in an environmentally sensitive area. The project is not located within a flood plain or within a tsunami zone. The project is not located on unique geologically hazardous lands. It is also not expected to have any significant adverse impacts on fresh or coastal waters.

XIII. LIST OF NECESSARY REVIEW/APPROVALS

A. County of Maui

1. Department of Public Works
  - a. Construction plan approval-Land Use and Codes Administration
  - b. Work in County Roads Permit per Ordinance 639

B. State of Hawaii

1. Department of Health
  - a. "Potable Water Systems" Chapter 20 of Title 11

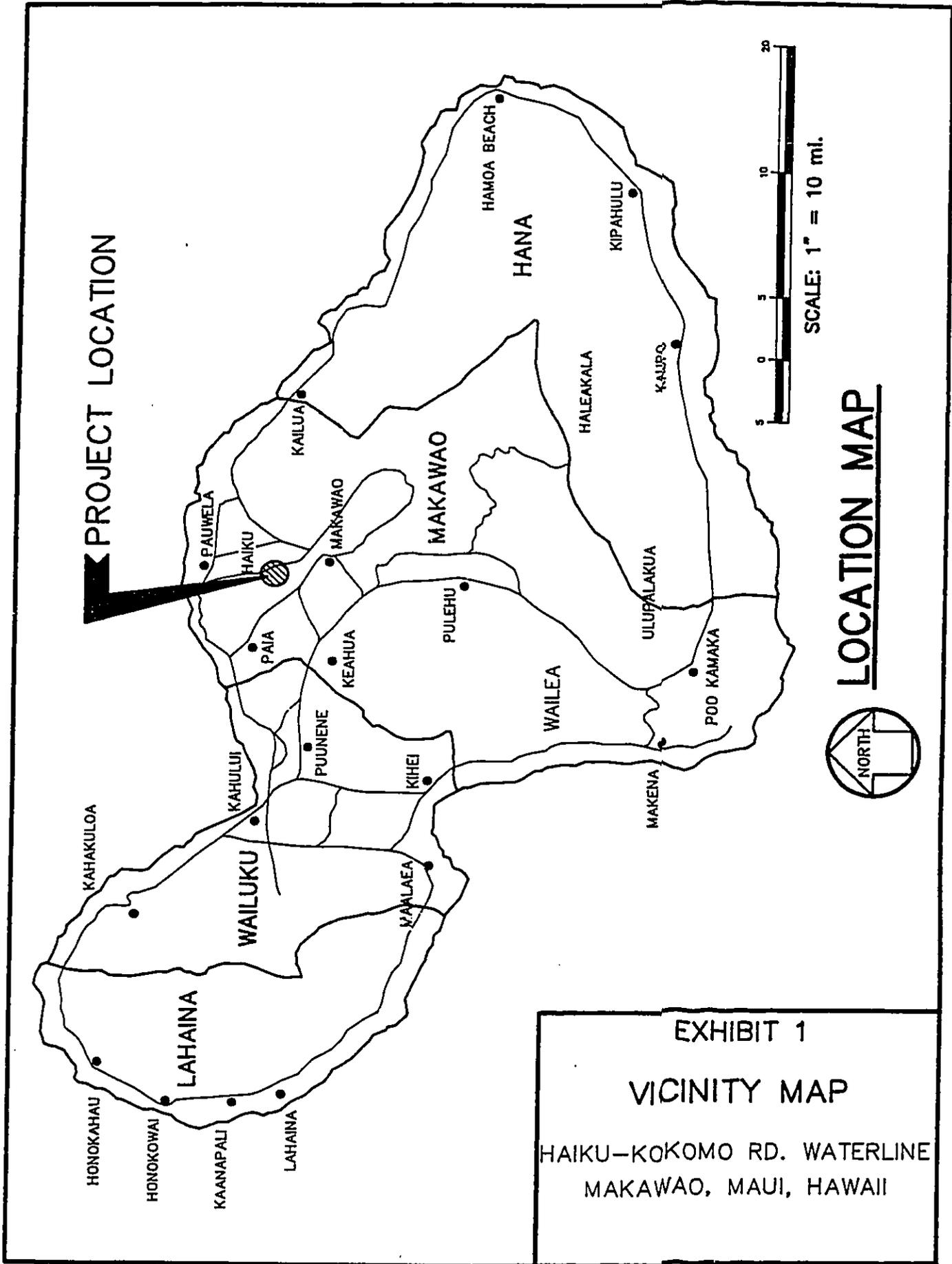
XIV. ORGANIZATIONS AND PERSONS CONTACTED

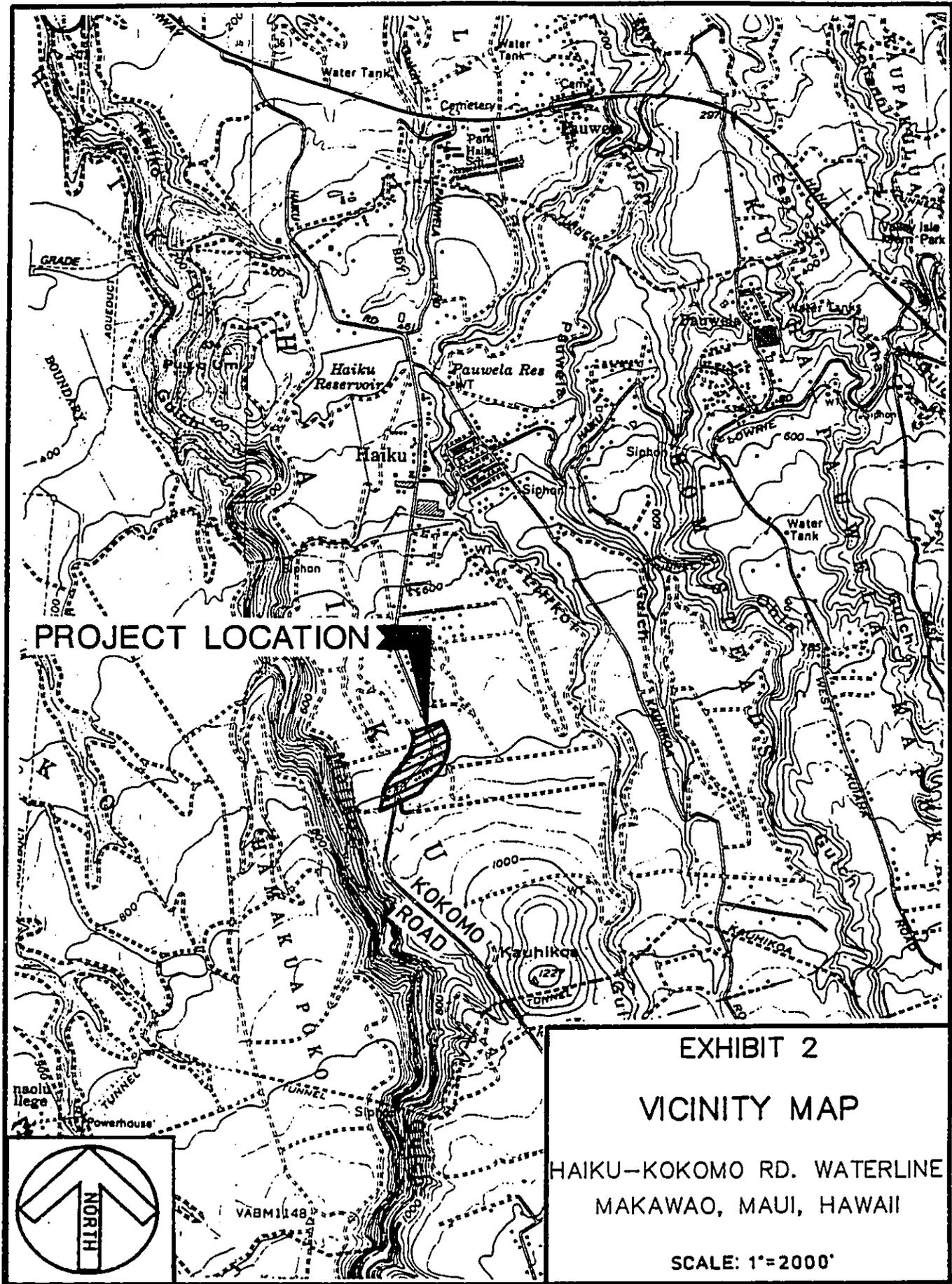
The following agencies provided information in the preparation of the Environmental Impact Assessment on the subject project.

- A. Department of Planning  
County of Maui  
200 South High Street  
Wailuku, Maui
- B. Department of Public Works  
County of Maui  
200 South High Street  
Wailuku, Maui
- C. Office of Environmental Quality Control  
State of Hawaii  
465 South King Street, Room 4  
Honolulu, Hawaii 96813

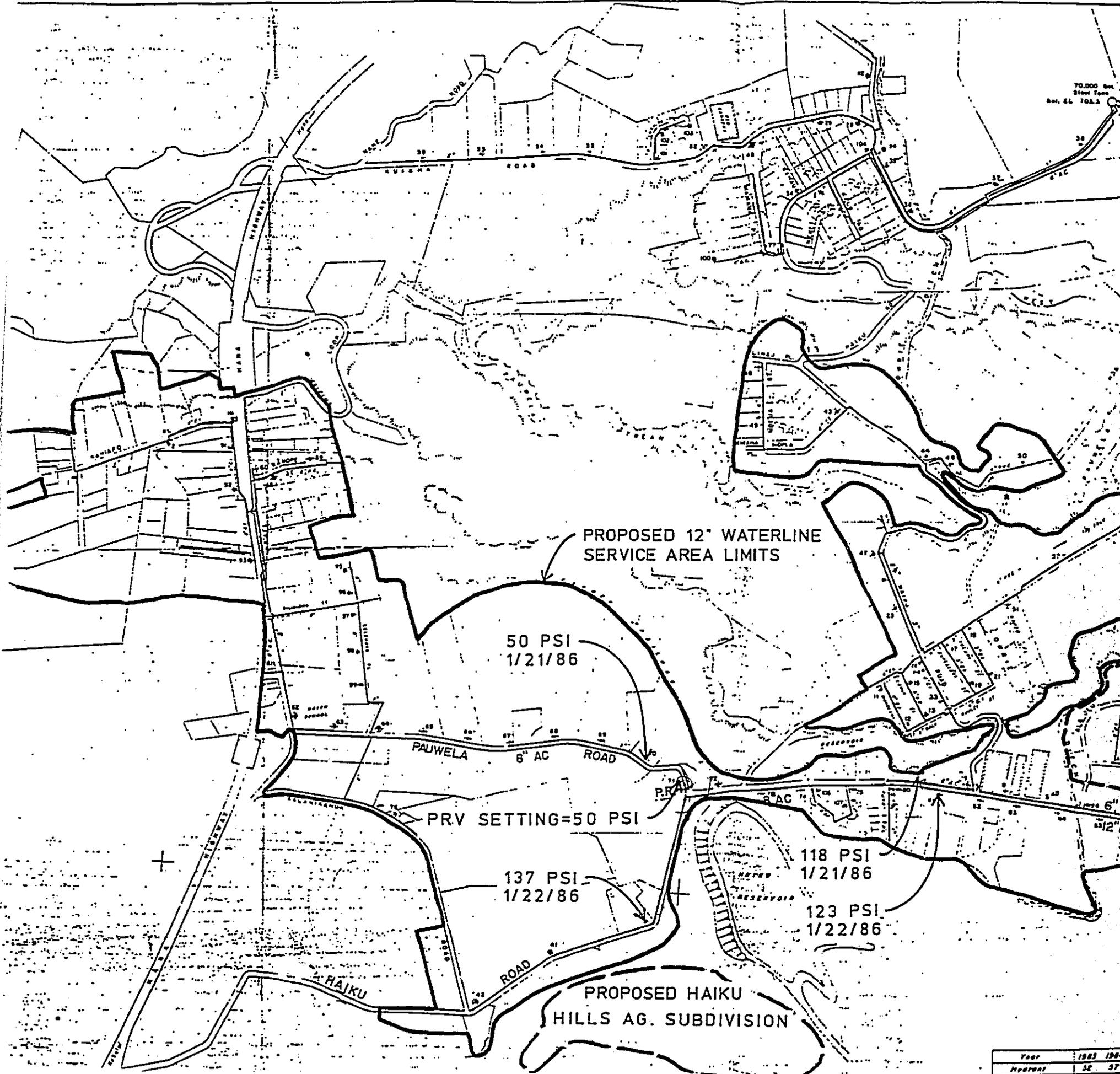
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1. County of Maui, Department of Water Supply, Water System Standards, Vol. I, 1985.
2. MacDonald, Gordon A., Volcanoes in the Sea, University of Hawaii Press, 1983.
3. U.S. Department of Agriculture, Soil Conservation Service, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, 1972.
4. State of Hawaii, Department of Planning and Economic Development, State of Hawaii Data Book, 1987: A Statistical Abstract, 1987.
5. County of Maui, Paia-Haiku Community Plan, 1983.
6. County of Maui, Department of Water Supply, Environmental Impact Statement: Makawao - Kula Water Treatment Plants, 1982.

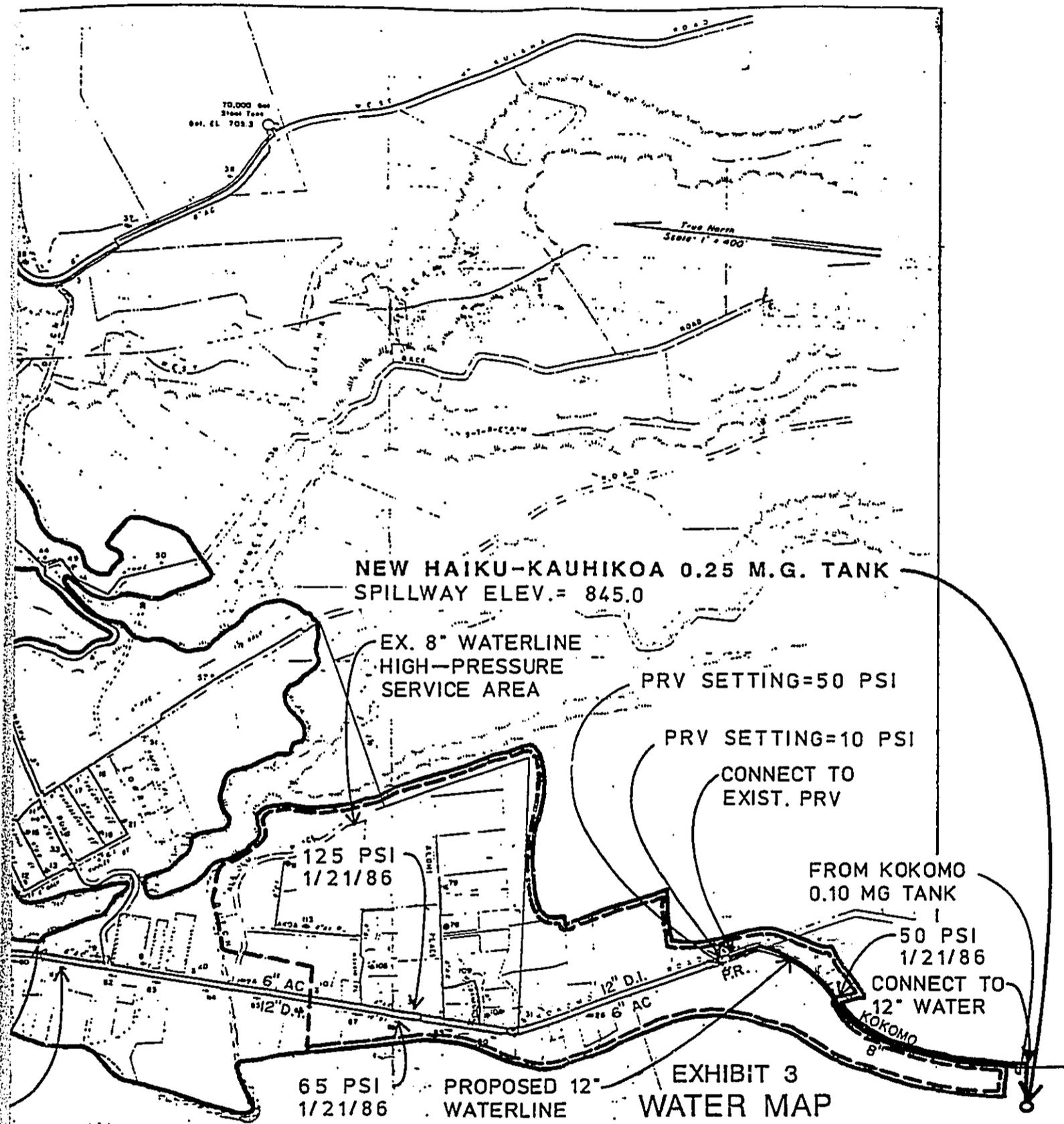




70,000 Gal.  
Steel Tank  
Bot. El. 702.5



Year	1985	1986
Hydrant	35	37



Year	1983	1984	1985	1986
Hydrant	32	37	60	60

DEPARTMENT OF WATER SUPPLY, COUNTY OF MAUI  
WAILUKU, MAUI, HAWAII

**FIRE PROTECTION  
WATER DISTRIBUTION MAP**

**HAIKU - PAUWELA**

MAKAWAO DISTRICT

Drawn By: E. S. H. Date: April 5, 1974  
Scale: 1" = 400'  
Approved By: Carl Kerama

