DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

Prepared By

Harbors Division

REVISED
ENVIRONMENTAL IMPACT STATEMENT

ADMINISTRATIVE ACTION

FOR

KIHEI BOAT LAUNCHING RAMP FACILITY
KEAWAKAPU, MAUI

THIS STATEMENT FOR IMPROVEMENT WAS DEVELOPED IN ACCORDANCE WITH THE ENVIRONMENTAL IMPACT STATEMENT REGULATIONS, STATE OF HAWAII, AND IS SUBMITTED PURSUANT TO:

Chapter 343
Hawaii Revised Statutes

9/20/79
Date

DAVID K. HIGA, CHIEF
HARBORS DIVISION

REVIEWED FOR CONTENT AND ACCEPTED BY STATE DOT

9/21/79
Date

RYOKICHI HIGASHIONNA, Ph.D.
DIRECTOR

REVISED

ENVIRONMENTAL IMPACT STATEMENT

FOR THE

KIHEI BOAT LAUNCHING RAMP FACILITY

AT

KEAWAKAPU, MAUI, HAWAII

(TAX MAP KEY: 3-9-04)

CONTRACT NO. 8427, JOB H.C. 4053

Prepared for:

Harbors Division
Department of Transportation
State of Hawaii

Prepared by:

M&E Pacific, Inc.
Environmental Engineers
190 South King Street
Honolulu, Hawaii 96813

September 1979

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LOCATION:	Keawakapu, Kamaole Homestead, Wailuku, Maui
APPLICANT:	Harbors Division, State of Hawaii
ACCEPTING AUTHORITY FOR EIS:	Governor, State of Hawaii
APPROVING AGENCY FOR USE OF LAND:	Department of Land and Natural Resources, State of Hawaii
BY:	M&E Pacific, Inc.

SUMMARY OF THE

ENVIRONMENTAL IMPACT STATEMENT

FOR THE

KIHEI BOAT LAUNCHING RAMP FACILITY

1. DESCRIPTION OF THE PROPOSED ACTION

The proposed project is the construction of a boat launching facility at Keawakapu, Maui. The facility will include a double lane ramp, boat washdown and maneuvering areas, an access road, parking for 39 cars with trailers, and offshore protective structures. The offshore protective structures are necessary for the attenuation of surge at the launch ramp. Provisions will also be made for a future comfort station and a small boat dry storage operation.

Funding for this project will be administered by the Harbors Division of the State of Hawaii from appropriations by the State Legislature.

The objective of the proposed action is consistent with the guidelines of the Statewide Boat Launching Facilities Master Plan because, when this facility is operational, it will provide a safe launch site under most wave conditions for boaters bound for popular boating and fishing areas near Makena and Kahoolawe and Molokini islands.

The project site is located on the southwest coast of Maui on land owned by the State of Hawaii. It is situated south of Kamaole Beach Park #3 and makai of Kihei Road. The total land and water space required for this facility are approximately 1.5 and 2.0 acres, respectively.

2. DESCRIPTION OF THE ENVIRONMENTAL SETTING

The project site is situated in an undeveloped, arid piece of land zoned for park use. Access to the project site is provided by a dirt road from Kihei Road. No improvements have been made to the land.

Grasses and kiawe trees are the dominant plant species at the project site. The shoreline, forming a rocky cove, supports only sparse strand vegetation. The nearshore area with hard substratum supports abundant coral growth and benthic organisms. No endangered species of flora or terrestrial fauna were found in the general area.

The waters inshore from a line drawn from Hekili Point at Olowalu southeast to Puu Olai are designated as calving and breeding grounds for Humpback whales. The Humpback whale is protected under federal law as an endangered species.

Found near the project site were a registered historic site and several other features of archaeological significance. However, no construction activity is planned in these areas.

3. PROBABLE IMPACTS OF THE PROPOSED ACTION

The probable impacts can be distinguished between those associated with construction and those associated with the operational phases of the proposed action.

The physical impacts associated with the construction of this project are as follows:

a. Alteration of the natural landscape due to clearing and grading operations.

b. Temporary minor noise and dust disturbances to residents in the proximity of the site caused by the construction work.

c. Potential accelerated soil erosion caused by high intensity rains which could occur during grading.

d. Minor temporary disturbance to local traffic due to construction of the access road.

e. Destruction of coral colonies and benthic ecosystems caused by dredging operations for the launch basin and entrance channel.

f. Temporary silting of the water columns in the nearshore waters caused by dredging operations.

The operational impacts associated with this project are summarized as follows:

a. Possible effect of noise generated from motors of power boats upon nearby residents.

b. Minimal air and water quality impairment.

c. Minimal traffic disruption from boaters utilizing this facility.

The land use and planning impacts associated with this project are summarized as follows:

a. Preservation of the "open space" character of the area.

b. Minimal impacts to existing utilities.

The social, cultural and economic impacts associated with this project are summarized as follows:

a. A safe, convenient launch site provided for boaters relatively near popular boating areas.

b. Preservation of the public right of access to the shoreline.

c. Generation of construction-related employment and other indirect income to various labor force segments.

d. Possible increase in expenditures by boaters and appurtenant activities.

e. Restrictions to swimming and diving activities in the launch basin and entrance channel.

4. PROBABLE ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Unavoidable short term adverse environmental effects associated with this project are summarized as follows:

a. Temporary silting of the water column in the nearshore waters caused by dredging of the launch basin and entrance channel.

b. Minor noise and dust disturbance to local residents caused by construction activity.

c. Temporary minor traffic disruption along Kihei Road caused by construction of the access road.

d. Potential accelerated soil erosion caused by high intensity rains which could occur during grading.

Unavoidable long term environmental effects associated with this project are summarized as follows:

a. Alteration of the natural landscape and elimination of existing flora by clearing and grading.

b. Removal of existing coral colonies and temporary disturbance of benthic habitats by dredging operations.

c. Noise generated from motors of power boats may affect residents in the immediate proximity of the launching facility.

5. ALTERNATIVES TO THE PROPOSED ACTION

As an alternative to the proposed action, consideration was given to the selection of another site, varying the scope of the project, improving existing conditions at Kalama Park, and no action.

A site selection study revealed no other suitable site exists between Kalepolepo and Makena. Each alternate site studied had critical factors that precluded its selection as the primary choice for a new boat launching facility.

The scope can be varied to alter the characteristics of the proposed action. One option is to increase the size of the project to include plans for a small boat harbor. The boat ramp would then be an incidental item to this action which would reduce the cost for the boat ramp but incur a greater overall cost for the project.

A second option is to use the proposed site as a park for picnicking and camping. However, this plan can be incorporated with the proposed action at a later date since ample State-owned lands zoned for park use are available adjacent to the project site.

The alternate action of improving existing conditions at Kalama Park ramp involves some effort and presents certain restrictions. Land availability limits the expansion of this site to a single lane launch ramp because there is insufficient back-up area for parking and maneuvering. An active littoral sand transport mechanism at Kalama Park will require the design of a control structure. Periodic dredging may be required to maintain this structure. Furthermore, a protective structure is needed to reduce wave action at the ramp and approach channel. Such a structure may conflict with surfing activity in the nearshore zone.

The final alternative of no action or nonimplementation of this project would result in the proposed site remaining in its natural state. Trailered boat owners will have to tolerate existing facilities and methods of launching in the Kihei district.

6. MITIGATING MEASURES PROPOSED TO MINIMIZE IMPACT

Mitigating measures proposed to minimize the significant adverse environmental impacts are summarized as follows:

a. The use of silt screens or similar containment facilities shall be considered to lessen the dispersion of sediments to surrounding areas.

b. The breakwater and groin will provide additional substrate and cover for marine life to partially compensate for the habitat loss during construction of these structures and dredging operations.

c. Contractors are to control noise produced by construction activity and comply with the appropriate federal, state or county regulations.

d. Noise produced by motors of power boats shall be lessened by restricting boat speed limits within the launch basin and entrance channel.

e. The contractor shall take appropriate actions to control dust generated by construction activities.

f. Potential erosion of graded areas shall be retarded by landscaping. Cutoff ditches can be constructed to minimize runoff from exposed slopes as necessary.

g. Construction shall be scheduled during nonpeak traffic flow hours and flagmen shall be provided when the intersection of the access road with Kihei Road is made.

h. The Contractor shall restore to a practical extent any area damaged or disturbed by construction activity that was not specified on the plans.

ENVIRONMENTAL IMPACT STATEMENT
FOR THE
KIHEI BOAT LAUNCHING RAMP FACILITY
AT
KEAWAKAPU, MAUI, HAWAII

1. DESCRIPTION OF PROPOSED ACTION

The proposed action, initiated by the Harbors Division, State of Hawaii, is the construction of a boat launching ramp and related facilities at Keawakapu, Maui. These facilities will contain the following features:

1. Access road from Kihei Road (Piilani Highway) to parking and launching areas
2. Parking for 39 cars with trailers
3. Boat washdown area accommodating two boats simultaneously
4. Maneuvering area
5. Double lane boat launching ramp with loading docks and space for two additional ramps
6. Rubble mound breakwater and groin
7. Utilities to provide water, lights, and telephone service
8. Provisions for a future comfort station and future dry stack operation
9. Landscaping

The work on this facility shall be completed incrementally, depending upon the availability of funds appropriated by the State Legislature.

PROJECT LOCATION

The project site is located at Keawakapu, Kamaole, in the Wailuku District, on the southwest coast of Maui as shown in Figure 1. It is

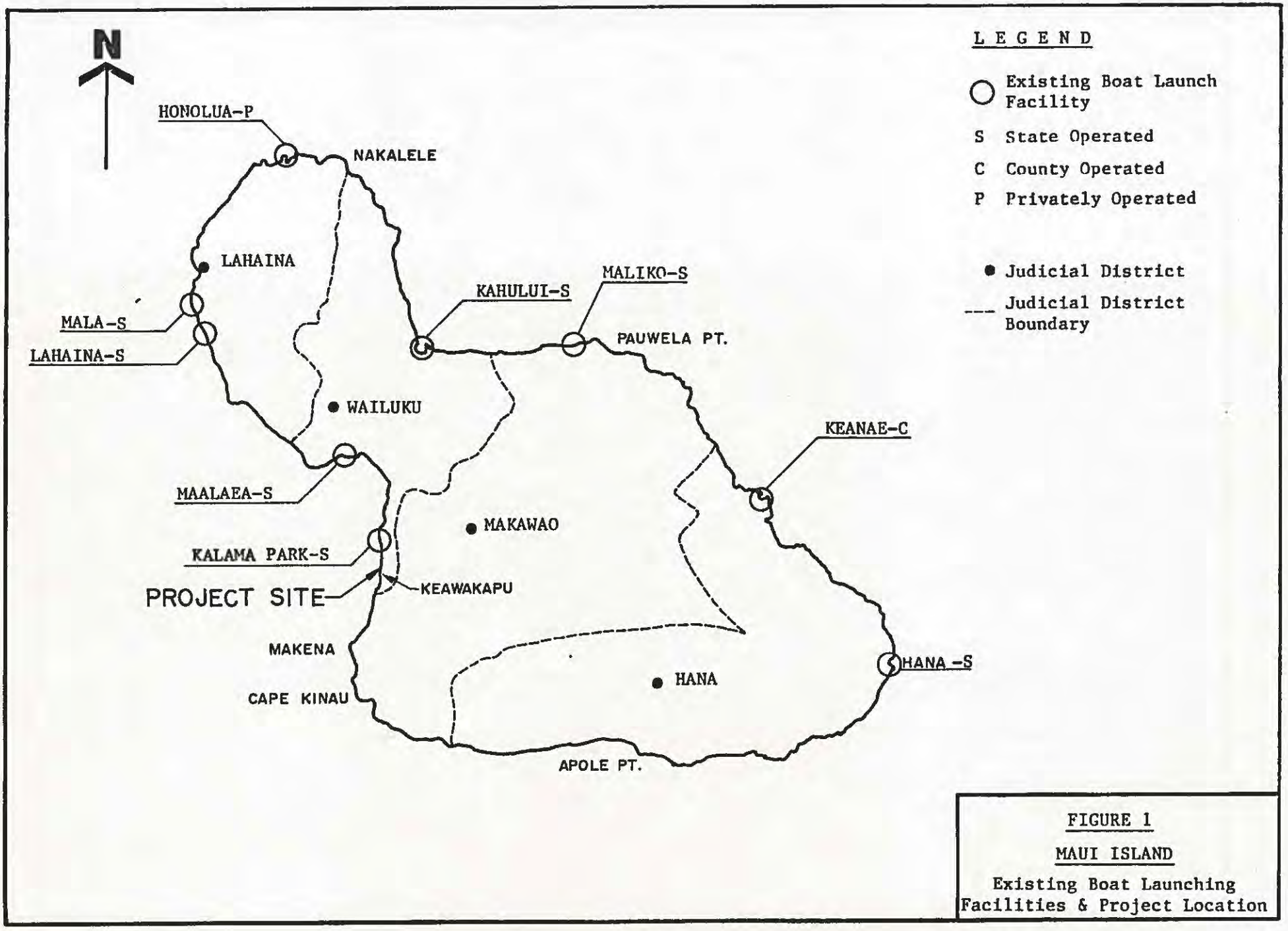


FIGURE 1

MAUI ISLAND

Existing Boat Launching Facilities & Project Location

situated south of Kamaole Beach Park No. 3 and west of Kihei Road. The total area required for this project is included in parcels identified by tax map numbers 3-9-04-1 and 3-9-04-61.

2. PROJECT OBJECTIVE

The objective of the proposed project is the construction of a boat launching facility on the southwest coast of Maui as recommended in the Statewide Boat Launching Facilities Master Plan (Ref. 1). A petition by Maui trailer boat owners (Appendix 1) requested that a boat ramp be constructed on this stretch of coastline, preferably situated as far south as possible. A boat launching facility along this coast would facilitate access to popular boating waters and fishing grounds near Makena and around Kahoolawe and Molokini since boaters would be launching from a site that is closer to these waters than existing launching ramps.

OVERVIEW OF THE EXISTING BOAT LAUNCHING FACILITIES

On the Island of Maui there are currently six lanes of public launching ramps available for use. In addition to these six lanes, a private ramp at Honolua Bay is open to the public and a double lane launching facility has been constructed by the State of Hawaii near the site of the old Mala Wharf. The locations of these boating facilities are shown in Figure 1.

With the exceptions of the ramps at Keanae and Honolua, launching facilities are located in areas of high population concentrations. Sixty-one percent of the boaters travel a distance of 8 miles or less to their usual launching ramp sites, while the remaining 39 percent travel from 9 to 36 miles to launch their boats.

As a result of the long overland travel distances involved, a substantial number of launchings are from beaches as shown in Table 1. In addition to the long overland travel distances, limitations at various public ramps tend to restrict their use and are described herein.

Lahaina

The Lahaina ramp is very congested since it is located within a popular tourist center and marina. Consequently, finding parking spaces

TABLE 1*

PREFERRED LAUNCH SITES OF MAUI ISLAND BOATERS

Site	Percent
Maalaea Boat Harbor	27.0
Kalama Park	24.4
Lahaina	18.9
Kahului	10.8
Keanae	2.7
Honolua	2.7
Beaches (Hana, Makena, Paia, Napili)	13.5
	100.0

*Ref. 1 (Published 1972)

and maneuvering of trailers are difficult. To alleviate further congestion and avoid limitations caused by the lack of land, a new double lane launch ramp at the old Mala Pier has been constructed.

Kahului

The major limitation of the Kahului facility is attributed to navigational problems caused by rough water during the tradewind seasons.

Maalaea

The major limitation of the Maalaea facility is insufficient area for parking near the ramp which results in the boat repair and mooring areas being cluttered with cars, trucks and trailers.

Keanae

The disadvantages of the Keanae site consist of a narrow boat channel, dangerous underwater obstructions, erosion at the ramp's toe and considerable surge caused by the prevailing tradewinds.

Kalama Park

The major disadvantages limiting the use of the Kalama Park facility are the lack of sufficient parking and maneuvering areas, sand accumulation in the launch basin, hazardous wave breaking on a fringing reef in front of the ramp, high catwalks, and conflicting use by swimmers, surfers, divers, and limu pickers.

3. GENERAL DESCRIPTION OF THE ACTION'S TECHNICAL, ECONOMIC, SOCIAL, AND ENVIRONMENTAL CHARACTERISTICS

TECHNICAL CHARACTERISTICS

The scope of this project involves sitework, including clearing and grubbing; construction of an access road, car/trailer parking lot, boat washdown area, maneuvering area, launch ramp with loading docks, breakwater and groin; provisions for a future comfort station and small boat dry storage operation; dredging; and landscaping. A conceptual plan of the facility is shown in Figure 2.

The proposed boat launching ramp facility will require approximately 1.5 acres of land area and 2.0 acres of water space.

Sitework

The facility will be graded to obtain the necessary elevations for the access road, parking lot, washdown area, maneuvering area and launching ramp. Cuts will be sloped at 1½:1 maximum while fills will be sloped at 2:1 maximum or as specified by a qualified geotechnical engineer.

Access Road

The access road from Kihei Road to the parking area will be surfaced with an asphaltic concrete (A.C.) pavement. The road will be approximately 155 feet long by 30 feet wide. The pavement cross section will consist of a 2-inch A.C. wearing surface and a 6-inch untreated base course or as specified by a geotechnical engineer. Street lights may be provided if funds are available.

Parking

The parking area will also be paved with an A.C. wearing surface to provide space for 39 cars with trailers. As shown in Figure 2, the parking area will be marked to furnish two rows of parallel stalls each measuring 10 feet by 45 feet. Travelways in the parking lot will be 30 feet wide with curbside parking for automobiles along the perimeters.

Washdown Area

A paved washdown area with accommodations for two car-trailer combinations will be located along the approach to the launching ramp as shown in Figure 2. Hose bibbs will be provided to facilitate the "washdown" operation.

Maneuvering Area

The maneuvering area at the approach to the ramp will measure 70 feet by 70 feet. This area will consist of A.C. pavement or a concrete slab on a crushed rock bedding.

Ramp

The launch ramp will be constructed from a combination of precast concrete panels and cast-in-place concrete slabs properly anchored to preclude sliding. The portions of the ramp above the waterline will be cast in place and precast panel elements will be utilized for the section of the ramp below the waterline. A minimum subgrade of 6 inches consisting of compacted gravel or crushed rock shall be placed beneath the concrete slabs to provide adequate support and drainage.

The finished ramp will be 30 feet wide with a constant slope of 12 to 15 percent extending down to a depth of -8.0 (MLLW). A 3:1 dressed slope of keyed and fitted stones shall be placed at the sides and end of the concrete ramp to provide toe protection to the -8.0 (MLLW) depth.

To provide adequate traction and drainage, the surface of the concrete ramp will be finished with saw-tooth grooves, 2-inch wide by 1-inch deep, in a double herringbone pattern. Exposed side slopes will be protected to prevent scour and undermining.

Two loading docks will be placed on both sides of the launch ramp at an elevation of +4.0 (MLLW). Each loading dock will be approximately 3 feet wide extending 20 feet beyond the paved section of the ramp. The loading docks will be furnished with wooden fenders and cleats along the ramp side to facilitate launching and retrieving operations.

Figure 3 shows a typical plan and profile of the ramp and loading docks. Space will be provided for future expansion of the ramp to accommodate two additional lanes, as shown on Figure 2.

Comfort Station and Dry Boat Storage Operation

A site for a future comfort station and dry boat storage operation will be included in the facility plan for the launching ramp. The comfort station will be designed and constructed with State financing as funds become available.

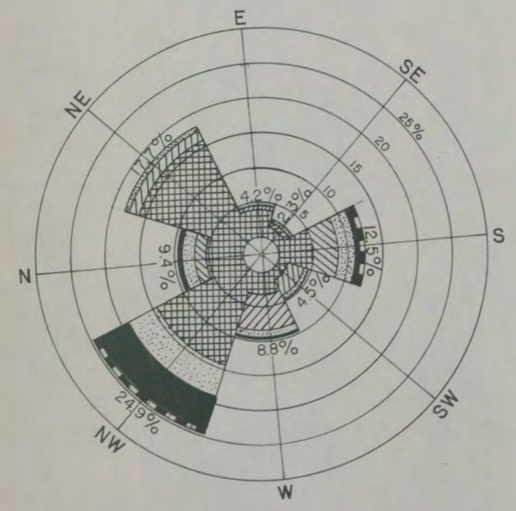
The dry boat storage operation is to be operated solely on a concession basis. The cost of design and construction, maintenance, and operation of such a facility will be borne by the concessionaire.

Utilities

The existing waterlines near the project are shown on Figure 4. A 6-inch asbestos concrete pipe paralleling Kihei Road from Kamaole Beach Park No. 3 to a condominium development will be tapped with a 2½-inch pipe pending approval by the Maui County Department of Water Supply. A meter and appurtenances will be placed at this junction. The 2½-inch line will be adequate to accommodate the complete boat launching facility.

Sewage from the future comfort station will be discharged into the existing sewerage system shown in Figure 4. The components of this system consist of two pipelines following the alignment of Kihei Road--an 8-inch gravity line and a 12-inch force main. The sewage in the 8-inch Interceptor "A" flows to the Sewage Pump Station No. 8. The effluent is subsequently pumped through the 12-inch Force Main Force Main No. 8 to Interceptor "B", where the sewage then flows by gravity to Sewage Pump Station No. 7. No sewers at the project site nor connections to the existing system will be installed until the comfort station is built.

Overhead lighting will be provided at the maneuvering area and launching ramp to aid in launching and recovery operations during early morning hours. No lights will be located in the parking area until funding is available. Power lines for electrical facilities will be buried to minimize hazardous obstructions.



LEGEND

- WIND VELOCITIES 1-3 MPH
- WIND VELOCITIES 4-7 MPH
- WIND VELOCITIES 8-12 MPH
- WIND VELOCITIES 13-18 MPH
- WIND VELOCITIES 19-24 MPH

NO WIND - 15.7%

WIND ROSE

AVERAGE SURFACE CONDITION
STATION · WAILEA · WAILEA, MAUI
AUG., 1959 THRU JULY 1960

LEGEND

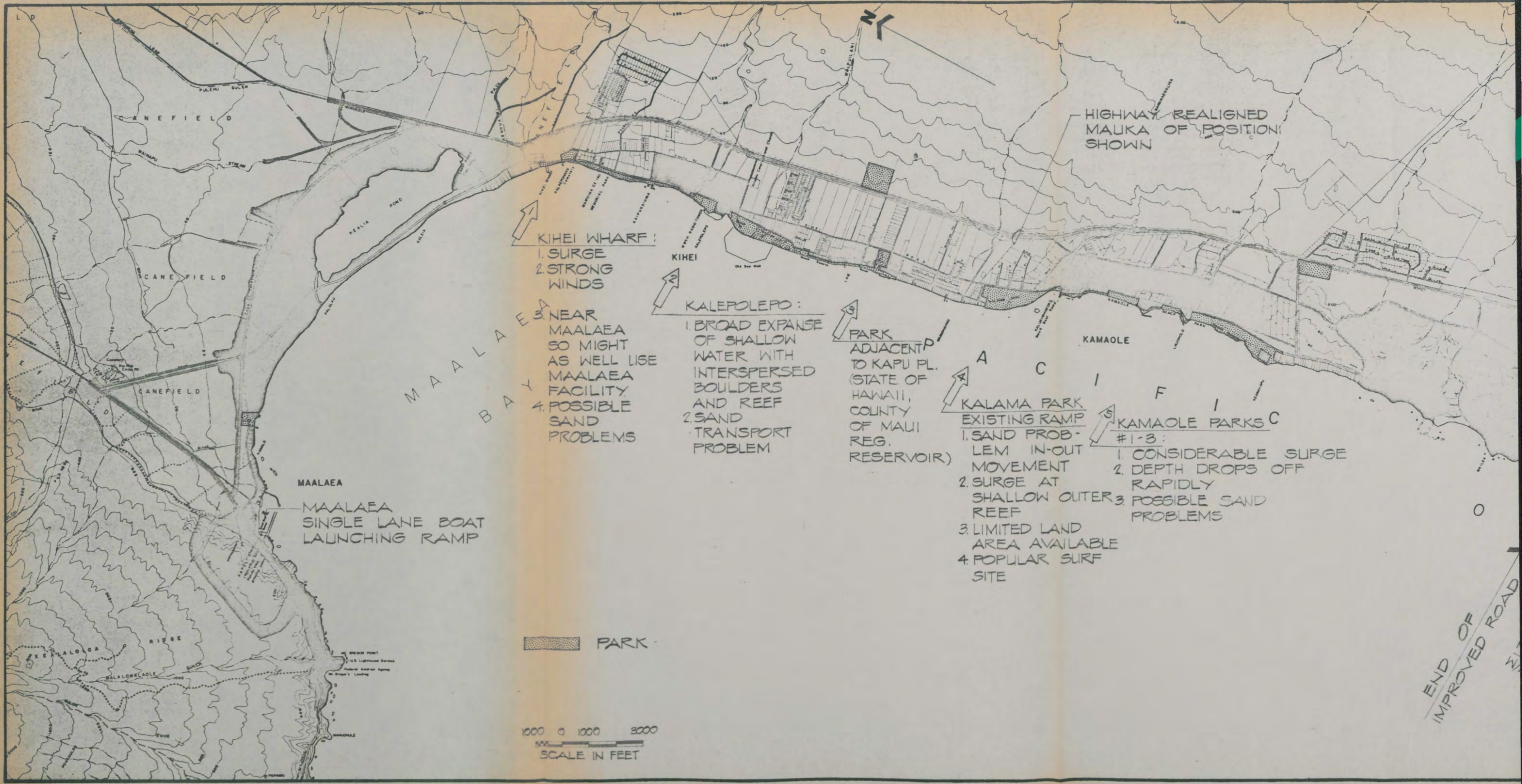
- ♦ LIGHT POLE
- o TELEPHONE

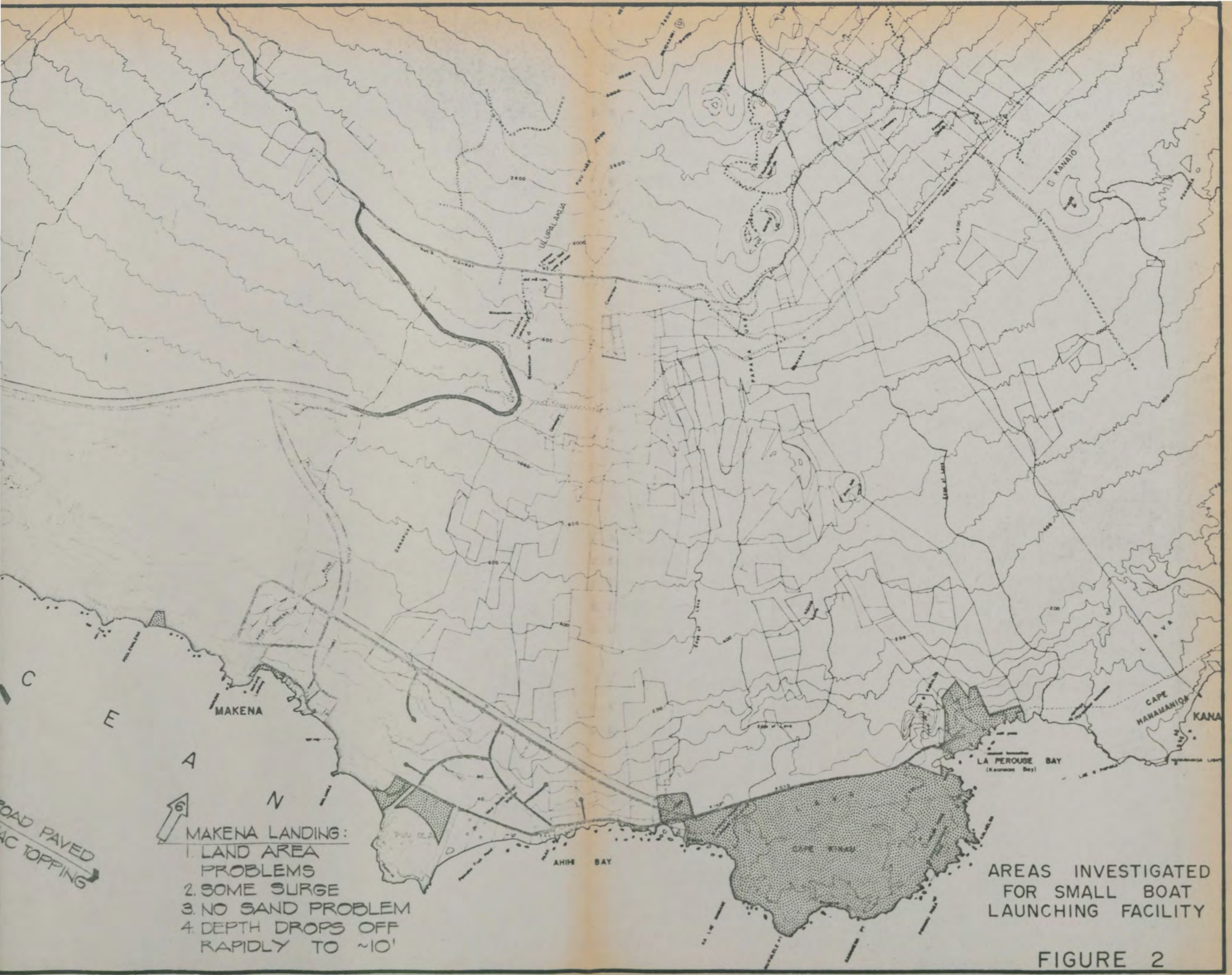
GRAPHIC SCALE
40' 0 40' 80'
SCALE IN FEET

FIGURE 2

CONCEPTUAL PLAN (LAYOUT) FOR KIHEI BOAT LAUNCHING RAMP

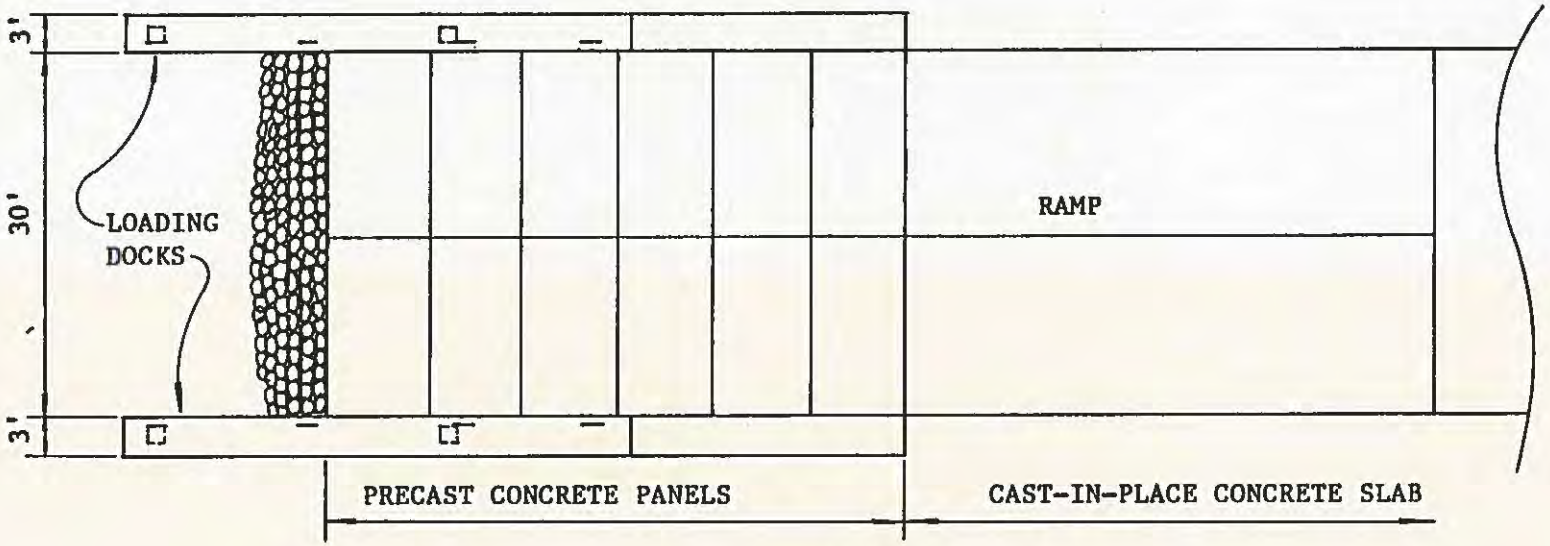
KEAWAKAPU, MAUI
DECEMBER 11, 1978


HIGHWAY REALIGNED MAUKA OF POSITION SHOWN
KIHEI WHARF:
1. SURGE
2. STRONG WINDS
3. NEAR MAALAEA SO MIGHT AS WELL USE MAALAEA FACILITY
4. POSSIBLE SAND PROBLEMS
KALEPOLEPO:
1. BROAD EXPANSE OF SHALLOW WATER WITH INTERSPERSED BOULDERS AND REEF
2. SAND TRANSPORT PROBLEM
PARK ADJACENT TO KAPU PL. (STATE OF HAWAII, COUNTY OF MAUI REG. RESERVOIR)
KALAMA PARK EXISTING RAMP
1. SAND PROBLEM IN-OUT MOVEMENT
2. SURGE AT SHALLOW OUTER REEF
3. LIMITED LAND AREA AVAILABLE
4. POPULAR SURF SITE
KAMAOLE PARKS #1-3:
1. CONSIDERABLE SURGE
2. DEPTH DROPS OFF RAPIDLY
3. POSSIBLE SAND PROBLEMS
MAALAEA SINGLE LANE BOAT LAUNCHING RAMP
MAALAEA BAY
PACIFIC O
KIHEI
KAMAOLE
MAALAEA
KEALIA POND
CANEFIELD
CANE FIELD
RIDGE
PARK
1000 0 1000 3000
SCALE IN FEET
END OF IMPROVED ROAD
N

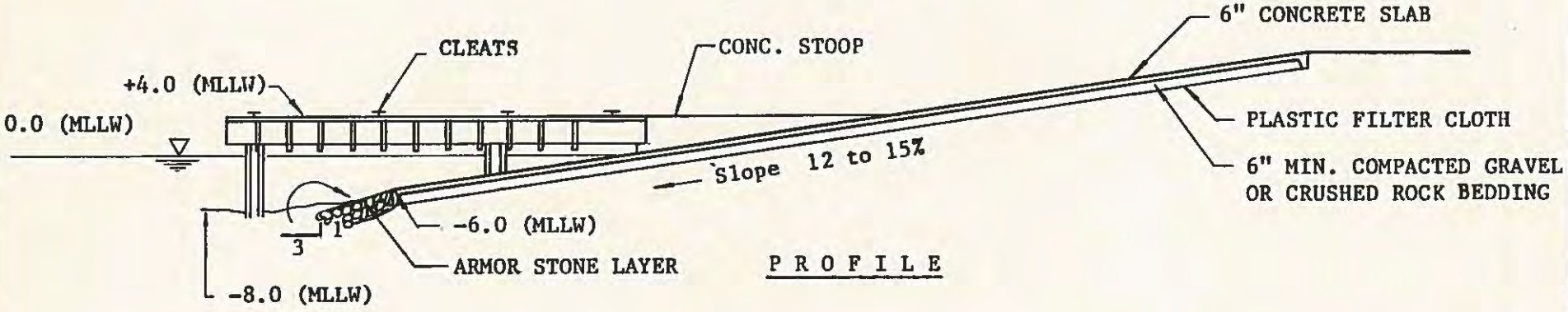


AREAS INVESTIGATED FOR SMALL BOAT LAUNCHING FACILITY

FIGURE 2



P L A N



P R O F I L E

DATUM: 0.0 MLLW

FIGURE 3

RAMP AND LOADING DOCKS

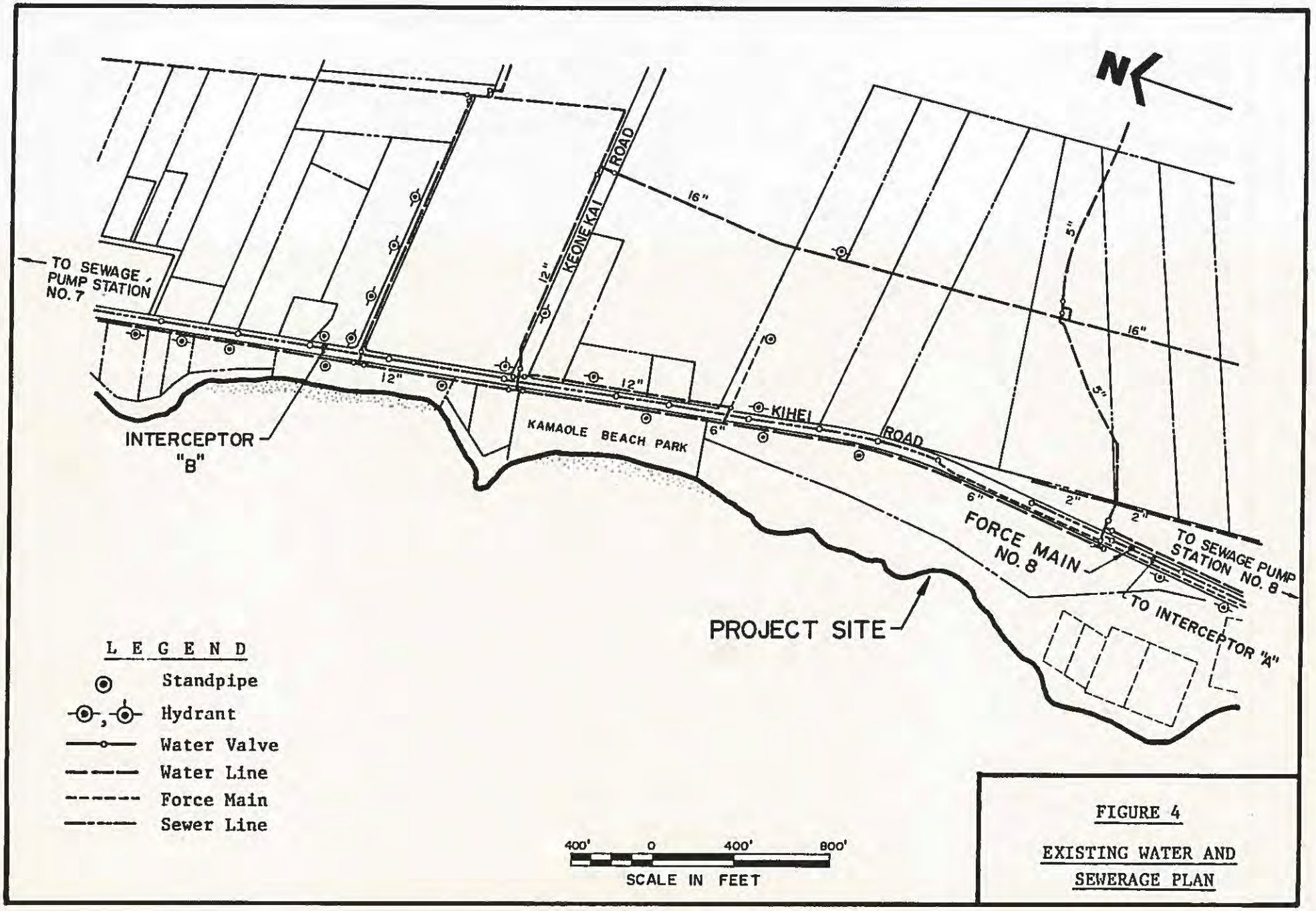


FIGURE 4

EXISTING WATER AND SEWERAGE PLAN

A public telephone will be located near the launching area.

Breakwater

The breakwater will be aligned as shown in Figure 2 to protect the launch area from direct wave impingement. The breakwater will extend some 400 feet to form a 2.0 acre embayment.

Based on preliminary design calculations the breakwater will be a rubble mound structure with a 10-foot wide crest at an elevation of +10.0 feet above mean sea level. The seaward slope of 2:1 will be dressed with two layers of 5 ton rough angular specially placed armor stones at the head and 4 ton stones along the trunk. The 1½:1 leeward slope will be dressed with a single layer of armor stones similar to the seaward face. A secondary layer of half ton stones will be placed under the armor units with 2 to 50 pound rocks filling the remaining core of the breakwater.

The breakwater will be keyed into the sea bed approximately 2 to 4 feet depending upon the results of geotechnical investigations.

Groin

A groin will be constructed parallel to the loading dock extending approximately 140 feet as shown in Figure 2. The purpose of the groin is to reduce surge within the launch area thus facilitating launching and recovery operations during periods of high wave activity.

The groin was designed for the same wave condition as the breakwater. Consideration was given however to wave amplitude attenuation due to diffraction at the breakwater tip. To obtain the wave angle relative to the breakwater alignment, several refraction diagrams were drawn for various incident wave directions as shown in Figures 5 to 6. The refraction diagrams were developed assuming a 25-foot deepwater wave with a period of 15 seconds as designated in the "Statewide Boat Launching Facilities Master Plan."

The refraction diagrams reveal that the wave orthogonals tend to diverge at Keawakapu independent of the incident wave direction. Preliminary design of the groin assumed a rubble mound structure with a

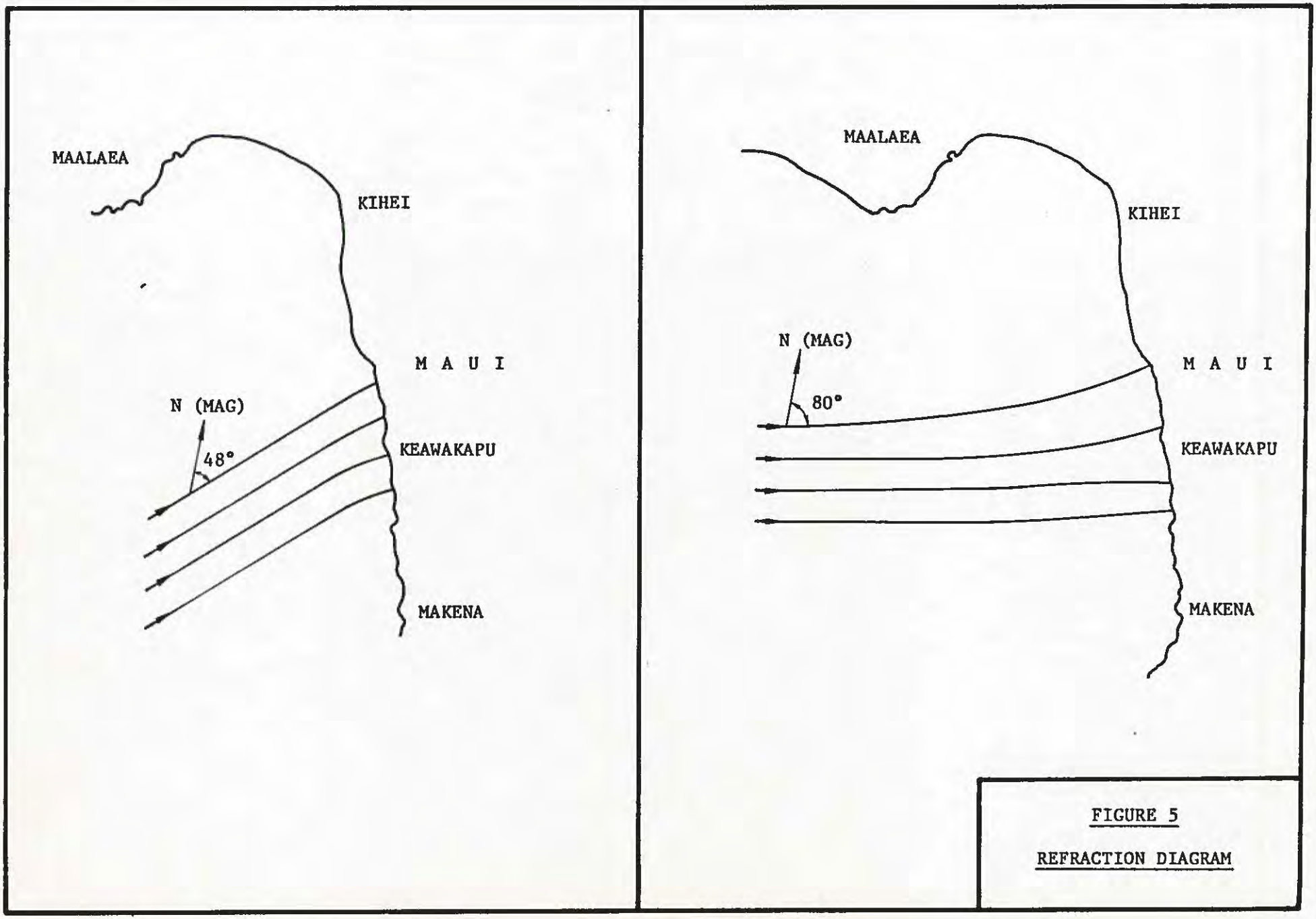


FIGURE 5

REFRACTION DIAGRAM

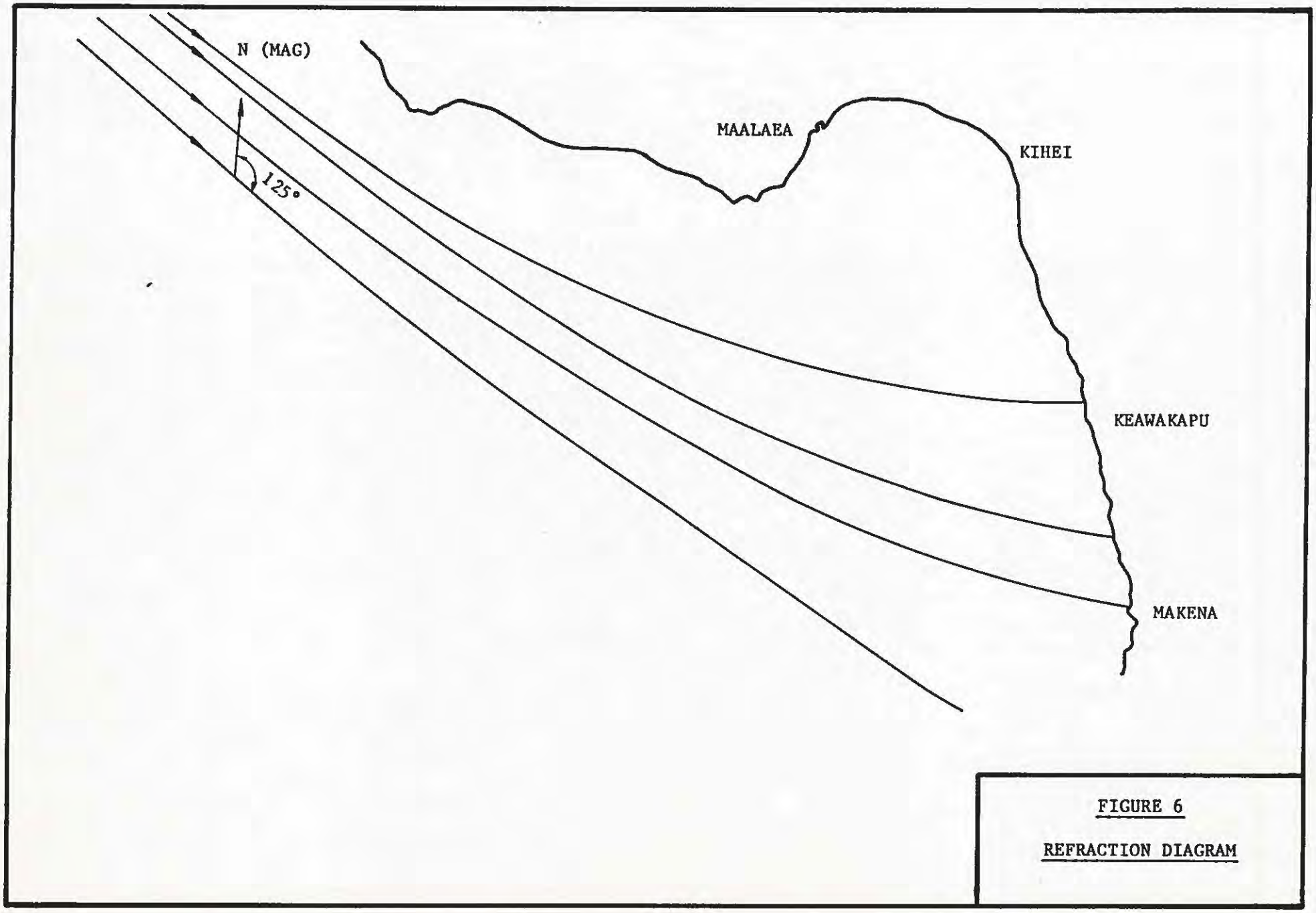


FIGURE 6

REFRACTION DIAGRAM

single layer of keyed and fitted one ton rough angular armor stone on a 1-3/4:1 slope. The core material will consists of 100 to 200 pound quarry stones. The top of the groin will be about 4 feet above mean high water level.

The bedding material and foundation design will be specified after the geotechnical investigation has been completed.

Launch Basin and Entrance Channel

The launch basin and entrance channel will be dredged to a depth of -8.0 (MLLW). This should provide sufficient depth for boats utilizing the launching facility. The entrance channel west of the breakwater will be dredged to allow a gradual transition from the -8.0 (MLLW) depth to the -10.0 (MLLW) depth at approximately 100 feet seaward of the head of the breakwater. Total dredging quantities for this work will be about 4,200 cubic yards. This quantity does not include dredging for keying the breakwater or groin (if required) into the substrata. This will depend upon the results of the geotechnical investigation.

ECONOMIC CHARACTERISTICS

At the present time, the lands at the proposed project site have not experienced any economically valuable improvements. Funding for this project will depend upon construction appropriations made by the State Legislature to the Harbors Division. The estimated cost is $882,000 (see Table 2) excluding future items such as the comfort station and dry boat storage facility.

Construction is expected to begin in 1980 and will require approximately eight months for completion.

SOCIAL CHARACTERISTICS

The design objective for this project is to provide Maui County boaters an operational boat launching facility at Keawakapu because the existing Kalama Park boat launching ramp is not used due to deficiencies explained previously. Consequently, the closest launching ramp that boaters can use is at Maalaea Harbor. Boaters are dissatisfied with this

TABLE 2

PRELIMINARY COST ESTIMATE

KIHEI BOAT LAUNCHING FACILITY

KEAWAKAPU, MAUI

Description	Unit	Total Cost
Clearing and Grubbing	L.S.	$ 8,000
Earthwork	L.S.	60,000
Asphaltic Concrete Pavement (including Base Course)	L.S.	118,000
Breakwater and Groin	L.S.	400,000
2-Lane Launch Ramp	L.S.	45,000
Rigging Docks	L.S.	35,000
Dredging	L.S.	53,000
Misc. Work: Traffic, Striping, Signs, Curbs	L.S.	10,000
Landscaping	L.S.	9,000
Elect. System (Lighting)	L.S.	15,000
Water System	L.S.	12,000
Mobilization (5%)	L.S.	37,000
Contingency Allowance (10%)	L.S.	80,000
Subtotal		$882,000
Future Comfort Station	L.S.	70,000
Total		$952,000

situation (see Appendix 1) because of the congestion at Maalaea Harbor and the long, difficult distances which have to be navigated to reach the boating waters and fishing grounds south of Kalama Park.

The shoreline north of the project site is presently being used for public park purposes. Use of the project site as a boat ramp facility will be consistent with the purpose of the park.

The extent to which this project will affect lifestyles and growth rate in the area is not quantifiable. However, the desirability of a boat ramp has been indicated in the Statewide Boat Launching Facilities Master Plan.

ENVIRONMENTAL CHARACTERISTICS

The construction of the land based facilities (i.e., access road, parking lot, washdown area, maneuvering area, and launching ramp) will require grading of the project site. Further, the alignment of a gully near the ramp will probably be altered to some extent to prevent runoff from high intensity rainfall from flowing onto the launching ramp.

The construction of the breakwater and groin will require the importation of large quantities of boulders. Therefore, specifications regulating hauling operations and procedures on roadways will have to be enforced.

To obtain the required depths within the launch basin and entrance channel, some dredging will be required. Stockpiling of dredged spoils and on-site dumping of excess materials will be limited to the affected areas on a temporary basis. Upon completion of construction, all excess excavated and dredged materials will be removed and disposed of at approved locations on land away from the job site.

4. DESCRIPTION OF THE ENVIRONMENTAL SETTING

THE REGIONAL DISTRICT OF KIHEI

The Island of Maui was created by two volcanoes. The first volcano, Puu Kukui, formed the West Maui Mountains which rise to an elevation of 5,788 feet. The second volcano, Haleakala, dominates the East Maui landscape, rising to an elevation of 10,025 feet. Between these two mountain masses is the Central Maui isthmus which is a relatively level alluvium plain with a maximum elevation of 100 feet (see Figure 7).

Maui's wind pattern is a result of this unique topography. The North Pacific tradewinds which flow from the northeast most of the year are funneled between the West Maui Mountains and Haleakala producing a venturi effect over the Central Maui isthmus.

Maalaea, located at the throat of the isthmus, receives wind velocities 50 percent higher than those of the incident tradewinds at Wailuku. As this wind fans out over Maalaea Bay, it retains its added velocity and produces an inshore component parallel to the Kihei Coast. This wind component meets the eddy currents of the deflected tradewinds from the southeast slopes of Haleakala resulting in unpredictable wind conditions between Kalama Park and Cape Kinau.

During winter months, the tradewind regime is interrupted by low atmospheric conditions to the southeast causing unstable winds accompanied by south winds (kona winds).

Despite these wind conditions, the coastal area usually experiences unexcelled atmospheric serenity especially before 12:00 noon.

There are 22 miles of shoreline in the Kihei district of which 13 miles are sandy beaches. The beaches located north of Kamaole are marred by seaweed deposits which are generated from large areas of offshore growths. The seaweed is stimulated by warm water and nutrient-laden terrestrial runoff found in a shallow lagoon formed by a fringing reef.

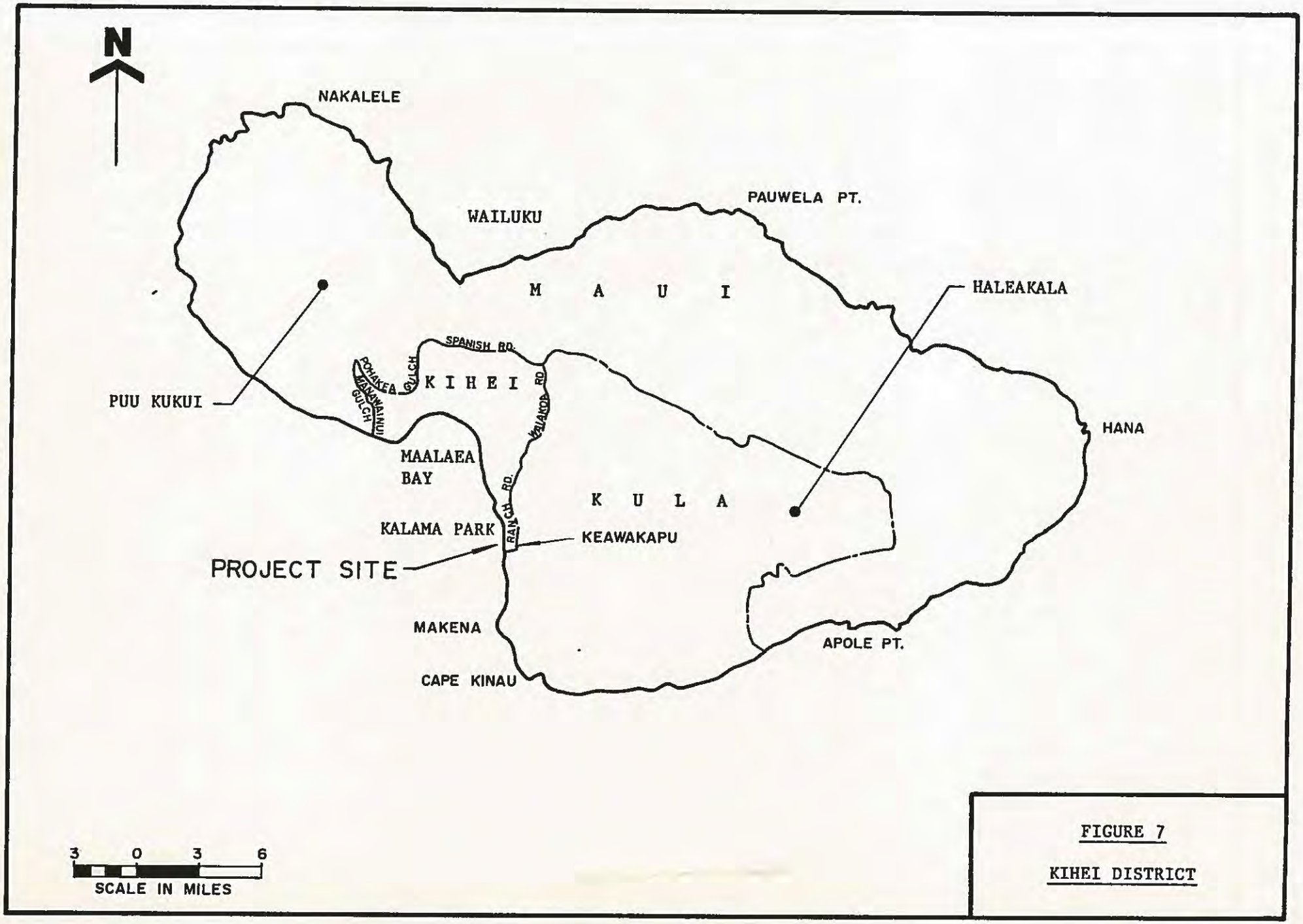


FIGURE 7

KIHEI DISTRICT

The sand beaches north of Kalama Park are vulnerable to lateral movements of sand. This has prompted several beach erosion control projects in the area. South of Kalama Park, however, beach erosion is not as serious since the sand generally moves onshore and offshore during the year rather than laterally.

The Kihei district is an arid area receiving on the average less than 15 inches of annual rainfall, produced mostly by high intensity Kona storms during winter months. See Figure 8. This type of precipitation tends to cause serious runoff and flooding problems. The flooding covers much of the low-lying areas during and after a storm, but it is usually of short duration. Such conditions occur only a few days of the year.

Variations in temperature depend more upon location in the district than seasons. Normal temperatures near the project site average about 70°F during summer.

Major transportation arterials to Kihei include Honoapiilani Highway, Mokulele Highway and Kihei Road. These arteries link the district to Lahaina, Wailuku, and Makena. Most of the roadways in Kihei were laid out as homestead roads during the 1930's to service the area along Waiohuli-Keokea Beach and Kamaole. These roads have rights-of-way varying between 20 and 60 feet. Kihei Road, the district's main arterial highway which extends to Polo Beach in Wailea, is a double laned street with no roadside drainage system and no shoulders.

THE IMMEDIATE PROJECT AREA

The proposed Kihei boat launching facility is to be located south of Kamaole Beach Park No. 3 and north of Kihei Surfside condominium, between Kihei Road and the ocean. This parcel of land is presently vacant and unimproved.

Physical Characteristics

Topography and Drainage. The project site may be separated into three sections: a northern, southern and coastal sector (see Figure 9). Each sector is characterized by distinct topographic features.

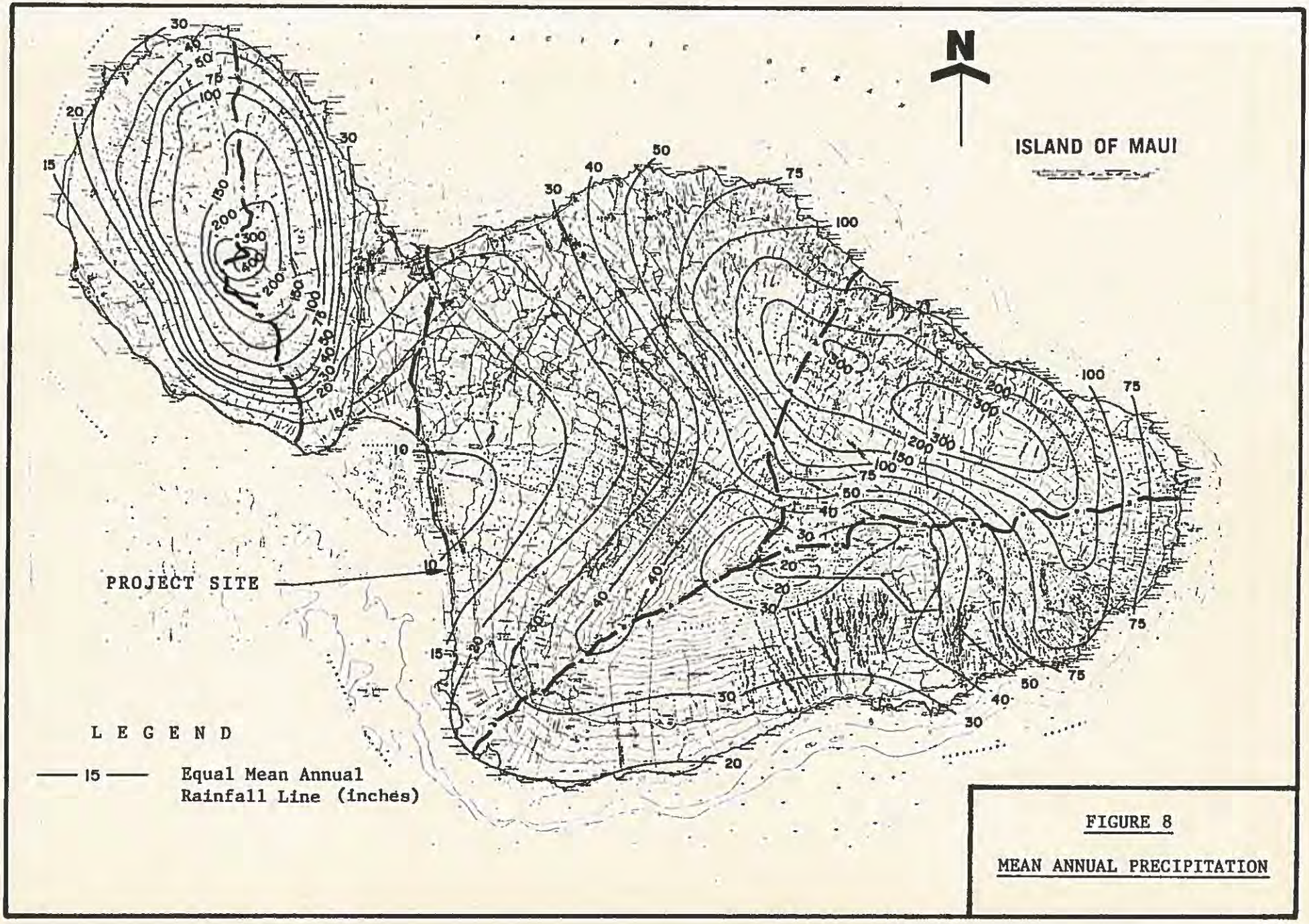


FIGURE 8

MEAN ANNUAL PRECIPITATION

The coastal sector, identified by two narrow headlands which form a small rocky cove, is separated from the north and south sections by an existing dirt road. The headland at the northern end of the cove extends approximately 200 feet seaward and has a maximum elevation of about 20 feet. This land mass slopes down to the middle of the cove where the shoreline slopes upward to the existing dirt road at a grade of 10 to 40 percent.

The northern sector, mauka of the dirt road, is a gently undulating sand dune area with slopes averaging about 5 percent. An indication that this area may have been cleared in the past is the relatively abrupt change in vegetation delineating the boundary between the northern and southern sectors.

In the southern sector, a shallow gully occupies a major portion of the area. This gully extends mauka of Kihei Road and its hydraulic continuity across the road is maintained by a 24-inch reinforced concrete pipe laid under this thoroughfare. The gully is dry most of the year and the only water it receives is from local rainfall runoff.

Soils. According to the Soil Conservation Service map shown on Figure 10, the area around Keawakapu is classified as dune land (DL). This miscellaneous land type occurs in coastal areas on the islands of Maui and Kauai.

The soil at the project site varies from sand composed of crushed coral and seashells to the Keawakapu-Makena association. The sandy area is located in the north sector of the project site. This sand dune area was created by the wind action. The active shifting of the sands has been retarded by the growth of grasses, but because the sand movement has only been recently retarded no soil horizon has been developed.

The Keawakapu-Makena soil association found in the remaining areas of the project site consists of well drained, medium-textured soil. It developed from natural weathered volcanic ash on gentle to moderately steep slopes.

The Keawakapu soils have a surface layer of dark, reddish-brown, very friable, extremely stony silt loam. The subsoil is dark, reddish-brown,

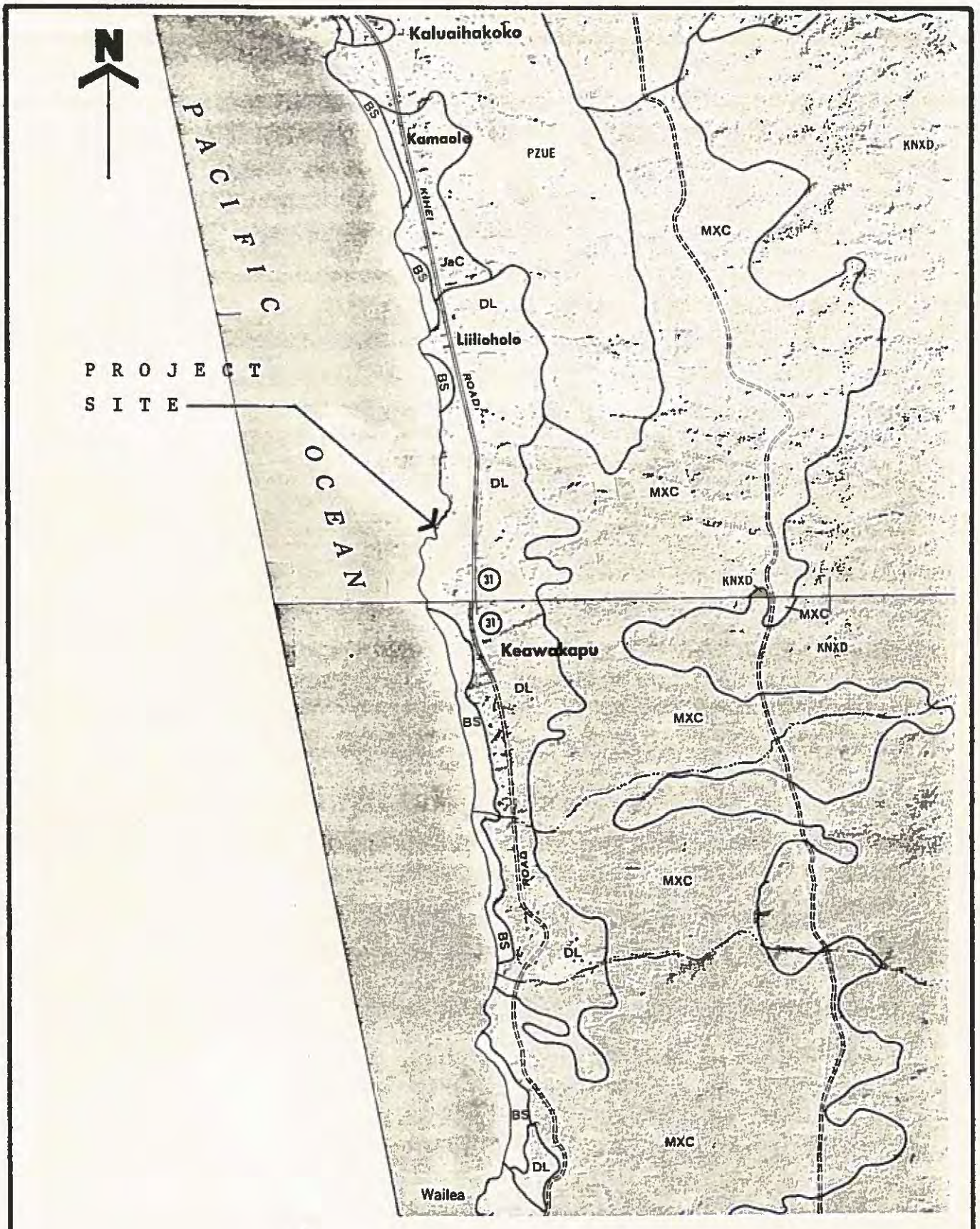


FIGURE 10

SOIL CONSERVATION SERVICE

MAP - MAUI

friable silty clay loam and silty clay. The substratum is cobblestone and stone-sized fragmental Aa lava with a depth of 12 to 30 inches.

The natural vegetation generally associated with these types of soil is mixed grasses and kiawe trees, which are dominant at the project site.

Coastal Morphology. The irregular shoreline at the project site is composed of Aa lava from past volcanic activity. A sand deposit is located along the northern end of the cove and extends seaward well past the headlands. Preliminary investigations revealed this sand deposit is 3 to 5 feet thick within the cove area and is situated in a channel that is approximately 10 to 12 feet deep. The remaining offshore area in the cove is composed of a rocky, coralline bottom 3 to 5 feet deep. The bathymetry is shown in Figure 2.

Beach Processes. The sand beaches from Kihei to Keawakapu experience annual fluctuations in width due to the inshore-offshore movement of sand. The width of these beaches usually increases in summer and decreases in late winter (Ref 22). Furthermore, together with this annual movement of sand is a longshore component dependent upon local currents as shown in Figure 10A.

Substantial sand deposits of about 2.9 billion cubic yards extend some 3000 yards offshore paralleling the coast from Lahaina to Ahiki Bay (Ref. 23). At the project site, the sand deposit is concentrated along the northern half of the cove as described in the previous section.

The sand found in this area is fine, well sorted and almost entirely a mixture of calcareous organisms and detrital material. Table 3 shows the results of analysis of sand samples taken at the project site which correlates well with the results found in Ref. 23.

Waves and Swells. Examination of the offshore bathymetry within the area bounded by Lanai, Kahoolawe, and Maui shows a marine plateau with depths not exceeding 100 fathoms except in the Kealaikahiki Channel. This area is shielded from ocean swells originating from all directions except from the south and southwest.

Fetches in the area are relatively short for the generation of any significant wave trains; however, high local winds parallel to the coast

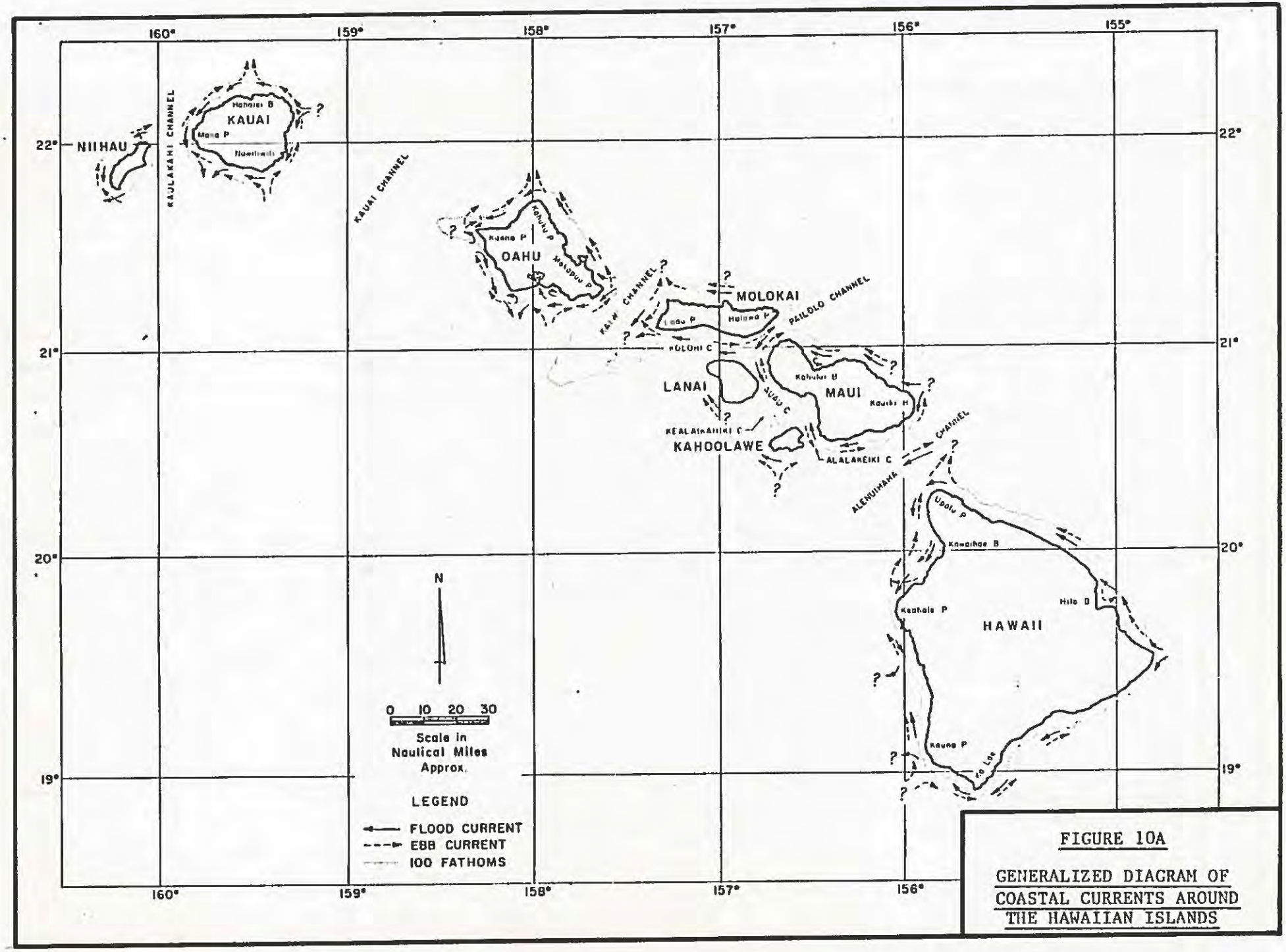


FIGURE 10A

GENERALIZED DIAGRAM OF COASTAL CURRENTS AROUND THE HAWAIIAN ISLANDS

TABLE 3

SAND SAMPLES ANALYSES

Item	Station A*	Station B*
Specific Gravity	2.694	2.688
Particle Size (on % basis):		
Particle Diameter (in.)		
0.0937 to 0.2500	0.2	2.1
0.0331 to 0.0937	2.9	3.0
0.0083 to 0.0331	83.0	90.2
0.0029 to 0.0083	13.7	4.5
0.0017 to 0.0029	0.2	0.2
	100.0%	100.0%

*See Figure 2 for station locations

as previously described caused choppy and difficult boating conditions for crafts returning to Maalaea from the south.

Two types of waves are important in regards to the wave climate at the project site. These include the long period southern swells and the Kona storm waves.

The southern swells are a summer phenomenon with heights averaging 1 to 4 feet. These waves are present continously for more than half the year and are generated by Antarctic winter storms south of Hawaii.

Kona storm waves may occur any time of the year but are most common in winter and early spring. These waves average 10 to 15 feet and are generated by Kona storms. These storms are low pressure areas (cyclones) of subtropical origins which usually develop northwest of Hawaii, moving with an eastward track. Figure 11 shows the exposure limits of the project site to these storms. The number of Kona storms per year vary in frequency from year to year. Some winters have had no storms while other winters, five or more. Based on weather information the project site may experience Kona storm waves zero to fifteen percent of the year.

Surge. The surge in the vicinity of the cove is primarily due to southerly swells impinging upon the shoreline. These swells cause surge currents which form circulation cells whose specific orientation is dependent upon the angle of incidence of the waves. Typically, the surge currents create a flow of water towards shore in the central section of the cove. To balance the influx of water, a counter flow is generated seaward along the headlands. The incoming waves are refracted over the shallow shoals causing their orthogonals to diverge (see Figure 5 and 6). As the waves enter the launch basin they are further attenuated by diffraction around the head of the proposed breakwater and groin resulting in the diminution of the waves to less than five percent of their incident amplitude.

Water Quality. Water quality data from sample stations 1 and 2 shown on Figure 2 are presented in Table 4. The concentrations of nitrate-nitrogen, total Kjeldahl nitrogen and total phosphorus appear to be high due to wind and storm runoff from adjacent shoreline areas. The temperature of the water at these stations averaged about 24.4°C.

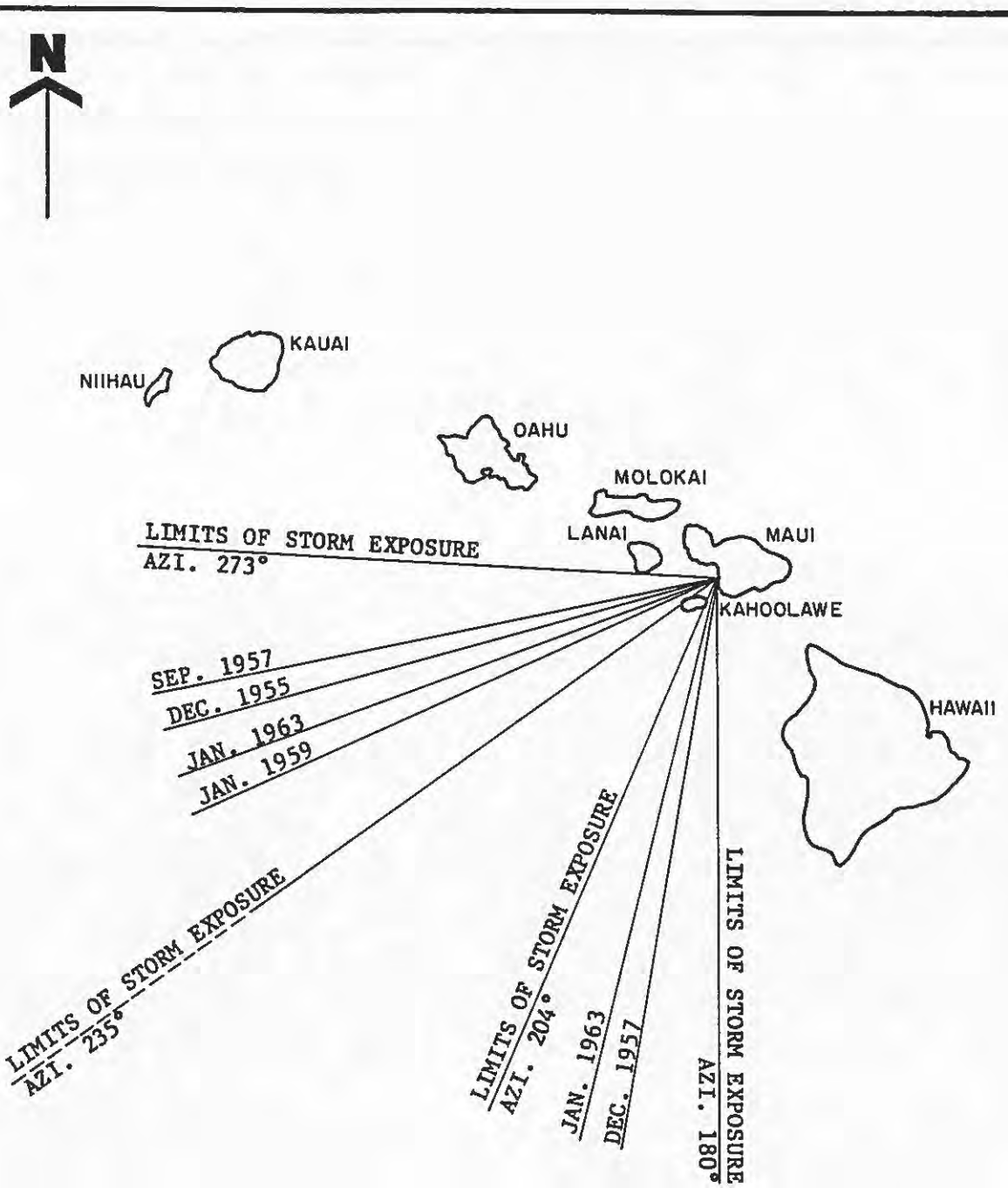


FIGURE 11

PROJECT SITE

STORM EXPOSURE CHART

TABLE 4

WATER QUALITY DATA

Station	NO_3+NO_2 -N (ug/l)		TKN (ug/l)		Total P (ug/l)	
	Repl	Mean	Repl	Mean	Repl	Mean
1	11.7	11.9	32.0	42.6	73	76
	12.1		53.3		78	
1	19.8	19.5	150	171	126	134
	19.1		181		141	
2	26.4	27.3	128	117	42	44
	28.3		107		47	
2	26.4	26.8	120	144	48	45
	27.2		160		42	

Note: See Figure 2 for station locations

Tsunamis. Significant tsunamis, as noted in Table 5, are those capable of inflicting some damage to the Hawaiian Islands and have historically originated near Japan, Alaska and Chile. The sections of Maui coastline, directly exposed to the paths of these tsunamis, experienced much larger wave heights than the sections of coastlines on the lee side of the tsunami's approach. The project site, located in a fairly protected area bounded by the islands of Molokai, Lanai, Kahoolawe, and Hawaii, has had recorded tsunamis ranging from 5 to 7 feet (see Figure 12).

Figure 13 shows the flood and tsunami inundation limits as established by the U.S. Army Engineer Division, Pacific Ocean, Corps of Engineers.

Predicting a tsunami with any degree of certainty is difficult. This is because the data base is somewhat sparse and numerous inaccuracies exist. For example, the tsunami wave height is measured as near the shoreline as possible, but verification of where the historical measurements were taken is lacking (Ref. 13). In most cases, what was measured is the height of the maximum intrusion of water onto inland areas. This height may be lower than the tsunami wave height at the shoreline if the reach of the wetted area extends far inland or higher if the beach gradient is very steep. Nevertheless, an attempt was made to statistically establish the probability of a tsunami occurring at the project site. The method employed was that described by Loomis and applied to observations at Wailea. The results showed that a 7-foot tsunami would have a 50 percent probability of occurring within approximately 7 years. Whereas, a 9-foot tsunami would have a 50 percent probability of occurring within 20 years.

Terrestrial Biological Characteristics

A flora and fauna survey was conducted at the project site by Beatrice H. Krauss, Research Affiliate at the Lyon Arboretum, to identify the species that may be affected by construction of the boating facility. The following discussion is a summary of the findings of the flora and fauna survey as presented in Appendix 2.

The flora encountered in the project site was characteristic of each of the site's three geographic sectors. In particular, the sparse vegetation of the coastal sector consisted of low-lying or postrate plants.

TABLE 5*

LIST OF SIGNIFICANT TSUNAMIS IN HAWAII SINCE 1946

Date, time[1]	Location of epicenter Magnitude of earthquake	Distance and direction from Hawaii	Time of arrival and travel time	Tide stage	Brief summary
Apr. 1, 1946 1229 GMT 0159 HT	53.5°N, 163°W, Aleutian Deep, south of Unimak Island, magnitude 7¼ G&R[2]	2000 nautical miles due north	Kauai 0555 HT, 3 hr 56 min Honolulu 0633 HT, 4 hr 34 min Hilo 0654 HT, 4 hr 55 min	About 0.5 foot above mean low low water on falling tide	Waves were large on north coasts of all islands including Kauai 45 feet, Oahu 37 feet, and Hawaii 55 feet. The south coasts had wave heights of 5-10 feet with some exceptions.
Nov. 4, 1952 1658 GMT 658 HST	52.5°N, 159°E Kamchatka, magnitude 8¼-8½ G&R	2600 nautical miles northwest	Kauai 1300 HST, 6 hr min Honolulu 1,314 HST, 6 hr 16 min Hilo 1335 HST, 6 hr 37 min	About 1 foot above mean low low water and falling	Waves were recorded on northwest Oahu 20-23 feet, Kaena Point 30 feet, Waianae coast 10-18 feet. The largest reported wave on Hawaii was 12 feet at Hilo.
Mar. 9, 1957 1422 GMT 0422 HST	51°N, 175°W 100 miles southeast of Adak, magnitude 8-8½	2000 miles northwest	Kauai 0842 HST, 4 hr 20 min Honolulu 0850 HST, 4 hr 28 min Hilo 0911 HST, 4 hr 49 min	About 2.5 feet above mean low low water, just past high tide	Waves were largest on the north coasts of all islands. Maximum wave heights were Kauai 53 feet, Oahu 22 feet, and Hawaii 32 feet. Wave heights on the south coast were about 9 feet.
May 22, 1960 1911 GMT 0911 HST	38°S, 73.5°W 8¼-8½ south coast of Chile	6600 nautical miles southeast	Kauai 1040, 15 hr 29 min Honolulu 1033, 15 hr 22 min Hilo 1024, 14 hr 47 min	High tide	Wave heights of about 10 feet were common around all islands with the singular exception of Hilo where a 35-foot wave occurred. Kahului had 17-foot waves.
Mar. 28, 1964 0336 GMT 1736 HST (Mar. 27)	61.1°N, 147.6°E 8½G&R, Prince William Sound, Alaska	2342 nautical miles, northnortheast	Kauai 2233 HST, 4 hr 57 min Honolulu 2253, 5 hr 17 min Hilo 2300, 5 hr 24 min	Just past low tide and rising, + 0.5 foot	Significant waves occurred only on the north side of islands. Waves of 5-6 feet were usual except for: Kaena, Kauai 10 feet, Haleiwa, Oahu 15 feet; Kahului, Maui 12 feet, and Hilo 10 feet.
Nov. 29, 1975 0448 HST	19.3°N, 155.02°W 7.2 G&R, at shoreline southeast coast of Hawaii	–	Waves commenced immediately at source. Hilo 0512 (24 min), Kahului 0530 (42 min), Honolulu 0542 (54 min), Nawiliwili 0546 (58 min)	Tide falling, almost low tide	Waves on Hawaii were 20-26 feet high near the source. Kau coast 16-22 feet, Puna coast 7-20 feet, Hilo 8.5 feet, Kapoapoo 12.3 feet, Keauhou Bay 9.6 feet, and Kailua 6 feet. Wave height diminishes rapidly with distance. Kahului 1 foot, Honolulu 0.5 foot, and Nawiliwili 0.5 foot.

[1] HT - Hawaii time was 10½ hours earlier than Greenwich mean time until June 8, 1947 when the difference was changed to 10 hours, Hawaii standard time.

[2] G&R - Gutenberg and Richter scale.

*Reference 13

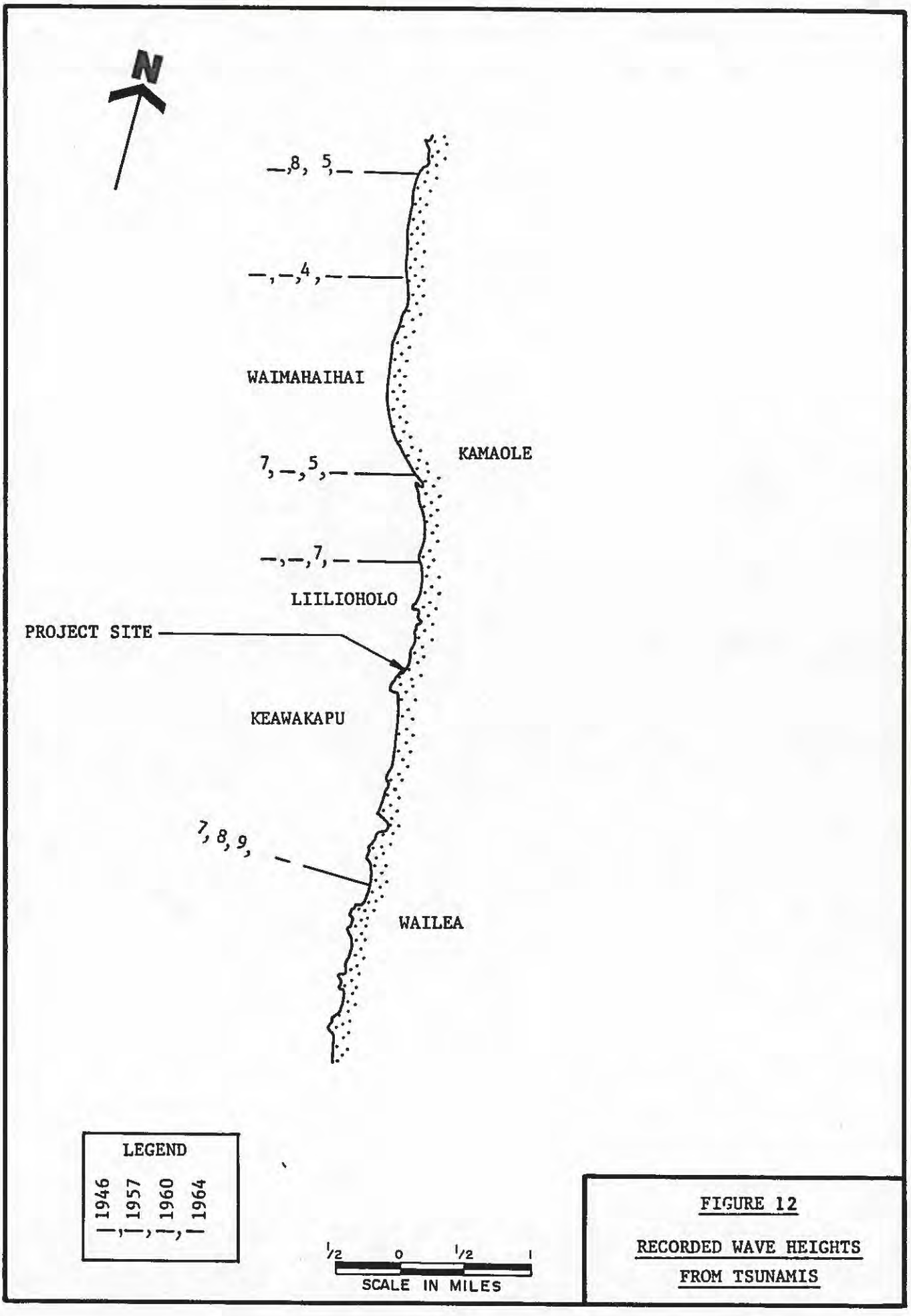
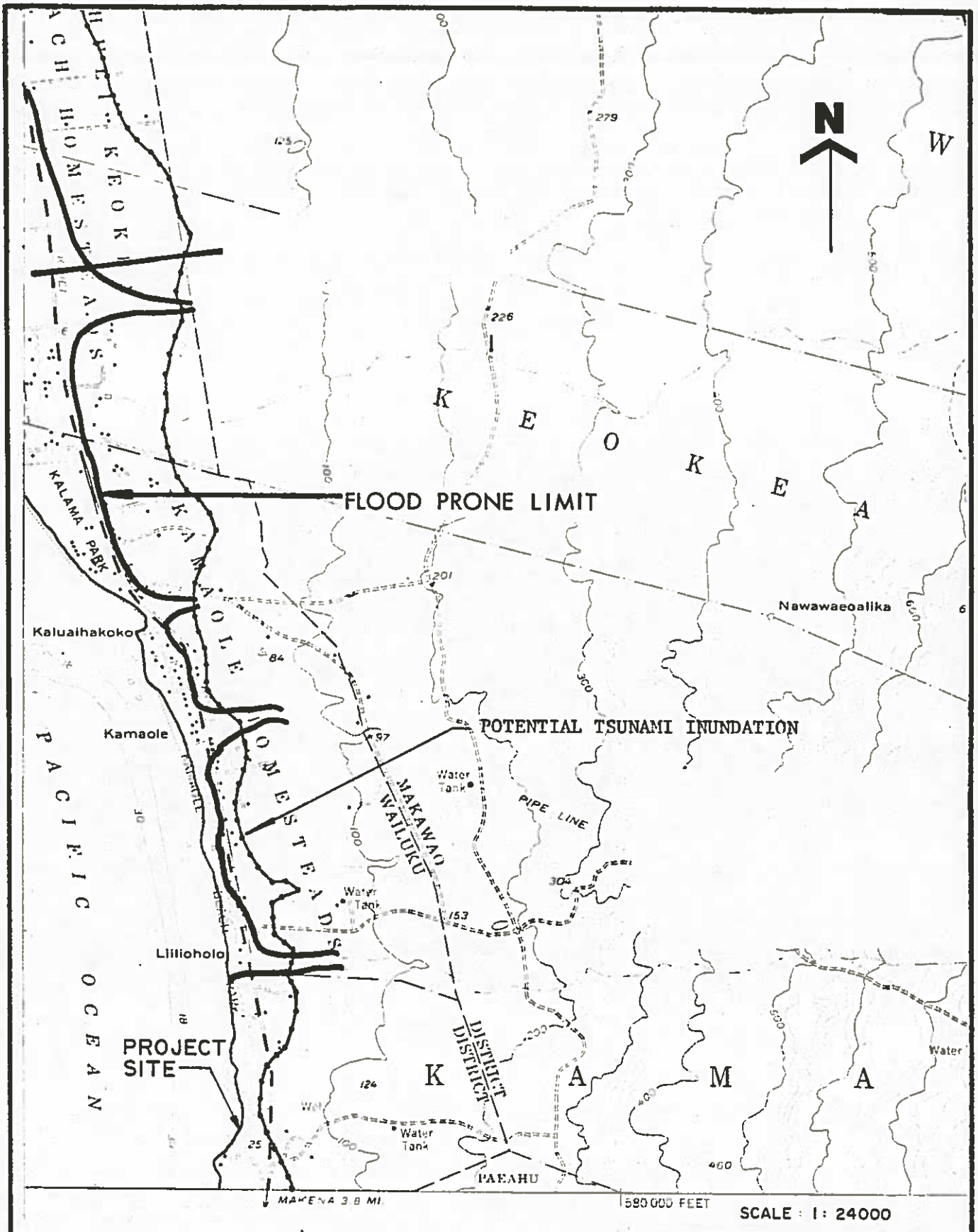


FIGURE 12

RECORDED WAVE HEIGHTS FROM TSUNAMIS



EXPLANATION

Potential Tsunami Inundation. Limits delineated by the Hawaii Institute of Geophysics Tsunami Research Program.

FIGURE 13

FLOOD AND TSUNAMI INUNDATION LIMITS

These included the Australian salt bush, and two endemic species, pa'u-o-hi 'i-'aha and 'aheahea. The latter two species are native plants but do not constitute rare or endangered varieties.

Only grasses common to dune lands were found in the north sector. This type of low ground cover consisted of buffalo grass with Hilo and panicum in lesser quantities.

In the southern sector, the dominant specie found was kiawe growing in "open" groves. These trees were of fairly good size and the canopy provide cover for an undergrowth of lantana, common and hairy morning glory, koa-haole, false mallow, ma'o, grasses (as found in the northern sector), and 'ilima. The 'ilima is indigenous but does not constitute a rare or endangered specie.

The kiawe has some economic value; however, this is the dominant tree specie in the Kihei district, of which the project site is a small portion. All other plants in the surveyed area except the endemic and indigenous species are considered weeds. Appendix 2 contains a complete listing of the plant species found in the site referred by their common, Hawaiian and scientific names.

No animals including birds were observed in the project area at the time of the survey. On subsequent field trips to the project site one mongoose and a covey of quails were observed in the south sector.

Marine Biological Characteristics

An offshore reconnaissance was conducted at the project site by Dr. Ralph Bowers, marine biologist. The substratum, from the shoreline to approximately 300 feet seaward, was surveyed and a "biotic map" was drawn illustrating the various biological characteristics in broad categories. The following discussion is a summary of the finding of this survey as presented in Appendix 3.

Sixteen species of coral and 8 species of echinoderms were observed within the project limits. See Appendix 3 for a complete list. The coral growth varies over the observed substratum. A few feet from areas of 100 percent live coral growth are areas of very sparse or no coral coverage.

The major factor influencing this type of coral coverage appears to be sand movement generated by waves impinging on the cove. In areas where sand is prevalent, live corals were found on coral or basalt "islands" that protruded some distance above the sand.

Referring to the "biotic map" in Appendix 3, Area 1 consists of basalt cobbles and small boulders. Occasional robust colonies of Pocillopora meandrina were encountered on some of the boulders, resulting in approximately 5 to 20 percent coverage.

Area 2 is generally sandy with some patches of flat hard coral substratum covering 5 to 20 percent of this area. Some of the coral colonies in this area show damage from sand abrasion.

Area 3 is characterized by "islands" of basalt or dead coral that protrude 2 to 4 feet above a sandy substratum which support good coral growth.

Area 4 is similar to Area 3 but the "islands" of basalt or dead coral are separated by greater distances of sandy substratum.

Area 5 contains much irregular hard substratum that supports a rich growth of coral. Live coral were visually estimated to cover 80 to 100 percent of the hard substratum.

Seaward of these five areas, the substratum is dominated by sand with a few, widely spaced, "islands" of basalt or dead coral with attached live corals.

5. HISTORICAL AND ARCHAEOLOGICAL SITES

The results of the archaeological survey at the project site and adjacent surrounding areas conducted by the Bernice P. Bishop Museum are presented in Appendix 4 and are summarized here.

Six previously unrecorded archaeological features consisting of various formations of dry rubble walls were located south of the shallow gully which is the southern boundary of the project site. No items of archaeological significance were found exposed within the areas to be graded.

A registered historic site included in the Statewide Inventory of Historic Places, 1973, was designated as reserve/marginal status. Its boundaries are located well outside the construction area. For a complete description of this feature, refer to "Hawaii Register of Historic Places - Archaeological Cover Sheet" in Appendix 4.

The majority of the historic sites found are considered marginal in significance and merit no further archaeological work at this time because no construction activities are planned within the historical sited areas.

6. CULTURAL AND SOCIAL CHARACTERISTICS

The resident population on the island of Maui declined during the period from the 1930's through the early 1960's. Only since the start of major resort development on the island has this population trend been reversed. The census of 1970 showed the resident population of 38,691 did not reach the 1930's high of 48,756 but recent estimates have placed the present population well above this level.

The 1970 population within the Kihei district was 1,636 or approximately 4 percent of the 1970 resident population of Maui (census tract 307). The 1970 census also noted 547 year-round housing units within this district. These units reflect the recent growth of the area since a majority of them have been occupied only since 1968.

Table 6 shows income characteristics along with population and housing characteristics for census tract 307. Maui and particularly the Kihei district are presently experiencing a tremendous growth. Since the 1970 census, several new high rise and low density apartment developments have been built in the Kihei district. The development plan for this district has designated this area for resort development, especially around the Kamaole area. Also planned with this development of the area are the improvements to the transportation arteries servicing the district, the major one being the new Kihei-Ulupalakua Highway.

The existing parks in the Kihei Area include Maipoina oe Iau Memorial Park, Kalama Park and Kamaole Beach Parks No. 1 to 3 encompassing a combined total area of approximately 55.3 acres. The State of Hawaii owns an additional 175.03 acres of beach reserve lands and numerous rights-of-way for pedestrian access to beaches around Wailea.

The only available ramps in this area are at Maalaea and Kalama Park. The launching ramp at Maalaea is located at the northern end of the Kihei district while Kalama Park is centrally located with respect to the general boating areas offshore. But the Kalama Park launching ramp, as previously pointed out, suffers from dangerous wave action and surge conditions. The

TABLE 6

POPULATION, INCOME, AND HOUSING CHARACTERISTICS

KIHEI DISTRICT

Description	Census Tract 307
Population (1970)	1,636
Median Income (Families & Unrelated Individuals - 1969)	$8,292
Mean Income (Same as above)	$11,083
Housing	
Value of Units:[1]	
Less than $ 5,000	1
$ 5,000 - $ 7,499	1
$ 7,500 - $ 9,999	3
$10,000 - $14,999	9
$15,000 - $19,999	21
$20,000 - $24,999	21
$25,000 - $34,999	57
$35,000 - $49,999	39
$50,000 or more	115
Median	$42,900

[1] Limited to one-family homes or less than 10 acres and no business on property.

nearshore area is also too shallow due to littoral fill which constantly drifts into the ramp area. Therefore, additional launching ramps would be desirable in the area which is separated from the public parks.

7. BOATING CHARACTERISTICS

The preferred method of launching trailered boats on Maui is from one of the available boat ramps on the island as shown in Table 1. However, a substantial number of launchings are still made from beaches.

Most boat launchings occur between Makena Bay and Nakalele Point for destinations around Lanai, Kahoolawe and Molokai. These areas usually exhibit calm waters which is the major concern of boaters. Therefore, overland distances to launch sites usually take a lesser precedence to the condition of the boating waters.

The frequency of trailer boat launchings during the year is generally dictated by the prevailing weather and ocean conditions exhibited around the Hawaiian Islands. Although launchings occur throughout the year, lighter activity is experienced during the winter months. On a typical day, the majority of launchings usually occur between 6:00 and 9:00 a.m. with recoveries made between 12:00 and 6:00 p.m.

The predominant boating activity engaged in by Maui County boaters is fishing, with a substantial number of boaters also participating in diving. Table 7 presents a list of activities in order of occurrence by Maui boaters. The number of persons per boat trip averages 3 to 4 people including the boat operator.

TABLE 7*

PREFERRED BOATING ACTIVITIES IN MAUI COUNTY

Activity	Percent
Pleasure fishing	75.6
Diving	31.1
Commercial fishing	19.4
Sailing	4.9
Water skiing	2.4
Crabbing	2.4
	138.8**

* Ref. 1.

** Total exceeds 100 percent because of participation of more than one activity per outing.

8. HUMPBACK WHALE CHARACTERISTICS

The Humpback whale is an endangered species now protected by the Endangered Species Act of 1973, as amended (The U.S.C. 1531 et seq.), the marine Mammal Protection Act of 1972, as amended (16 U.S.C. 1361 et seq.) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora, March 3, 1973 (T.I.A.S. No. 8249).

Each year the Humpback whales begin arriving in Hawaiian waters in late October. Their numbers peak in late January through February and remain fairly constant throughout mid-March. The whales return each year to the waters inside the 600-foot depth for the purposes of calving, nursing, and breeding. Their major areas of concentration are Penguin Bank; the coastal waters off the island of Hawaii from Kamakamaka Point to Keahole Point; the coastal waters of Lanai within two miles of the mean high water line from Keana Point east by southeast, passing Halepalaoa Landing and Kikoa Point, to Kamaiki Point; and all the waters of Maui inshore from a line drawn from Hekili Point at Olowalu southeast to Puu Olai. The Humpback whales' annual northward migration begins in April and by early June most of them will have left Hawaiian waters.

9. THE RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS, POLICIES, AND CONTROLS FOR THE AFFECTED AREA

TAX MAPS

The two parcels on which the proposed boat launching facility is to be located are identified by tax may key numbers 3-9-04-1 and 3-9-04-61 as shown in Figure 14. Of the 37.2 acres contained in these parcels approximately 1.5 acres will be required for the land based facilities.

DESIGNATED LAND USE IN STATE LAND USE COMMISSION DISTRICT

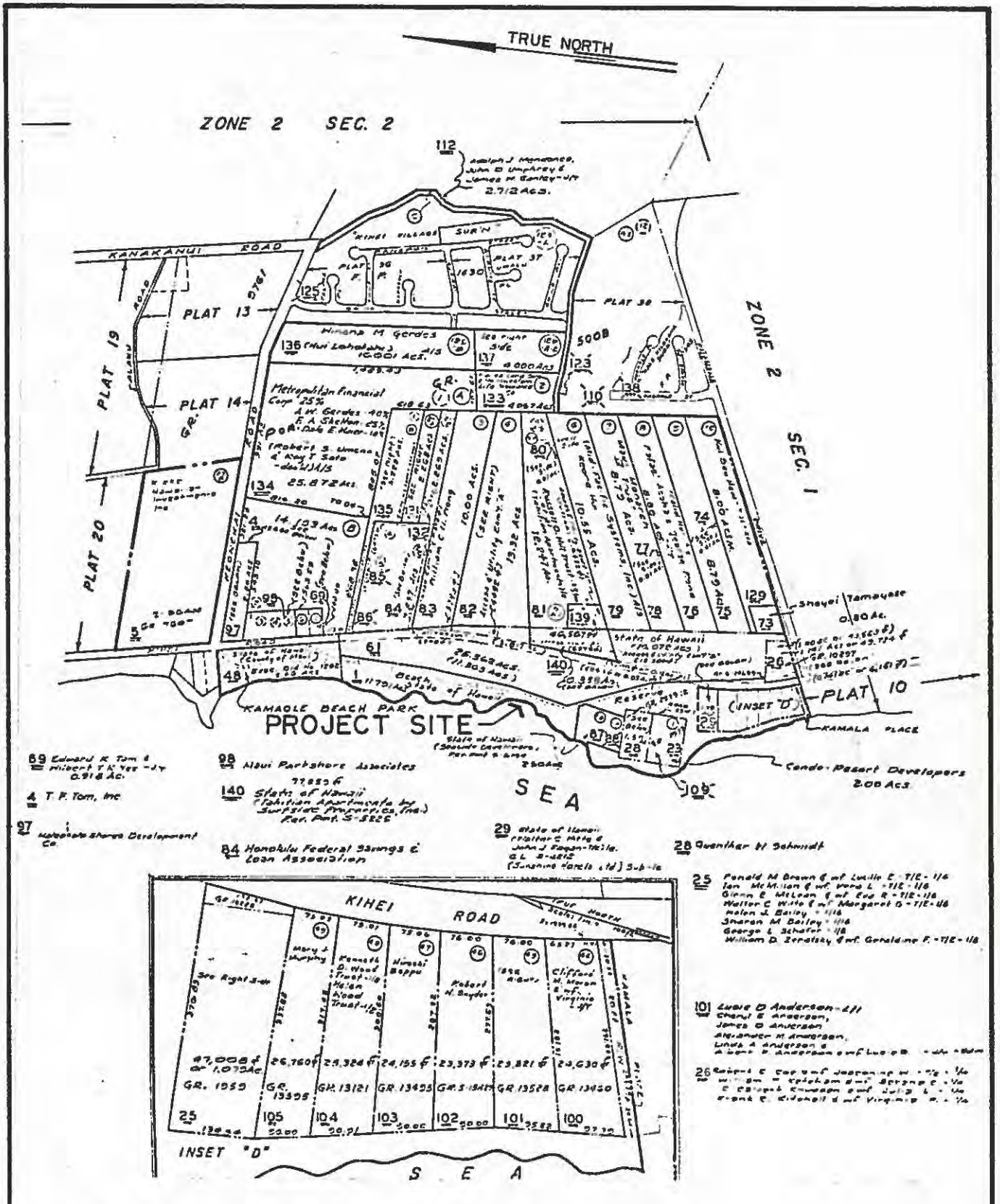
The project site as well as adjacent areas are designated as urban land according to State Land Use provisions as listed in Table 8.

The proposed action on urban lands does not conflict with the general objectives and specific terms of the State Land Use Commission's plans, policies, and controls. The seaward areas of the project site are conservation lands defined by the Department of Land and Natural Resources (DLNR) as Conservation District subzone L for limited use. This area must therefore meet all land compatibility and general physical and environmental preservation conditions as set forth by DLNR in Regulation No. 4 and is subject to approval by the State Board of Land and Natural Resources.

DESIGNATED LAND USE IN GENERAL PLAN AND ZONING

Referring to Table 8, the present lands at the project site are designated for park use, while surrounding areas are specified for residential and resort use.

The shore region as defined in the Special Management Area is under the jurisdiction of the County of Maui. According to the county's Supervising Planning inspector, the boat ramp is a permitted use within this area.



DEPARTMENT OF TAXATION - TAXATION MAPS BUREAU STATE OF HAWAII		
TAX MAP		
SECOND		DIVISION
ZONE	SEC.	PLAT
3	9	04
CONTAINING		TAX
SCALE 1 IN. 200 FT.		

FIGURE 14

TAX MAP

TABLE 8

LAND USE AND ZONING CODES

(1975)

Tax Key Number	State Land Use	General Plan Use Code	County Zoning Code	Land Tenure	Area (acres)	Actual Use
3-9-04-48	Urban	Parks	Park	State owned	5.9	Public land, recreation
3-9-04-4	Urban	Residential	A-2 Apt.	Fee simple, priv owned	14.1	Single family dwelling
3-9-04-84	Urban	Residential	Duplex unit	Fee simple, priv owned	4.3	Duplex, apt, multi family dwelling
3-9-04-83	Urban	Residential	Duplex dist	Fee Simple, priv owned	10.0	Open space
3-9-04-82	Urban	Residential	Duplex dist	Fee simple, priv owned	13.2	Service
3-9-04-81	Urban	Residential	Duplex dist	Fee simple, priv owned	13.3	Open space
3-9-04-79	Urban	Residential	R-2 Res	Fee simple, priv owned	10.6	Duplex, apt, multi family dwelling
3-9-04-78	Urban	Residential	R-2 Res	Fee simple, priv owned	8.8	Duplex, apt, multi family dwelling
3-9-04-76	Urban	Residential	R-2 Res	Fee simple, priv owned	8.8	Duplex, apt, multi family dwelling
3-9-04-75	Urban	Residential	R-2 Res	Fee simple, priv owned	8.8	Open space
3-9-04-129	Urban	Residential	R-2 Res	Fee simple, priv owned	8.0	Duplex, apt, multi family dwelling
3-9-04-73	Urban	Residential	R-2 Res	Fee simple, priv owned	0.8	Open space
3-9-04-26	Urban	Residential	R-2 Res	Fee simple, priv owned	1.4	Open space
3-9-04-29	Urban	Resort	H-M hotel	Fee simple, priv owned	1.1	Condominiums
3-9-04-23	Urban	Resort	H-M hotel	Fee simple, priv owned	1.0	Condominiums
3-9-04-28	Urban	Resort	H-M hotel	Fee simple, priv owned	1.5	Condominiums
3-9-04-87	Urban	Park	Park	Fee simple, priv owned	0.7	Open space
3-9-04-1	Urban	Park	Park	Stated owned	12.9	Public land, recreation
3-9-04-61	Urban	Park	Park	State owned	25.7	Public land, recreation

LAND TENURE

The project site will be located on lands presently owned by the State of Hawaii (TMK: 3-9-04-1 and 61). The remaining areas south of the site and mauka of Kihei Road are privately owned, fee simple lands.

FUTURE PLANS

Land now in the Kihei district that is actually being used for urban purposes is minimal. However, the modern urbanization process is just beginning. Kihei town, once a sugar plantation camp, is destined to become a resort, residential and recreational center along with Wailea and Makena. Thus, the urbanized development of the area is limited only by public utilities and by land use controls (Ref. 5).

COASTAL ZONE MANGEMENT PROGRAM

The Coastal Zone Management Program provides for the effective management, beneficial use, protection and development of the coastal zone.

The proposed project will conform to the objectives and policies of the Coastal Zone Management Program as set forth by Chapter 205A of the Hawaii Revised Statutes and amendments in H.B. No. 1642.

Along with the necessary approvals as stated in Section 19, "LIST OF NECESSARY APPROVALS," a State consistency certification will be provided in compliance with the Coastal Zone Management Program.

The proposed project complies with the objectives and policies of the following categories of concerns within the Hawaii Coastal Zone Management Program:

Recreational Resources. The project will improve the launching and retrieving of boats and thereby encourage public use of the ramp for access to offshore boating and fishing areas.

Economic Uses. The launching site at Keawakapu will be located closer to the popular fishing and boating areas of Molokini and

Kahoolawe islands. Therefore, the proposed facility will stimulate more launching and recovery of commercial fishing vessels.

10. PROBABLE IMPACTS OF THE PROPOSED ACTION ON THE ENVIRONMENT

The probable impacts of the proposed action are related to the construction and operational phases of the project with ramifications in land use, social, cultural, and economic areas. The project site is presently an undeveloped area whose physical characteristics will be altered by the construction of a boat launching ramp facility.

The operational impacts are partially related to the number of boaters using this facility. A single lane ramp can handle between 30 to 40 launchings during a peak user-day; therefore, the proposed double laned ramp can be expected to experience a maximum of 50 to 70 launchings. The corresponding number of individuals associated with these launchings is between 150 and 200 based on the average number of participants on every boating trip.

The single lane Kalama Park ramp in 1970 accommodated about 2,400 boat launches which represent 18.8 percent of the total number of launchings in Maui County.

The proposed facility is expected to replace the Kalama Park ramp as the primary launching ramp in the area. The annual usage is expected to be approximately 25,000 user-days by 1980.

PHYSICAL IMPACTS

The physical impact is principally related to the construction of the proposed launching facility. The site will require grading, including clearing and grubbing, which would change the appearance of approximately 2.0 acres of undeveloped landscape. Grasses and kiawe trees in the affected area will be replaced by a paved access road, parking lot, boat washdown area, maneuvering area, and launching ramp. The extent of grading will be strictly controlled. The flora destroyed during construction may be replaced by landscaping. There will be no further significant impacts to terrestrial flora and fauna by this action.

The archaeological sites located in the vicinity of the project area are considered marginal in significance and merit no further investigation at this time since no construction activities are planned in the archaeological areas.

Temporary impacts related to the construction of this facility include noise and dust generation, primarily from activities associated with clearing, grading and hauling operations for earthwork and breakwater construction. This could cause minor disturbance to residents in the proximity of the site. Such impacts would be temporary, and no continual air quality or noise impairment should be created.

Traffic disturbance along Kihei Road will occur during the construction of the intersection of the access road with Kihei Road. Normal two-lane traffic will be restricted to a single lane pattern with vehicular speeds reduced accordingly. Vehicular traffic generated by construction activity will be regulated to minimize interruption of normal traffic flow. This should not generate serious traffic-related problems and should persist only thru the period of construction.

The potential for soil erosion exists on graded and exposed areas during construction as a consequence of high intensity rains that might occur before soil stabilization work is completed.

Dredging of the turning basin and construction of the groin and breakwater will eliminate an area of living coral and associated organisms in the central and southern portions of the cove and its benthic ecosystems. The biota near the affected area have frequently been exposed to flumes of fine sediments suspended in the water column by the influence of runoff and nearshore waves. Therefore, dredging and filling operations producing similar consequences over a brief period should have minimal effect on organisms in the area. After the breakwater and groin are in place, they will provide additional habitats for organisms to compensate somewhat for the loss of benthic habitats.

The construction of the breakwater and groin will not significantly affect the sand transport mechanism in the general area. The obstruction caused by the breakwater to longshore movement of sand is minimal since

the structure will extend only 100 yards from shore and is aligned parallel to the rocky coast. The dynamic equilibrium of sand movement at the beaches of Kamaole and Keawakapu to the north and south of the project site respectively will not be affected and the seashore will continue to experience annual fluctuations of beach widths. Small deposits may be created at the head but such accumulations will have minimal effect on the operation of this facility. If such accumulations become excessive, it may be necessary to periodically remove this material.

Because of the simple configuration of the enclosed water space and limited area involved, residence time of water behind the breakwater will be relatively short thereby preventing any significant eutrophication. It is estimated that on the average residence time will be less than one day.

The visual impact of the facility will be compatible with the recreational and zoning use in the area. Land masses surrounding the launching ramp are elevated well above the breakwater's crest thereby providing an unobscured view of the horizon. The appearance of the rubble mound breakwater should blend in well with the existing rocky coastline.

OPERATIONAL IMPACTS

During the operation of the facility the noise level of automobiles will not be above that which already occurs along Kihei Road and therefore is of little consequence. Engines of power boats may be heard above the noise of vehicular traffic due to their higher frequency, especially for small motors. Residents should not be greatly annoyed by this disturbance because they are located some distance from the launch site.

Impairment of air quality will be minimal and therefore will not have a significant effect. Hydrocarbons released in the water from power boats will be comparable to other launching ramp sites around the State which are not considered objectionable. Hence, air and water quality in the immediate area should be within acceptable limits of the State Air and Water Quality Standards. The activity of this facility is expected to have a minimal effect on the marine environment.

On a peak boating day, approximately 100 to 150 automobiles will be trailering boats to this facility. The impact of this action on local

traffic will be diminished by the fact that most launchings take place during early morning hours on weekends. Furthermore, the construction of the Kihei-Ulupalakua Highway from Kihei to Makena will supplement Kihei Road as a major transportation artery and lessen the traffic on Kihei Road. Five connecting roads will join these two thoroughfares along their lengths.

LAND USE AND PLANNING IMPACTS

The proposed use of the area for a boat launching facility will be compatible with the development plan for the district. Because the project site is located on State lands within the limits of the flood-prone and tsunami inundation areas, use of the site for commercial buildings and residences is precluded unless large capital expenditures are made.

The development of surrounding areas will be carried out by many and diverse interests transforming Kamaole into a major resort area. This project will preserve the open space along this portion of the shoreline in a park-like setting, thereby ensuring easy public access to offshore areas.

Existing water, sewerage, power, and communication lines in the immediate vicinity are adeqate to service the facility planned on the site. Maintenance required for normal groundskeeping can be provided by existing governmental agencies servicing adjacent parks.

SOCIAL, CULTURAL, AND ECONOMIC IMPACTS

The construction of this boat launching facility will have a positive impact on boaters in Maui County. This facility will enhance fishing and diving excursions to popular boating areas near Makena and around Kahoolawe and Molokini Islands by leisure time boaters. Consequently, this project is expected to meet the recreational needs of residents wishing a safe, easy, accessible launching site for trailered boats.

This public facility will also preserve the shoreline as a public open space area offsetting the creation of private beach preserves in

front of large hotels built almost directly along the shoreline. The construction of the boat ramp will retain a beach front atmosphere along the Kamaole Coast.

In addition to recreational benefits, a positive short-term economic impact is anticipated in the form of providing construction-related employment and other indirect income to various labor force segments. The enhancement of boating activities will also provide an incentive for increased expenditures by boaters.

No adverse impacts on surfing or other water related activities in adjacent areas are anticipated. However, swimming and diving in the launch basin and entrance channel will be restricted.

The project will not affect any exposed archaeological sites since no construction is contemplated within these areas. Since unexposed subsurface features are a possibility, if any features or artifacts are encountered during construction, a qualified archaeologist will be contacted to monitor the work.

IMPACTS ON THE HUMPBACK WHALES

Construction activities such as dredging and land grading for roads and parking lots cannot be completed without the addition of particulate matter to the water column. The amount of particulate matter added to the water as a result of the project construction is thought not to be a serious factor with respect to the degradation of the "critical" area (environment) used by the humpback whales. This opinion is based on previous observations of the Maalaea Bay-Kihei nearshore waters during periods of southerly or westerly winds. Such winds are not uncommon during the winter months of December and January and create wave patterns that resuspend large quantities of particulate matter, ultimately resulting in turbid water conditions extending seaward beyond the 30-foot depth contour.

It is difficult to assess the possible impact of dredging noise on the humpback whales. There does not appear to be any specific information available on the reactions of humpback whales with respect to a

noise source. It is known, however, that the whales continue to utilize waters near the coast of the island of Kahoolawe (from information at the public hearing in Lahaina on June 26, 1978). This island has been used by the military as a target complex for many years. Occassionally, ordinances intended for a terrestrial target fall short and detonate underwater. Such underwater detonations, coupled with aircraft noise and terrestrial explosions apparently have not been a sufficiently strong stimulus to permanently remove the whales from the waters surrounding Kahoolawe. Presumably, dredging in shallow water produces a considerably less intense source of noise that would not seriously degrade the adjacent humpback whale environment.

It is also improbable that the humpback whales actually winter near any beach within the 80- to 100-foot depth contour. Except for one specific observation by Hudnall (1978) that describes the birth of a humpback whale in 10 meters of water in Maalaea Bay just east of McGregor Point, there does not appear to be other records of the humpback whales observed near the shoreline at or within the 30-foot depth contour.

Undoubtedly, there will be some boat-whale interactions throughout the "Four-Island" area. There does not appear to be sufficient information to indicate that the proposed new launching facility at Keawakapu will place boating activity at "the very heart of the paths of the whales" and at "apparently one of the centers where whales give birth." As mentioned above, the only recorded birth of a humpback whale took place near McGregor Point, some distance with respect to boating activities from Keawakapu.

The humpback whales are protected by law from harassment (a term not yet properly defined with respect to the whales) by human activity. Boaters using the waters frequented by the humpback whales should be made aware of the laws now in effect (perhaps a conspicuous sign posted at each launch ramp within the "Four-Island" area) and the consequences incurred if the the laws are broken.

It seems inappropriate not to consider the construction of the new launch ramp at Keawakapu, based on the lack of a complete study of the

humpback whales. More important is the education of the boating public on peaceful coexistence (nonharassment) with the whales during the part of the year they are present.

11. SECONDARY OR INDIRECT CONSEQUENCIES OF THE PROPOSED ACTION

Population and growth impacts indirectly related to this action are likely to be insignificant. The population and growth factors will be more dependent upon other development pressures by commercial enterprises and the construction of the Kihei-Ulupalakua Highway.

There will be no significant secondary impacts caused by the construction of this boat launching ramp facility.

12. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Unavoidable short-term adverse environmental effects associated with the proposed action are related to the construction phase of the project. These are summarized as follows:

1. Temporary silting of the water column caused by dredging operations for the launch basin and entrance channel.
2. Minor noise and dust disturbance to local residents caused by construction activity.
3. Minor temporary traffic disruption along Kihei Road caused by the construction of the intersection of the access road with Kihei Road.
4. Potential soil erosion caused by high intensity rains that could occur during grading.

Long-term environmental effects which cannot be avoided are summarized as follows:

1. Alteration of the natural landscape and elimination of existing flora at the project site by clearing and grading.
2. Destruction of coral and benthic habitats by dredging operations.
3. Possible effect of noise generated from motors of power boats on residents in the immediate proximity of the launching facility.

13. ALTERNATIVES TO THE PROPOSED ACTION

There are no other sites suitable for a boat launching ramp between Kalepolepo and Makena. Each alternate site investigated had critical factors that precluded its selection as the primary choice (see Appendix 5).

One alternative would be to expand the scope of this project to include the plans for a small boat harbor. The boat ramp would be incidental to the development of the harbor and therefore its cost would be reduced. A small boat harbor, however, would require a larger commitment of lands, monies, labor, and materials than the proposed action.

A second alternative would be to change the use of the site to a park instead of a boat launching facility, which is also a compatible use for this flood-prone area. The park could consist of picnic and/or outdoor camping areas. However, the shoreline in this area is not as attractive for swimming as at some other shoreline locations in this district. If required, this type of park could still be combined with the boat launching facility by using adjacent State-owned lands which would not be occupied by the facility. This combination of park coupled with a boat launching facility would not be conflicting so long as boating activities are restricted to the launching area.

A third alternative would be to improve the facilities at the Kalama Park boat ramp instead of creating a new boat launching facility at Keawakapu. This action, however, would involve a similar expenditure of funds since the deficiencies of the existing facility are considerable. First, the presence of an active sand transport mechanism at Kalama Park would require the design of a control structure which may still require routine maintenance dredging. Second, a protective structure would be needed to reduce wave action at the ramp. Such a structure may conflict with the surfing activities in the area. Last, the land area available at Kalama Park ramp is insufficient to develop and support facilities for a double lane launching facility.

15. MITIGATING MEASURES PROPOSED TO MINIMIZE IMPACTS

Mitigating measures proposed to minimize the significant adverse environmental impacts are summarized in this section. These considerations have been grouped according to duration of adversity as previously presented.

MITIGATING MEASURES FOR UNAVOIDABLE SHORT-TERM IMPACTS

1. The use of silt screens or similar containment facilities will be considered to lessen the dispersion of sediments to surrounding areas if conditions warrant it.
2. Noise produced by construction activities will be monitored and if excessive, corrective action will be taken by the contractor to comply with the appropriate federal, state, or county regulations.
3. A water sprinkling system will be implemented to reduce the dust generated by construction activities.
4. Ground erosion of graded areas will be retarded by landscaping. Cutoff ditches will be constructed to minimize runoff from exposed slopes and the gully in the area which receives most of the runoff will not be cleared.
5. Construction of the intersection of the access road with Kihei Road and heavy construction traffic will be scheduled during nonpeak traffic flow hours. Flagmen will be provided, as necessary, to coordinate traffic during construction hours.
6. Construction activity will be limited to standard hours of operation.
7. The contractor will be required to restore to its natural state any area damaged or disturbed by his construction activity that was not specified on the plans.

MITIGATING MEASURES FOR UNAVOIDABLE LONG-TERM IMPACTS

1. The unimproved areas within the site which are altered as a result of construction activities will be landscaped.

2. The breakwater and groin will provide substrate and cover for marine life that will mitigate the loss of habitats during construction.

3. Noise levels generated by the motors of power boats, may be attenuated by restricting boat speed limits in the launch basin and entrance channel.

16. ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

The proposed small boat launching ramp facility would commit the immediate area for boating. Swimming or diving in the vicinity of the ramp and breakwater would be hazardous and should be curtailed.

Approximately 1.5 acres of state land and 2 acres of offshore area would be committed to this project. Construction of the breakwater and groin and dredging of the launch basin and channel would destroy benthic animals and corals in the area.

Other commitment of resources would be the labor and capital investment by the State of Hawaii for the construction of the boat launching facility.

17. AN INDICATION OF WHAT OTHER INTERESTS AND CONSIDERATIONS OF GOVERNMENT POLICIES ARE THOUGHT TO OFFSET ADVERSE ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

The primary governmental policy that is encouraging the construction of the proposed boat launching facility at Keawakapu is contained within the recommendations of the Statewide Boat Launching Facilities Master Plan prepared for the Harbors Division of the State of Hawaii. The master plan recommends that an operational boat launching ramp be provided in the Kihei area and an additional one be constructed at La Perouse Bay by 1990. The creation of the proposed facility should accommodate present and future demands for a boat launching ramp in the Kihei area until that time.

The recommendations in the master plan also suggest the improvement of the Kalama Park boat launching ramp as one course of action. However, such an action, as discussed previously in Section 13 of this environmental impact statement as opposed to construction of the proposed boat launching facility at Keawakapu, would require a larger expenditure of funds, create use conflicts between boaters and surfers, and provide insufficient backup land area for parking and maneuvering.

18. ORGANIZATIONS AND PERSONS CONSULTED

The following is a list of government agencies, groups and individuals who were consulted with regard to various aspects of the description and impact of the proposed project.

1. Department of Land and Natural Resources, Historic Sites Division, State of Hawaii.
2. Bernice P. Bishop Museum, Archaeology Department.
3. Beatrice Krauss, Research Affiliate, Lyon Arboretum, University of Hawaii.
4. Ralph Bowers, Ph.D., Marine Biologist.
5. Department of Public Works, Engineering Division, County of Maui.
6. Department of Planning and Economic Development, State of Hawaii.
7. David F. DeVine, Resident, Maui County.
8. Planning Department, County of Maui.
9. Department of Planning and Economic Development, County of Maui.
10. U.S. Coast Guard, Aids to Navigation Branch.
11. U.S. Army Corps of Engineers.
12. Water Transportation Facilities Division, State of Hawaii.
13. William E. Maschal, President, Kihei Community Association.
14. Maui Group, Hawaii Sierra Club.
15. National Marine Fisheries Service, National Oceanic and Atmospheric Administration.

RESPONSES AND COMMENTS OF ORGANIZATIONS AND PERSONS CONSULTED

1. National Marine Fisheries Service - Fishery Bioliogist John Naughton, 6/27/79.

   a. O.K. as long as construction of breakwater and offshore facilities are not done between December and May.

   b. Increase in boat traffic will have minimal effects on whales.

   c. Boat traffic will be removed from Maalaea and Kalama. Boaters do not have to traverse bay if ramp is located further south.

   d. National Marine Fisheries have been consulted and have no objections at the present time.

   e. Must adhere to Federal Register requirements.

2. Mr. David F. Devine, Resident, Maui County, 1/10/78.

   a. Want no power lines so sailboats have access.

Other comments, responses and reports by government agencies, groups and individuals are reproduced in this section and the appendix. Records of phone conversations and personal meetings not included are those in which agencies and groups were informed of the project but no pertinent comments were given at that time.

The Sierra Club
MAUI GROUP, HAWAII CHAPTER
P. O. Box 416
HAIKU, MAUI, HAWAII 96708

WATER TRANSPORTATION FACILITIES DIVISION

April 21, 1979

Hc. 4053

Mr. Matthew Nahm
Dept. of Transportation
Water Transportation Facilities Div.
79 S. Nimitz Highway
Honolulu, HI 96813

Dear Sir:

Please list the Maui Group, Hawaii Sierra Club, as a consulted party in preparation of the EIS for KIHEI BOAT LAUNCHING RAMP, KEAWAKAPU, MAUI.

Thank you,

John Bose, II
For the Executive Board

Ph. 575-2396

To M & E Pacific

Talked over the phone with John Bose, II, on 4/26/79. He asked why Makena was not selected. Told him that not enough land for backup area. This was brought out in the 1st Public Hearing.

He asked that "Maui Group, Hawaii Sierra Club" be listed on page 61 of the EIS as a consulted party. He asked for a copy of the printed EIS. I will see that he gets one.

Matt Nahm 4/26/79

Kihei Community Association
P. O. Box 662 • Kihei, Maui, Hawaii 96753

April 16, 1979

Dear Mr. Nakaw:

We would like very much to be consulted in the preparation of the EIS for the proposed small boat ramp near Kamaole Beach Park No. 3 in Kihei.

Our organization strongly supports the construction of this ramp at the earliest possible date as a matter of safety as well as convenience. We think the site is the proper one, also.

Please let us know if we can do anything to help the project along.

Sincerely

William E. Mashal
President
Ph. 879-2419

HC.4053

January 26, 1979 WT-EP 2744

Mr. Kisuk Cheung, Chief
Engineering Division
U. S. Army Engineer District,
Honolulu
Building 230
Fort Shafter, Hawaii 96858

Dear Mr. Cheung:

Subject: Kihei Small Boat Harbor Study

Thank you for your letter PODED-PJ of December 28, 1978, on the above subject.

We concur with your recommendation that the subject Section 107 study be deferred until the on-going U. S. Army Corps of Engineers study for improvements at Maalaea Boat Harbor and the State's Kihei Boat Launching Ramp EIS-design study are completed. However, it is our understanding that the subject boat harbor study is not limited to only Kihei but covers the southwest coast of Maui from Kihei to La Perouse Bay.

Very truly yours,

DAVID K. HIGA
Chief

FHS:jut/wh

bcc: WT-B
WT-ED
WT-M

DOT 1-026
(DIR 2/65)

DEPARTMENT OF TRANSPORTATION

MEMORANDUM FOR THE RECORD WT-ED 5127

TER TRANSPORTATION FACILITIES
DIVISION

Date: 6/5/78

ENGINEERING - DESIGN
BRANCH OR SECTION

PURPOSE OF MEETING: Small Boat Launching Ramp, Kihei, Maui, Job H. C. 4053

First public hearing to discuss site studies from Kihei to Makena, the recommended site selection at Kamaole Beach, and the conceptual plan for the proposed launching ramp at Kamaole.

DATE, TIME & PLACE:

Thursday, May 18, 1978, at 7:00 P.M. at Kihei School Cafeteria.

PARTICIPANTS:

Captain Charles Swanson, DEP-P; Captain P. A. Lilly, Maui District Manager; Mr. James Hara, project manager for the consultant; and Mr. Matthew Nahm, WT project manager.

Senator Mamoru Yamasaki attended. About 40 people were present.

BRIEF SUMMARY OF MEETING:

Captain Swanson presided over the meeting.

Mr. James Hara told the gathering that six sites were studied from the old Kihei Wharf to Makena. All four sites from Kihei Wharf to Kalama Park ramp presented problems of sand accumulation and lack of backup land. Makena Landing was favored from the oceanographic standpoint but it lacks backup land for trailer parking. Furthermore, the Maui County Planning Department has disapproved Makena for boat launching because it has already approved the area for swimming. Kamaole Beach is the only site which has adequate backup land--some 25 acres. However, from the oceanographic viewpoint, it presents problems. It will be costly to construct wave protection structures. The Kamaole launching ramp facility will cost about $830,000.

A preliminary conceptual plan of the facility was shown to the audience.

Following the formal part of the hearing, the meeting was opened for the receiving of testimonies--pro and con--on the proposed facility. Eight people presented testimonies.

Comments made by these speakers were as follows:

"To keep down traffic on Kihei Road, the ramp should be built at Kalepolepo, near the old Bureau of Standards station. There are about 3 acres of Federal land there.

Kalepolepo is too close to Maalaea. The launching ramp should be as close as possible to the fishing grounds near Molokini and Kahoolawe.

A ramp at Kamaole Beach would be preferable to one at Kalepolepo. It would be closer to Molokini and Kahoolawe and fishermen would save considerable energy because of the shorter travel distance.

Makena Landing would be the best site because of favorable sea conditions. (Note added: Makena lacks backup area. Also, the Maui Planning Department has disapproved Makena for boat launching, because the site has already been approved as a swimming beach.)

A boat ramp is needed now because the ramp at Maalaea is overcrowded.

The most important consideration is safety for boaters who have to fight 35-knot winds and 6-foot waves getting back from Molokini. Hence, the need for locating a ramp as far south as possible.

Kalepolepo has dangerous surf on the reef at low tide and also it is the site of a historic fishpond.

Kamaole Beach has old Hawaiian ruins which should be protected if a ramp is built. (Subsequently checked with DLNR Archaeological Division. The Hawaiian artifacts are recorded on DLNR Report 1034 titled "Kamaole House Site", dated August 17, 1973. The Hawaiian ruins or artifacts occupy 2,745 sq. ft., a small area when compared with the Kamaole Reserve area of about 25 acres.)

Boaters will not contribute to traffic congestion on Kihei Road because they usually use the ramps on weekends and travel before dawn and in the late afternoon."

Subsequently, questions were entertained and a general discussion followed.

All of the speakers were strongly in favor of a ramp and urged early construction of same because of its great need. No one present opposed the new ramp. The concensus was that a ramp should be built as close as possible to Molokini and Kahoolawe.

The hearing was tape recorded and the cassette is on file at the Water Transportation Facilities Division office, 79 South Nimitz Highway, Honolulu.

Respectfully submitted,

Matthew M. Nahm

MATTHEW M. NAHM

MMN:ao

Enclosure: Attendance List

cc: M&E Pacific, Inc.
WT-M

ATTENDANCE LIST
PUBLIC HEARING – H.C. 4053 – 5/18/78

NAME	ORGANIZATION
1. BERNIE KEAU	w/father
~~Charles Pitt Fiaa~~ Duplication	~~Maui Historical Society~~
2. Mrs. & Mr. James F. Stewart	Home Owner
3. Anthony Ventura	Maui Coop. Fishing Assn.
4. DAVE VENTURA JR.	" " " "
5. BETTY Beggs	Hale Kamaole
6. Charles P. Keau	MAUI HISTORICAL Society
7. Charles F. Bell	Home Owner
8. [illegible signature]	— —
9. Dave Beeman	HOME OWNER
10. [illegible signature]	Royal Mauian
11. Willie [illegible]	Home owner Boat owner
12. Herbert Santo	" " " "
13. Robert N. [illegible]	Rescue Service & Civil Defense

NAME	ORGANIZATION
14. Ruby Rymian	Hale Kamaole #201
15. Barbara Schaffer	Hale Kamaole #170

ATTENDANCE LIST

NAME	ORGANIZATION
L. S. King 3379 Kehala Dr Kihei, HI 96753	
Mr & Mrs A. T. Trailov 2737 So Kihei Rd	
David F. DeVine 1573 N. Alaniu Pl Kihei	
CONRAD B VENTURA 3181 Nahenahe Pl. Kihei	Maui Meadows
JOHN J. WALKER ?737 So Kihei Rd. #143	
Vera D. Walker Hale Kamaole	
NORMAN TAN 196A KENOLIO RD	
J.C. ANTHONY 3055 MAPU PLACE KIHEI	
TED PROCTOR	510 MIKIOI ST, MAUI MEADOWS
Naomi Proctor	510 Mikioi St, Maui Meadows
Russ Morris	Sierra Group - Maui Group
Teruo Kamasaki	Boater

— 2 —

M&E Pacific, Inc.

Memorandum

TO: Files

DATE February 15, 1978

FROM: J. Hara

SUBJECT: Minutes of Kihei Small Boat Ramp Meeting

Date of Meeting - February 15, 1978

Place - Planning Dept's Conference Room, County of Maui, Wailuku, Maui

Attendees - Howard K. Nakamura, Seibu's Consultant
Ross Riley, Assoc. Landscape Architect, Seibu's Consultant
Tosh Ishikawa, Director, Planning Dept., Maui County
John Min, Staff, Planning Dept., Maui County
Ed Kagehiro, Dept. of Public Works, Maui County
Tsunaki Ejima, Seibu Hawaii, Inc.
Larry Sasaki, Seibu Hawaii, Inc.
Takashi Manabe, Seibu Hawaii, Inc.
Capt. Lilly, State Water Transportation Facilities
Matthew Nahm, State Water Transportation Facilities
James Hara, M&E Pacific, State's Consultant

Howard Nakamura opened meeting to explain that the purpose of meeting was to resolve proposed parking facilities for beach recreational purposes and also for a small boat launching ramp at the Makena site. H. Nakamura was referring to letter written to him on January 23, 1978 by M&E Pacific, requesting consideration for making land available near the small boat launching ramp for parking and appurtenant facilities for the ramp. The following were discussed:

1. Seibu has a commitment with the County of Maui to provide public access to the beach area and to provide parking for 15 cars for beach recreational purposes in the vicinity of the proposed parking area for the ramp site.

2. Present plan is to locate this parking area for 15 cars outside of the 40 foot shoreline setback area.

3. Seibu has no objection to a proposed boat launching ramp at Makena.

4. Planners are of the opinion that Seibu does not own enough suitable land at the proposed site to provide parking for both beach recreational purposes and for the boat ramp (approx. 0.5 acres additional required). Portion of the usable area owned by others.

5. Tosh Ishikawa stated that he feels that beach use should have priority. Cited conflicting use of area between boaters and beach users. County has approved area for beach use. Unofficially, he would not support a boat ramp at the Makena site.

6. J. Hara and M. Nahm plan to visit Makena site after meeting for further evaluation. Also will visit and study other sites being considered.

7. Capt. Lilly feels ramp should be double lane and parking to accommodate about 40 car trailers. The parking area required then will be approximately 1.0 acre.

JSH/jn

19. LIST OF NECESSARY APPROVALS

Final construction plans for the proposed project will be subject to approval by the following governmental agencies:

1. U.S. Army Corps of Engineers (for work in navigable waters).
2. Department of Land and Natural Resources, State of Hawaii (for work in a Conservation District).
3. Water Transportation Facilities Division, State of Hawaii (for State operated and maintained boat ramp facility).
4. Department of Public Works, County of Maui (for road, drainage, and sewer facilities).
5. Shoreline Management Area Permit, Maui County (for work in shoreline areas).
6. Water Supply Department, County of Maui (for water service).
7. Coastal Zone Management Program (for consistency certification).
8. National Marine Fisheries Service, NOAA, Department of Commerce (for the Humpback Whales).

20. REFERENCES

1. Statewide Boat Launching Facilities Master Plan, State of Hawaii, Department of Transportation - Harbors Division, 1972.

2. 1970 Census of Population and Housing, U.S. Department of Commerce, Social and Economic Statistics Administration, Bureau of the Census, March 1972.

3. Census Statistical Area Committee, Report CTC-32, State of Hawaii, April 1976.

4. OEO 1975 Census Update Survey, Maui County, Maui Economic Opportunity, Inc., February 1976.

5. Kihei Civic Development Plan, Maui County Planning Commission, February 1970.

6. Atlas of Hawaii, Department of Geography, University of Hawaii, 1973.

7. Hawaii Regional Inventory of the National Shoreline Study, U.S. Army Engineer Division, Pacific Ocean, Corps of Engineers, August 1971.

8. Climatologic Stations in Hawaii, State of Hawaii, Department of Land and Natural Resources, Division of Water and Land Development, January 1973.

9. Climatic Summary of the United States Supplement for 1919 through 1952 and Supplement for 1951 through 1960, Hawaii and Pacific, U.S. Department of Commerce, Weather Bureau, 1965.

10. Soil Survey of Island of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, U.S. Department of Agriculture, Soil Conservation Service, August 1972.

11. Maui County, The Islands of Maui, Molokai, Lanai and Kahoolawe, Facts and Figures, 1978, State of Hawaii, Department of Planning and Economic Development and County of Maui, Department of Economic Development, 1978.

12. EIS for the Proposed Boat Launching Ramp Facility, Mala, Maui, Hawaii State Department of Transportation, Harbors Division, October 1975.

13. Tsunami Wave Runup Heights in Hawaii, Harold G. Loomis, Hawaii Institute of Geophysics, University of Hawaii and Joint Tsunami Research Effort, Pacific Marine Environmental Laboratory, Environmental Research Laboratories, NOAA, May 1976.

14. Estuary and Coastline Hydrodynamics, Arthur T. Ippen, McGraw Hill Book Company, Inc., 1966.

15. Report on Small Craft Harbors, ASCE - Manuals and Report on Engineering Practice - No. 50, 1969.

16. Marine Sediment Transport and Environmental Management, Daniel Jean Stanley and Donald J.P. Swift, John Wiley & Sons, Inc., 1976.

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18. Shore Protection Manual, Coastal Engineering Research Center, U.S. Department of the Army, 1973.

19. Conservation District Inventory, Island of Maui, State of Hawaii, Department of Land and Natural Resources, Divison of Water and Land Development, 1977.

20. Air Flow in the Central Valley of Maui, Hawaii, P. Anders Daniels and Thomas A. Schroeder, Journal of Applied Meteorology, Vol. 17, No. 6, June 1978.

21. Coastal Currents and Sewage Disposal in the Hawaiian Islands, Taivo Laevastu, Don E. Avery and Doak C. Cox, Hawaii Institute of Geophysics, University of Hawaii, June 1964.

22. Hawaiian Beach Systems, Ralph Moberly, Jr. and Theodore Chamberlain, Hawaii Institute of Geophysics, University of Hawaii, May 1964.

23. Reconnaissance Sand Inventory: Off Leeward Oahu and Maui, J.F. Campbell, B.R. Rosendahl, W.T. Coulbourn, and R. Moberly, Jr., Hawaii Institute of Geophysics, University of Hawaii, October 1971.

24. A Report on the General Behavior of Humpback Whales Near Hawaii and the Need for the Creation of a Whale Park, Oceans, Vol. 11, No. 2.

25. In the Matter of the Humpback Whales, Public Hearing, June 26, 1978, U.S. Department of Commerce, National Marine Fisheries Service.

26. Humpback Whale Harassment in the Hawaiian Islands Area, Jan. 4, 1979, Federal Register, Vol. 44, No. 3.

21. COMMENTS AND RESPONSES TO EIS

GEORGE R. ARIYOSHI
GOVERNOR

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

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

IN REPLY REFER TO:

July 11, 1979

HAR-ED 347

Mrs. Norma M. Pendleton
3539 Lanihou Place
Kihei, Hawaii 96753

Dear Mrs. Pendleton:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

This is in response to your letter of May 24, 1979, concerning the proposed project.

In planning the boat ramp facility, consideration was given to possible conflicts between beach users at Kamaole Beach Park #3 and boaters launching from the proposed site at Keawakapu. The proposed project will be located approximately 1400 feet southerly from Kamaole Beach Park #3. Because boating traffic will be generally in the southerly direction, the boats will be traveling away from Kamaole Beach Park #3. Minimal conflict is anticipated between the boaters and beach users.

A comprehensive site selection study and a public hearing were conducted prior to selecting the proposed site at Keawakapu. This site was selected as being the most viable being closest to the popular boating areas around Molokini and Kahoolawe islands.

We appreciate your concern about this project.

Very truly yours,

C. Swanson

for Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

May 24, 1979

I would like to go on record as stating that I am adamantly AGAINST the proposed building of a small boat launching ramp near Kamaole Beach Park No. 3 in Kihei, Maui.

Please, let us NOT LOUSE UP our few remaining good swimming areas on Maui. I suggest the boaters look elsewhere for their ramp.

Most sincerely,

Norma M. Pendleton

(Mrs.C.A.Pendleton,Jr.)
3539 Lanihou Pl.
Kihei, Maui HI 96753

EORGE R. ARIYOSHI
GOVERNOR

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

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

July 11, 1979

IN REPLY REFER TO:
HAR-ED 351

Mrs. Susanne Evers
2653 South Kihei Road, Apt. 314
Kihei, Hawaii 96753

Dear Mrs. Evers:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

Thank you for your letter of June 12, 1979 expressing your concern regarding the proposed Kihei Boat Launching Ramp Facility at Keawakapu, Maui.

In planning the boat ramp facility, consideration was given to possible conflicts between beach users at Kamaole Beach Park #3 and boaters launching from the proposed site at Keawakapu. The proposed project will be located approximately 1400 feet southerly from Kamaole Beach Park #3. Because boating traffic will be generally in the southerly direction, the boats will be traveling away from Kamaole Beach Park #3. Minimal conflict is anticipated between the boaters and beach users.

In regard to the Humpback whales, existing laws protect the whales from human disturbance. Boaters using the waters frequented by the whales shall be made aware of these laws.

A comprehensive site selection study and a public hearing were conducted prior to selecting the proposed site at Keawakapu. This site was selected as being the most viable being closest to the popular boating areas around Molokini and Kahoolawe islands.

Thank you for your comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

2653 S. Kihei Rd apt 31
Kihei, Maui, Hi 96753
June 12, 1979

Mr David K. Hijsa
Chief, Water Transp. Facilities Division
Dept of Transp., State of Hawaii.

WATER TRANSPORTATION
FACILITIES DIVISION

JUN 19 3 21 PM '79

Dear Mr Hijsa:

Please do not build a boat Ramp near Kamaole III. After traveling for 8 months in the South Pacific, looking for our ide Beach we have found it in Kihei Maui, where we bought our ideal condominium, after a lifetime of work, in the Maui Parkshores right across Kamaole III.

My husband and I are 65 and 62 respectively, and we are spending the happiest time of our life here, swimming from one to three miles daily in the Ocean across our apartment.

If a boat landing is built here we as well as the thousands of people who swim on the 3 Kamaole Beaches will be endangered and disturbed. The humpback whales which spend the winter near these beaches will be disturbed also. The boat owners most of whom wheant to fish across Kahoolawe where the fish abounds, will not be served unless the landing is near that part of the beach.

Thanking you for your kind
consideration of these facts
I am Yours Sincerely

(Mrs) Susanne Evers

EORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

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

July 11, 1979

IN REPLY REFER TO:
HAR-ED 351

Mrs. Susanne Evers
2653 South Kihei Road, Apt. 314
Kihei, Hawaii 96753

Dear Mrs. Evers:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

Thank you for your letter of June 12, 1979 expressing your concern regarding the proposed Kihei Boat Launching Ramp Facility at Keawakapu, Maui.

In planning the boat ramp facility, consideration was given to possible conflicts between beach users at Kamaole Beach Park #3 and boaters launching from the proposed site at Keawakapu. The proposed project will be located approximately 1400 feet southerly from Kamaole Beach Park #3. Because boating traffic will be generally in the southerly direction, the boats will be traveling away from Kamaole Beach Park #3. Minimal conflict is anticipated between the boaters and beach users.

In regard to the Humpback whales, existing laws protect the whales from human disturbance. Boaters using the waters frequented by the whales shall be made aware of these laws.

A comprehensive site selection study and a public hearing were conducted prior to selecting the proposed site at Keawakapu. This site was selected as being the most viable being closest to the popular boating areas around Molokini and Kahoolawe islands.

Thank you for your comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

2653 S. Kihei Rd apt 31
Kihei, Maui, Hi 96753
June 12, 1979

Mr David K. Hijsa
Chief, Water Transp. Facilities Division
Dept of Transp., State of Hawaii.

JUN 19 21 PM '79
WATER TRANSPURTATION
FACILITIES DIVISION

Dear Mr Hijsa:

Please do not build a boat Ramp near Kamaole III. After traveling for 8 months in the South Pacific, looking for our ide Beach we have found it in Kihei Maui, where we bought our ideal condominium, after a lifetime of work, in the Maui Parkshores right across Kamaole III.

GEORGE R ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O SWANSON
WALLACE AOKI
JAMES R CARRAS
DOUGLAS S SAKAMOTO

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

July 11, 1979

IN REPLY REFER TO

HAR-ED 353

MEMORANDUM

TO: JAMES S. KUMAGAI, Ph.D.
DEPUTY DIRECTOR FOR ENVIRONMENTAL PROGRAMS
DEPARTMENT OF HEALTH

FROM: DIRECTOR OF TRANSPORTATION

SUBJECT: EIS FOR THE KIHEI BOAT LAUNCHING RAMP FACILITY, KEAWAKAPU, MAUI

This is in response to your memorandum dated June 14, 1979, regarding the above subject matter.

The comfort station will be built with the boat launching facility if funds are available. However, if initial funding limitation precludes the immediate building of the comfort station, it will be scheduled for future construction.

for Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII

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

GEORGE A. L. YUEN
DIRECTOR OF HEALTH

VERNE C. WAITE, M.D.
DEPUTY DIRECTOR OF HEALTH

HENRY N. THOMPSON, M.A.
DEPUTY DIRECTOR OF HEALTH

JAMES S. KUMAGAI, PH.D., P.E
DEPUTY DIRECTOR OF HEALTH

TADAO BEPPU
DEPUTY DIRECTOR OF HEALTH

June 14, 1979

MEMORANDUM

In reply, please refer to:
File: EPHS-SS

To: Mr. David K. Higa, Chief, Water Transportation Facilities Division
Department of Transportation

From: Deputy Director for Environmental Health

Subject: Environmental Impact Statement (EIS) for Kihei Boat Launching Ramp Facility, Keawakapu, Maui

Thank you for allowing us to review and comment on the subject EIS.

The proposed comfort station should be constructed with the subject boat launching facility. The need for the comfort station will be immediate with the completion and use of the boat launching facility.

We realize that the statements are general in nature due to preliminary plans being the sole source of discussion. We, therefore, reserve the right to impose future environmental restrictions on the pboject at the time final plans are submitted to this office for review.

for Brian N.J. Chon
JAMES S. KUMAGAI, Ph.D.

cc: OEQC
DHO, Maui

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

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

IN REPLY REFER TO:

July 16, 1979

HAR-ED 385

Mr. David E. Kendall
Kihei Surfside, #513
2936 South Kihei Road
Kihei, Maui, Hawaii 96753

Dear Mr. Kendall:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

This is in response to your letter of May 24, 1979, regarding the above project.

The exact location of the proposed ramp will be approximately 1400 feet south of Kamaole Beach Park #3 and 800 feet north of the Kihei Surfside Condominium.

The open grassed area adjacent to and north of the Kihei Surfside will not be encroached upon in any way by the proposed boat launching facility.

Due to the topography and to preclude conflicts with beach users at Kamaole Beach Park #3, we regret the launching facility cannot be placed on the north end of the Keawakapu beachfront as you suggest.

All necessary precautions will be taken during construction and operation of the boat launching facility to minimize the disturbance to surrounding areas.

Thank you for your comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

David E. Kendall
Kihei Surfside, #513
2936 South Kihei Road
Kihei, Maui, HI 96753

May 24, 1979

Office of Environmental Control
550 Halekauwila St., Rm. 301
Honolulu, HI 96813

Gentlemen:

We are intensely concerned with the proposed new boat launching ramp on the State land at Keawakapu on Maui, as it will be in our immediate vicinity. It will be located on State land, between Kamaole Beach 3 on the north, and Kihei Surfside on the south, somewhere on the ¼ mile beachfront in between. We feel that the proposed facility is a needed one, and find no fault in locating it in the general area. However, we do object if the new facility is put on the south end of the State land which would put it right at the door of our home. We have been unable to get any information on the exact location, and would appreciate any information on current plans. We urge that you consider placing the ramp facilities on the North end, away from our home, and next to the public beach. Thank you.

Yours truly,

David E. Kendall

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

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

IN REPLY REFER TO:

July 16, 1979

HAR-ED 386

Honorable Hideto Kono, Director
Department of Planning and
Economic Development
P.O. Box 2359
Honolulu, Hawaii 96804

Dear Mr. Kono:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

We concur that the boat launching ramp is a shoreline activity as stated in your letter of May 30, 1979. We will include a discussion on the Coastal Zone Management Program in the revised EIS.

The proposed project will conform to the objectives and policies as set forth by Chapter 205A of the Hawaii Revised Statutes and amendments in H.B. No. 1642.

Along with the necessary approvals as stated in the subject EIS, Section 19 "LIST OF NECESSARY APPROVALS," a State consistency certification will be provided in compliance with the Coastal Zone Management Program.

Thank you for your review and comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

GEORGE R. ARIYOSHI
Governor

HIDETO KONO
Director

FRANK SKRIVANEK
Deputy Director

DEPARTMENT OF PLANNING
AND ECONOMIC DEVELOPMENT

Kamamalu Building, 250 South King St., Honolulu, Hawaii • Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

May 30, 1979

Ref. No. 9155

Mr. Richard L. O'Connell, Director
Office of Environmental Quality
Control
550 Halekauwila Street
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject: Review of the Environmental Impact Statement for the Kihei Boat Launching Ramp Facility at Keawakapu, Maui

Since the proposed Boat Launching Ramp is a shoreline activity, it should include discussion on the Coastal Zone Management Program. The proposed project requires both Federal and State agency approvals/actions and may be subject to consistency and compliance requirements of the National and State Coastal Zone Management Programs.

Thank you for the opportunity to review the subject EIS.

Sincerely,

Frank Skrivanek

for HIDETO KONO

cc: Water Transportation Facilities Division
Department of Transportation

GEORGE R. ARIYOSHI
GOVERNOR

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

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

IN REPLY REFER TO:

July 16, 1979

HAR-ED 387

Honorable Susumu Ono
Chairman and Member
Board of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96808

Dear Mr. Ono:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

This is in response to your letter of June 5, 1979, regarding the above subject matter.

The project should not pose any conflict with land drainage. All construction will be confined to the north side of the drainage gully and the present drainage flow will not be restricted in any way.

The word "dedicated" on page 43 has been changed to "designated."

Should any unanticipated archaeological sites or remains be found during construction, the work will be halted and your Historic Sites Office will be immediately contacted.

Thank you for your review and comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII

SUSUMU ONO, CHAIRMAN
BOARD OF LAND & NATURAL RESOURCES

EDGAR A. HAMASU
DEPUTY TO THE CHAIRMAN

DIVISIONS:
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FISH AND GAME
FORESTRY
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

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

June 5, 1979

REF NO.: APO-496

Honorable Richard L. O'Connell
Director
Office of Environmental
Quality Control
550 Halekauwila Street, Rm. 301
Honolulu, HI 96813

Dear Sir:

We have reviewed the draft EIS for the boat launching ramp at Kihei.

The site for the ramp is not now under executive order to DOT. Board and Legislative approvals are required for executive orders.

The County of Maui has given preliminary approval to developers of lands mauka of the highway to direct runoff into the natural drainageway which runs through the proposed launching site.

Page 43 of the draft indicates the project site is "dedicated" to park use. This should be changed to "designated".

In the event unanticipated archaeological sites or remains are encountered, the applicant should stop work on this project and contact our Historic Sites Office immediately (548-6408).

Very truly yours,

Susumu Ono

SUSUMU ONO, Chairman
Board of Land and Natural Resources

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

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

IN REPLY REFER TO

July 16, 1979

HAR-ED 388

Mrs. Helen Luuwai
Director of Parks
Department of Parks and Recreation
County of Maui
Wailuku, Hawaii 96793

Dear Mrs. Luuwai:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

Thank you for your comments on the subject project EIS. Our responses follow:

1. Comment #1. The boat launch facility is basically for the launching and retrieving of trailered boats and will preclude other water related activities at the site. However, the launching facility being 1400 feet southerly of Kamaole Beach No. 3, conflict with present beach use should be minimal.

2. Comment #2. Boaters will hardly contribute to traffic congestion on Kihei Road because they will usually use the ramps on weekends and will generally travel before dawn and in the late afternoon. Therefore, the boaters will seldom travel during the peak traffic on Kihei Road.

3. Comment #3. The ramp project will be built on grounds, presently undeveloped, and will preserve the "open space" character of the area. Rather than having an adverse impact on surrounding areas, the new ramp should have a beneficial effect, similar to the new Mala Boat Launching Ramp at Lahaina.

4. Comment on Alternate Site. A comprehensive site selection study was conducted and documented prior to writing the subject EIS. In this study, possible sites from Kihei Wharf (Suda Store site) to Makena were investigated. Subsequently the present proposed site at Keawakapu was selected as the best possible viable alternative. This study will be included in the revised EIS as an appendix.

The area around Kihei Wharf across from Suda Store was not selected because of the following reasons:

a. Its close proximity to the existing boat ramp at Maalaea Harbor.

b. Boaters expressed a preference for a new boat ramp as far south as possible along the Kihei coast close to the fishing grounds.

c. Considerable shallow water, combined with an active sediment transport mechanism, would cause difficulty in keeping a ramp operational in the Kihei Wharf area.

We appreciate your concerns.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

ELMER F. CRAVALHO
Mayor

HELEN LUUWAI
Director

ERIC SOTO
Deputy Director

TELEPHONE 244-7833

DEPARTMENT OF PARKS AND RECREATION
COUNTY OF MAUI
WAILUKU, MAUI, HAWAII 96793

June 14, 1979

Office of Environmental Quality Control
550 Halekauwila Street, Rm. 301
Honolulu, Hawaii 96813

Gentlemen:

Re: EIS For Kihei Boat Launching Ramp Facility

We have received the above and have the following comments to make:

1. We feel the site under discussion would be incompatible with beach use by the public.

2. Placement of the launching ramp in this area would create additional traffic to the already conjested Kihei Road.

3. This area should remain for general park use by the public.

If Cove Park, on the southside of Kalama Park, is inadequate due to lack of sufficient land area, we suggest that you consider locating this facility at the old harbor across the street from Suda Store. This area is suggested due to:

a. Its proximity to the Maalaea Harbor and the services therein;

b. Minimum additional traffic caused by the boaters along the Kihei Road;

c. Gas and food available across the street.

Thank you for allowing us to share our comments with you.

Very sincerely yours,

Helen Luuwai

(Mrs.) Helen Luuwai
Director of Parks

cc: State Dept. of Transportation

GEORGE R. ARIYOSHI
GOVERNOR

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

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

IN REPLY REFER TO

July 16, 1979

HAR-ED 389

Mr. William E. Maschal, President
Kihei Community Association
P. O. Box 662
Kihei, Hawaii 96753

Dear Mr. Maschal:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

Thank you for the comments contained in your letter dated June 20, 1979.

We are grateful for your valued input on the subject environmental impact statement.

Measures will be taken to mitigate adverse impacts as stated in paragraph 6 of the summary in order to avoid objections from the residents in the general area.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

Kihei Community Association

P. O. Box 662 • Kihei, Maui, Hawaii 96753

June 20, 1979

Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

SUBJECT: EIS For Kihei Boat Launching Ramp Facility, Maui

Gentlemen:

The Kihei Community Association strongly supports the Department of Transportation's proposal to construct a new boat launching ramp in the Kihei area and endorsesthe location specified in the subject EIS.

Our organization is constantly receiving requests from small boat owners and would-be boaters to "do something" about getting a new launching ramp in this area. The Maalaea Harbor site is inconvenient and much too far from the favored fishing grounds near Makena, Kahoolawe and Molokini island. The necessity for returning so far against the prevailing trade winds and frequently rough waters in the afternoon make the trip unpleasant and frequently hazardous.

The launching ramp at Charley Young Cove, adjacent to Kalama Park, is far too small and cannot be enlarged. Also, a constant safety hazard exists because the cove is a favorite surfing spot for youngsters from all over Maui who are just learning to surf. In addition, it adjoins a very popular swimming and diving area and near-accidents are very common.

The proposed location South of Kamaole Beach Park #3, near Keawakapu, is favored for the following reasons:

1. It is the only available location relatively close to Molokini, Kahoolawe, and Makena and easity accessible by cars with trailers.

2. It is to be on land already owned by the State, already zoned for park use, and is adjacent to an existing park and recreational area.

3. The beach front is actually a rocky cove with no beach.

Continued.....

4. The area available is ample to accommodate a launching ramp facility of the size needed and will permit future additions, as indicated in the proposal.

5. Clearing of the existing Kiawe trees for the project will open up an additional view corridor between Kihei Road and the ocean, and provide a paved road for public access.

We should like to see this project approved as outlined in the EIS. It should be made clear, however, that the "Mitigating Measures Proposed to minimize Impact," as stated in Paragraph 6 of the Summary, are essential to the success of the program and must be carried out if the department wishes to avoid objections from residents of the general area.

It is hoped that the Department of Transportation, once approval is received, will assign a high priority to this project and will include funds for its immediate construction in the next budget.

The Association is grateful to have the opportunity to review the EIS and provide its comments.

Sincerely,

KIHEI COMMUNITY ASSOCIATION

William E. Maschal

By William E. Maschal,
President

P.S. The writer would like to compliment the Department and M & E Pacific, Inc., on the quality, clarity and completeness of the EIS. It is by far the best one we have yet seen.

W.E.M.

cc: Department of Transportation
Senator Mamoru Yamasaki

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

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

IN REPLY REFER TO:

July 16, 1979

HAR-ED 390

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

Dear Ms. Miller:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

This is in response to your letter dated June 22, 1979, regarding the above subject matter.

We concur that further discussion is required on the topic of sand transport. A section entitled "Beach Processes" will be added to the revised EIS to further discuss sand movement and ocean current pattern at the project site. A map showing the ocean currents will also be included.

At this time it is difficult to establish the frequency of maintenance dredging but such operations are not expected to occur more than once in five years. The specific type of equipment used for maintenance will depend upon that available to the contractor selected to do the job. Either a mechanical or hydraulic dredging system will probably be employed. Maintenance dredging will comply with all federal and state rules and regulations.

Thank you for your review and comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 948-7361

Office of the Director

June 22, 1979

RE:0274

Mr. Richard O'Connell, Director
Office of Environmental Quality Control
550 Halekauwila Street
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Draft Environmental Impact Statement
Kihei Boat Launching Ramp Facility
Keawakapu, Maui

The Environmental Center has reviewed the above cited DEIS with the assistance of Frans Gerritsen, Oceanography; Jacquelin Miller and Barbara Vogt, Environmental Center. As noted from the petition included in Appendix 1, the facility is definitely needed by Maui boaters.

In general, the DEIS for the proposed boat launching facility covers most of the environmental impacts that can be expected to result from the project. One aspect which requires further discussion, however, is that of sand transport. The impacts resulting from alteration to the existing sand transport system through the proposed construction have not been dealt with adequately in the document.

Present and expected sand movement should be further discussed. Although a general discussion of sand type is provided on page 26, more specific data on actual direction of sand movement (not "tends to move inshore and offshore during the year"), ocean currents, and explicit description of sand type found in the proposed project area should be included. Furthermore, the impact of the proposed structures within this sand transport system should be examined in greater detail. Will the proposed construction require annual or biennial maintenance? In addition, will such maintenance utilize heavy equipment?

The number of maps included are helpful in understanding the situation. A map depicting currents and probable sand patterns should be included.

Thank you for the opportunity to comment on this document.

Yours truly,

Jacquelin Miller
BJ.

Jacquelin Miller
Acting Director

cc: M&E Pacific
Frans Gerritsen
Barbara Vogt

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

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

IN REPLY REFER TO:

July 19, 1979

HAR-ED 398

Mr. Kisuk Cheung, Chief
Engineering Division
Department of the Army
U.S. Army Engineer District, Honolulu
Building 230
Fort Shafter, Hawaii 96858

Dear Mr. Cheung:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

In reference to your letter of May 30, 1979, regarding the above subject matter, we offer the following responses to your comments:

1. The boat ramps at Honolua and Maliko were not discussed in the overview of the subject project because the location of these ramps has minimal effect on the Keawakapu site. Table 1 of the EIS shows that the private ramp at Honolua Bay is one of the least preferred launch sites on Maui. Not much data was available for the Maliko ramp because it has been in operation a relatively short time.

2. A comprehensive site selection study and public hearing were conducted prior to selecting the proposed site. The study report will be added as an appendix to the revised EIS.

3. A Wailea wind rose, closer to the project site, will be utilized in lieu of the Puunene wind diagram.

4. Bathymetric data used for wave analysis at the project site extended well offshore past Lanai and Kahoolawe. The bathymetry shown in Figure 2 is the result of a hydrographic survey conducted to establish the existing water depth within the proposed launch basin and breakwater location.

5. The sand beaches from Kihei to Keawakapu experience annual fluctuations in widths due to an inshore-offshore movement of sand. The width of these beaches usually increases in summer and decreases in late winter (reference: "Hawaiian Beach Systems," Ralph Moberly, Jr. & Theodore Chamberlain, 1964.) This annual movement of sand is complemented by a longshore component dependent upon local currents.

   As waves enter the existing cove at the proposed project site, circulation currents are formed. Typically, these currents flow counter to the incoming waves at the northern headlands depositing sand and sediments along this land form. The final alignment of the breakwater will endeavor to minimize the disturbance of the longshore movement of sand as well as provide maximum protection for boaters utilizing the proposed launching ramp. It is difficult to establish the frequency of maintenance dredging, but such operations are not expected to occur more than once in five years.

6. Your comments on the excavation of sand will be given consideration.

7. The proposed crest width of the breakwater is similar to that at the new boat ramp facility at Mala. A wider crest width would provide easier access for maintenance equipment. However, the cost could be prohibitive. During the design stage this consideration will be evaluated.

8. The proposed launching ramp facility will not be nor serve as a harbor. More detailed drawings for the entrance channel, launching basin and protective structures will be made during the design phase and submitted to your office.

   Your comment concerning dredged quantities will be considered.

9. It is felt that the water quality within the launch basin and in surrounding open ocean waters will not be degraded. Nutrient inputs will not be significantly increased and exchange rates will allow a complete exchange within less than a day.

Thank you for your review and comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
BUILDING 230
FT SHAFTER, HAWAII 96858

WATER TRANSPORTATION
FACILITIES DIVISION

PODED-PV

30 May 1979

Mr. David K. Higa, Chief
Department of Transportation
Water Transportation Facilities
Division
State of Hawaii
79 South Nimitz Highway
Honolulu, Hawaii 96813

Dear Mr. Higa:

We have reviewed the Environmental Statement dated May 1979 for the Kihei Boat Launching Facility at Keawakapu, Maui, Hawaii.

A Department of the Army permit will be required for the project. Your permit application should be submitted as soon as possible if you plan to construct in 1980. Your permit application should also include a request for periodic maintenance dredging indicating the volume of material to be dredged and method of disposal. For further information, contact the Operations Branch at 438-9258.

The proposed project is normally one which would require a federal environmental statement prior to the issuance of the Department of the Army permit. If a federal environmental statement is prepared, the time necessary to coordinate and process the statement may affect your 1980 construction schedule.

Comments on the project plans and the environmental statement are attached for your consideration (Incl 1). We appreciate the opportunity of reviewing and commenting on the proposed project.

Sincerely yours,

KISUK CHEUNG
Chief, Engineering Division

1 Incl
As stated

COMMENTS ON THE ENVIRONMENTAL IMPACT STATEMENT
FOR THE
KIHEI BOAT LAUNCHING FACILITY
AT
KEAWAKAPU, MAUI
30 May 1979

1. The boat ramps at Honolua and Maliko are not included in the overview of existing boat launching facilities on page 4 of the environmental statement.

2. The environmental statement does not provide a list of alternate sites considered and reasons for eliminating them from further consideration.

3. The Puunene wind rose on figure 2 does not appear to be appropriate to the project site based on discussions of wind conditions on page 19.

4. The bathymetry in figure 2 is too limited to permit conclusions relative to the wave climate at the site. We hope that bathymetric data used for wave condition analysis extended further offshore than shown on figure 2.

5. Shoaling in the entrance channel may be more of a problem than indicated on pages 48-49. The information provided in the environmental statement suggests that the direction of littoral drift is toward the north. The sand may be swept pass the rocky point to the south and shoreward by the waves. The sediment samples on table 3 indicate more fine sand in the north corner of the cove than offshore, and Brewer's observations indicate no sand near shore in area 1. Thus, littoral drift does not appear to be onshore and offshore. The maintenance problem may be significant if the rate of transport is high.

6. Excavation of sand prior to placement of a bedding layer under the breakwater or groin is advisable if the sand layer is too thick to anchor the structures to the sea floor. Cost estimates should consider sand excavation, if necessary.

7. The 10-foot breakwater crest width is felt to be insufficient to permit access to the breakwater head by maintenance equipment, especially if sand removal around the breakwater head is anticipated.

8. More detailed drawings for the harbor entrance channel and basin and protective structures are desireable. If dredging involves sand, the sand will take a flat slope which should be considered in the estimate of dredged material quantity.

Incl 1

9. Water quality impacts may not be minimal if circulation and exchange is restricted and nutrient input increased. Class B water quality classification for boat harbors suggests that water quality may be degraded with boating operation.

GEORGE R. ARIYOSHI
GOVERNOR

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

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

IN REPLY REFER TO

July 19, 1979

HAR-ED 399

Mr. Gregory Dean Kaufman
The American Cetacean Society
P.O. Box 998
Kihei, Hawaii 96753

Dear Mr. Kaufman:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

This letter is to acknowledge the concerns expressed in your letter of June 12, 1979 regarding the above subject EIS.

The present launch facility at Kalama Park is extremely limited due to shallow water and wave generated sand bars. None of the larger trailerable boats can use the Kalama Park facility and are now forced to use the Maalaea Harbor facility. The construction of the proposed launch ramp, however, will enable launching closer to the fishing grounds, thus eliminating the need to cross Maalaea Bay.

The humpback whales are protected by law from harassment by human activity. Boaters using the waters frequented by the humpback whales will be made aware of the laws now in effect and the consequences incurred if the laws are broken.

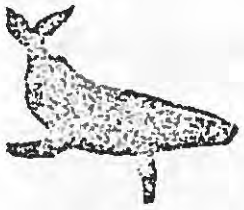
As indicated above, we do not feel that the proposed boat launching ramp at Keawakapu will significantly affect the humpback whales. We will include in the revised EIS paragraphs on the impact of the ramp on the humpback whales.

Thank you for your comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.



THE AMERICAN CETACEAN SOCIETY

MAUI CHAPTER
P. O. Box 998
Kihei, Maui, Hawaii 96753

06/12/79
Nuku'alofa, Tonga

Office of Env. Quality Control
550 Halekauwila St.
Rm 301
Honolulu, Hi, USA 96813

Dear Sirs;

I strongly urge that the building of a new boat launching facility in Kihei, Maui be delayed until the E.I.S. includes the effects on the wintering Humpback whale population.

It is currently being proposed that the Humpback whale may be "being driven out" of Hawaiian waters due to increased water activity. Since Maalaea Bay is a purported nursing and calving ground, increased boater activity may prove detrimental to the whale's biological fitness.

Maui ACS is planning a complex re-evaluation of the Maalaea Bay whale usage, to determine if the whale's use of the area is demonstrating, also to determine if whale-boat interaction is on the increase. This comprehensive program will commence during the '79-80 whale season. Please delay action until our assessment is complete, and can be considered apart of the existing E.I.S..

Sincerely yours,

Gregory Dean Kaufman
PRESIDENT

GEORGE R ARIYOSHI
GOVERNOR

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

RYOKICHI HIGASHIONNA, PH D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O SWANSON
WALLACE AOKI
JAMES R CARRAS
DOUGLAS S SAKAMOTO

IN REPLY REFER TO

July 19, 1979

HAR-ED 400

Mr. Kelley Dobbs
Greenpeace Hawaii
913 Halekauwila Street
Honolulu, Hawaii 96814

Dear Mr. Dobbs:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

We offer the following responses to your comments of June 15, 1979 on the above subject matter:

1. Humpback Whales. Construction activity such as dredging cannot be completed without the addition of particulate matter to the water column. The amount of particulate matter added to the water as a result of the project construction is thought not to be a serious factor with respect to the degradation of the "critical" area (environment) used by the humpback whales. This opinion is based on previous observations of the Maalaea Bay-Kihei nearshore waters during periods of southerly or westerly winds. Such winds are not uncommon during the winter months of December and January and create wave patterns that resuspend large quantities of particulate matter, ultimately resulting in turbid water conditions extending seaward beyond the 30-foot depth contour.

   It is difficult to assess the possible impact of dredging noise on the humpback whales. There does not appear to be any specific information available on the reactions of humpback whales with respect to a noise source. It is known, however, that the whales continue to utilize waters near the coast of the island of Kahoolawe (from information at the public hearing in Lahaina on June 26, 1978). This island has been used by the military as a target complex for many years. Occasionally, ordinances intended for a terrestrial target fall short and detonate underwater. Such underwater detonations, coupled with aircraft noise and terrestrial explosions apparently have not been a sufficiently strong stimulus to permanently remove the whales from the waters surrounding Kahoolawe. Presumably, dredging in shallow water produces a considerably less intense source of noise that would not seriously degrade the adjacent humpback whale environment.

The present launch facility at Kalama Park is extremely limited because of the shallow water and wave generated sand bars. None of the larger trailerable boats can use the Kalama Park facility and are now forced to use the Maalaea Harbor facility. The construction of the proposed facility, however, will enable launching closer to the fishing grounds, thus eliminating the need to cross Maalaea Bay.

It is also improbable that the humpback whales actually winter near any beach (within the 80- to 100-foot depth contour). Except for only one specific observation by Hudnall (1978) that describes the birth of a humpback whale in 10 meters of water in Maalaea Bay just east of McGregor Point, there does not appear to be other records of the humpback whales observed near the shoreline at or within the 30-foot depth contour.

The humpback whales are protected by law from harassment (a term not yet properly defined with respect to the whales) by human activity. Boaters using the waters frequented by the humpback whales will be made aware of the laws now in effect (perhaps a conspicuous sign posted at each launch ramp within the "Four-Island" area) and the consequences incurred if the laws are broken.

It seems inappropriate to defer the construction of the proposed launch ramp at Keawakapu, because of lack of a complete study of the humpback whales. More important is the education of the boating public on peaceful coexistence (nonharassment) with the whales during the part of the year they are present.

2. General Description of the Action's Technical, Economic, Social and Environmental Characteristics. The statistics shown in Table 1 indicate a preference of 24.4 percent of the Maui County boaters for the Kalama Park launching ramp. However, the actual number of launchings made in 1970 was about 18.8 percent of the total number of launchings in Maui County. The 5.6 percent difference was due to deficiencies in the launch ramp which restricted the use of the facility.

The above statistics were formulated when the Kalama Park ramp was operative. At the present, use of this ramp is extremely limited because of shallow water and wave generated sand bars.

The present launch facility at Kalama Park is extremely limited because of shallow water and wave generated sand bars. None of the larger trailerable boats can use the Kalama Park facility and are now forced to use the Maalaea Harbor facility. The construction of the proposed facility, however, will enable launching closer to the fishing grounds, thus eliminating the need to cross Maalaea Bay.

It is also improbable that the humpback whales actually winter near any beach (within the 80- to 100-foot depth contour). Except for only one specific observation by Hudnall (1978) that describes the birth of a humpback whale in 10 meters of water in Maalaea Bay just east of McGregor Point, there does not appear to be other records of the humpback whales observed near the shoreline at or within the 30-foot depth contour.

Undoubtedly, there will be some boat-whale interactions throughout the "Four-Island" area. There does not appear to be sufficient information to indicate that the humpback whales use the immediate vicinity of the proposed launching facility. As mentioned above, the only recorded birth of a humpback whale took place near McGregor Point, some distance away from the Kihei project.

The humpback whales are protected by law from harassment (a term not yet properly defined with respect to the whales) by human activity. Boaters using the waters frequented by the humpback whales will be made aware of the laws now in effect (perhaps a conspicuous sign posted at each launch ramp within the "Four-Island" area) and the consequences incurred if the laws are broken.

2. Mr. John Naughton, Fisheries Biologist at the National Marine Fisheries Service, was informed of the proposed project on June 27, 1979. Mr. Naughton indicated that approval from the National Marine Fisheries Service will be required and considered at the time the application for the U.S. Army Corps of Engineers permit is processed.

   Mr. Naughton had no objections to the proposed boat ramp at this time for the reasons as stated in the response to Comment #1.

3. In planning for the proposed boat ramp at Keawakapu the safety of beach users was considered. Minimal conflicts with beach users at Kamaole Beach Park #3 are anticipated. The proposed project is located approximately 1,400 feet south of this park. Because boating traffic will be generally in the southerly direction, the boats will be traveling away from Kamaole Beach Park #3.

   A petition by Maui boaters contained in the EIS indicates that a number of people want a boat ramp somewhere south of Kalama Park.

   A comprehensive site selection study and a public hearing were conducted prior to selecting the proposed site at Keawakapu. The proposed project site at Keawakapu was selected as being the most viable being closest to the popular boating and fishing areas around Molokini and Kahoolawe islands.

Your comments and our responses will be included in the revised EIS.

Thank you for your comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

MAUI WHALE RESEARCH
INSTITUTE
P.O. Box 822, Kihei, Maui
Hawaii 96753

June 21, 1979

Office of Environmental Quality Control
550 Halekauwila Street, Rm. 301
Honolulu, Hawaii 96813

Gentlemen:

I have examined the Environmental Impact Statement (EIS) for the Kihei Boat Launching Ramp Facility. I find it to be deficient in the following areas:

1. MARINE BIOLOGICAL CHARACTERISTICS (Page 35- 36):

The humpback whales (Megaptera novaeangliae) which use the immediate vicinity of the proposed ramp for approximately four months of the year have not been considered.

The humpback whale is an Endangered Species protected by the U.S. Endangered Species Act and the Marine Mammal Protection Act. Special consideration must be given to these mammals under the Acts. In addition, National Marine Fisheries Service (National Oceanic and Atmospheric Administration, Department of Commerce) has declared the ocean area in which the proposed boat ramp lies to be a calving and breeding grounds for the humpback whale (Federal Register, Vol 44, No. 3, Thursday, January 4, 1979) with special protective "harassment" regulations.

It is my opinion that a boat ramp in the proposed Keawakapu area must not be authorized without consideration of the impact on the humpback whales. I anticipate that a study of the whales' usage of the area will be necessary in order to determine exactly what that usage is and how it will be affected.

2. ORGANIZATIONS AND PERSONS CONSULTED (Page 61):

National MArine Fisheries Service, Maui County Whale Reserve Committee and Maui Whale Research Institute were not consulted prior to drafting the E.I.S. National Marine Fisheries approval should be required on this E.I.S.

3. SOCIAL, CULTURAL AND ECONOMIC IMPACTS (Page 50-51)

The social, cultural and econimic impacts of the proposed ramp have not been adequately assessed. Specifically, the impact on swimming, diving and other water related sports, for which the Kihei coast is famous, have not been adequately assessed. THERE ARE NO PERSONS OR COMMERCIAL INTERESTS IN THE KIHEI AREA WHICH WANT THE PROPOSED RAMP, a brief survey we have conducted indicates. Boaters were not included in the survey, and it is assumed that a number of this small group would want the ramp, in spite of the fact that it is not in a desirable location relative to Kahoolawe. Given a choice, most boaters would want a ramp between Makena and Cape Kinau.

Given the above deficiencies, I strongly urge accepting authorities to require a revised E.I.S. for the Kihei Boat Launching Ramp Facility.

Sincerely,

James Hudnall

James Hudnall, Director
Maui Whale Research Institute

cc: David K. Higa, Chief
Water Transportation Facilities Division
Department of Transportation
State of Hawaii

National Marine Fisheries Service, Washington, D.C. and Honolulu

Marine Mammal Commission, Washington, D.C.

National Marine Sanctuaries Program Office, Washington, D.C.

GEORGE R ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA PH D
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
DOUGLAS S SAKAMOTO
CHARLES O SWANSON

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

July 25, 1979

IN REPLY REFER TO
HAR-ED 427

Dr. Leighton S. King
King Biological Laboratory
3379 Kehala Drive
Kihei, Hawaii 96753

Dear Dr. King:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

Thank you for the favorable comments contained in your letter dated May 28, 1979.

We appreciate your valued input on the subject environmental impact statement. Depending on funding, the boat launching facility will be designed and constructed at the earliest possible date.

Your comments and our responses will be included in the revised EIS.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

KING BIOLOGICAL LABORATORY
SCOTTSDALE MEDICAL RESEARCH FOUNDATION AFFILIATE
MARINE DERIVED CELL GROWTH REGULATORS
3379 KEHALA DR. PHONE 879-4529
KIHEI, MAUI, HAWAII 96753

May 28 1979

Office of Environmental Quality Control
550 Halekawila St.
Room 301
Honolulu, Hawaii 96813

Dear Sirs!

In response to the announced plan of the State Department of Transportation, Water Facilities to construct a boat launching ramp near Kamaole Park No. 3 on Maui, I am pleased to offer the following comments. I am a resident near the proposed site and a boat owner who would use the facilities.

1. The area has been critically short of boat related facilities. The only currently available launching ramp in usable shape is at Maalaea which is badly overloaded with traffic.

2. The proposed site is an excellent choice in many ways. It is state property, accessible to the Maui highway, has no environmental factors that are of value and is situated so that it will serve a large boating population.

3. The boating community has been given enough time by many selfish individuals and deserves an opportunity to secure a few benefits. There should be little or no opposition to this site, although having been through the cancellation of the new Kaloaloa harbor and the subsequent opposition to improving Maalaea it will be surprising if someone doesn't create a few obstacles.

I strongly urge that the Kawaole Park No. 3 launching ramp be approved and that construction be started at the earliest possible date

Sincerely,

Leighton S. King

GEORGE R ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA PH D
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
DOUGLAS S SAKAMOTO
CHARLES O SWANSON

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

IN REPLY REFER TO:
HAR-ED 428

July 25, 1979

Mr. Douglas Meller
Life of the Land
404 Piikoi Street
Honolulu, Hawaii 96814

Dear Mr. Meller:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

Thank you for the encouraging comments contained in your letter dated May 30, 1979.

We are grateful for your valued comments on the subject environmental impact statement.

Your comments and our response will be included in the revised EIS.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

LIFE OF THE LAND
A GROUP FOR ENVIRONMENTAL RESEARCH AND ACTION

May 30, 1979

Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Re: EIS for Kihei Boat Launching Ramp Facility

Gentlemen:

The EIS seems adequate. The project obviously will help to meet the recreational needs of Maui boaters without adversely affecting any other recreational interests. It is good public policy to locate boating facilities away from beaches and surfing sites - - as will be the case with the proposed Kihei boat launching ramp.

Sincerely,

Doug Meller

Douglas Meller
Staff Supervisor

404 PIIKOI STREET HONOLULU HAWAII 96814 TELEPHONE 521-1300

GEORGE R ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH D
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

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

July 25, 1979

IN REPLY REFER TO:
HAR-ED 429

Ms. Betsy B. Haines
3234 S. Kihei Road
Kihei, Hawaii 96753

Dear Ms. Haines:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

Thank you for your letter of June 21, 1979 expressing your concern regarding the proposed Kihei Boat Launching Ramp Facility at Keawakapu, Maui.

In planning the boat ramp facility, consideration was given to possible conflicts between beach users at Kamaole Beach Park #3 and boaters launching from the proposed site at Keawakapu. The proposed project will be located approximately 1,400 feet southerly from Kamaole Beach Park #3. Because boating traffic will generally be in the southerly direction, the boats will be traveling away from Kamaole Beach Park #3. Minimal conflict is anticipated between the boaters and swimmers.

The subject project is not to be built along a swimming beach but along an undeveloped stretch of coastline with a rocky shoreline. Loud noises generated by the boats can be mitigated by restricting the craft speed. Permanent signs will be posted restricting the speed of motor boats within the launching basin.

The humpback whales are protected by law from harassment (a term not yet properly defined with respect to the whales) by human activity. Boaters using the waters frequented by the humpback whales will be made aware of the laws now in effect (perhaps a conspicuous sign posted at the launch ramp) and the consequences incurred if the laws are broken.

We appreciate your concerns.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

June 21, 1979

Dear Sir,

I am writing to express my real concern over your proposal to build a boat ramp at Keawakapu. I was raised at Keawakapu and have seen many changes over the years. The increased number of boats that will be present due to this ramp is a change for the worse.

My first concern is safety. There are many people who swim a mile or so daily as a way of exercise. They swim several yards off shore to avoid the waves. I find it difficult to locate them even as I stand on the beach. Any increase in boating and there is sure to be a tragedy. Many boaters that we have seen spend most of their time looking at what's on the beach rather than who's in the water. In addition to the swimmers, there

are always snorkelers, usually tourists. They often swim quite far out and are very difficult to see.

My second concern is the environment. The noise from these boats is incredible. You always hear them several minutes before you see them. Kealakapa is a quiet place. All you need is one or two boats cruising the shoreline and you have a noise problem.

And while you hear them before you see them, you also smell them after they leave.

Over the years, I have become a whale watcher. There are not nearly as many opportunities to see them as there were when I was child. If they surface, it's way out. I feel the increase boating activity in the area should come up for some blame. I have witnessed at least one incident of a boater harrassing

some whales. This was reported by a neighbor. My father, Dr. Burden, witnessed another incident.

I hope this letter has proved helpful in your deliberations.

sincerely,
Betsy B. Haines
3234 S. Kihei Rd.

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

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

July 25, 1979

IN REPLY REFER TO
HAR-ED 430

Mr. Maurice H. Taylor
Fish and Wildlife Service
U.S. Department of the Interior
P. O. Box 50167
Honolulu, Hawaii 96850

Dear Mr. Taylor:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

We offer the following responses to your comments of June 22, 1979 on the above subject.

1. Pages 7, 13, and 18. Material for the base course can be obtained from HC&D Maui, or from Maui Concrete and Aggregate. Material for the armor stone or boulders for the breakwater and groin can be obtained from Pioneer Mill Co., Ltd., Lahaina, or from Maui Concrete and Aggregate.

2. Page 16. The statistics shown in Table 1 indicate a preference of 24.4 percent of the Maui County boaters for the Kalama Park launching ramp. However, the actual number of launchings made in 1970 was about 18.8 percent of the total number of launchings in Maui County. The 5.6 percent difference was due to deficiencies in the launch ramp, which restricted the use of the facility.

The above statistics were formulated when the Kalama Park ramp was operative. At present, use of this ramp is extremely limited because of shallow water and wave generated sand bars.

3. Page 18. The project site is in an arid region receiving, on the average, less than 15 inches of annual rainfall. The natural hydraulic characteristic of the project site will be minimally altered by the boat ramp facility. The natural sheet flow patterns will generally be preserved rather than concentrating the runoff. Since the shoreline is basically exposed lava rock, no erosion of any significant quantity is anticipated. No realignment is envisioned for the gully to affect the natural water flow pattern. However, minor alterations to the drainageway deemed necessary during the design phase will be mitigated by landscaping or other erosion control measures.

4. Page 35. No tide pools were observed along the rocky beach that forms the eastern boundary of the project water site. A few tide pools were noted on the rocky points to the north and south of this area, but were not investigated since these pools appeared to be outside the construction area.

The attached and slow-moving organisms such as corals, molluscs, and echinoderms are the most likely to be affected during the construction of the boat ramp. Indeed, the loss of some organisms cannot be prevented. For this reason, the major effort is centered on corals and echinoderms. Molluscs were undoubtedly present but were not obvious during the biological reconnaissance of the project site.

The more rapidly moving organisms such as fishes and crustaceans generally can avoid the harmful effects of construction by moving away from the project site. There is no reason to believe that, after completion of the launch ramp and breakwater, the fish and crustacean fauna would not return to preconstruction populations. The habitat space provided by the breakwater may allow for an even more diverse fauna than now exists at the project site.

The attached list of fishes illustrates those species that were observed in a nearly identical environment at Keawakapu, a very short distance south of the project site. A more extensive field study at the project site most assuredly would produce a fish species list similar to the one annotated for Keawakapu.

Grapsid and pagurid crabs, as well as the sea urchin, Colobocentrotus atrata, undoubtedly occur within and/or adjacent to the project site. Since these organisms were not immediately apparent or observed in the project area, they were not discussed in the original marine biological reconnaissance report. The marine biological study in Appendix 3 will be revised to further discuss additional species of marine fauna.

5. Page 36. We concur that Area 5, which has 80 to 100 percent coral coverage on hard substrate, is the approximate location of the proposed breakwater.

6. Page 47. The term "wilderness" will be deleted from the first paragraph.

7. Page 52. Use of the present launch facility at Kalama Park is extremely limited because of shallow water and wave generated sand

bars. None of the larger trailerable boats can use the Kalama Park facility and are now forced to use the Maalaea Harbor facility. The construction of the proposed facility, however, will enable launching closer to the fishing grounds, thus eliminating the need to cross Maalaea Bay.

8. Page 54. Prior to preparing the EIS, a comprehensive site selection study and public hearing were conducted. The study report will be added as an appendix to the revised EIS. The proposed project site at Keawakapu was selected as being the most viable and closest to the popular fishing areas around Molokini and Kahoolawe islands.

9. Page 57. Consideration will be given to curtailment of dredging operations during adverse conditions.

10. Page 57. A water sprinkling system most probably will be used, depending on amount of dust control required. An alternative would be hydromulching.

11. Page 58. The EIS will be revised by changing the phrase "will compensate" to "will mitigate".

Very truly yours,

Ryokichi Higashionna

Enclosure

cc: OEQC
M&E Pacific, Inc.

Species of Fishes Observed South of the
Project Site at Keawakapu, Maui,
in the Nearshore Environment

(Average depth 10 feet)

Family Acanthuridae
- Acanthurus dussumieri
- A. nigrofuscus
- A. sandvicensis
- Ctenochaetus strigosus
- Naso lituratus
- Zebrasoma flavescens
- Z. veliferum

Family Chaetodontidae
- Chaetodon fremblii
- C. lunula
- C. multicinctus
- C. trifasciatus
- C. quadrimaculatus

Family Pomacentridae
- Pomacentrus jenkinsi
- Plectroglyphidodon johnstonianus
- Abudefduf abdominalis
- A. imparipennis
- Chromis leucurus
- Abudefduf sordidus

Family Labridae
- Coris gaimardi
- Halichoeres ornatissimus
- Thalassoma duperreyi

Family Mullidae
- Mulloidichthys samoensis
- Parupeneus chryserydros
- P. multifasciatus

Family Cirrhitidae
- Cirrhitus alternatus
- Paracirrhites arcatus

Family canthigasteridae
- Canthigaster jactator
- C. amboinensis

Family Tetraodontidae
- Arothroni meleagris

Family Ostraciontidae
- Ostracion meleagris

Family Balistidae
- Rhinecanthus rectangulus

Family Zanclidae
- Zanclus canescens

Family Aulostomidae
- Aulostomus chinensis

Family Monacanthidae
- Cantherhines sandwichiensis

United States Department of the Interior

FISH AND WILDLIFE SERVICE
300 ALA MOANA BOULEVARD
P. O. BOX 50167
HONOLULU, HAWAII 96850

IN REPLY REFER TO:
ES
Room 6307

June 22, 1979

Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Re: Environmental Impact Statement for Kihei Boat Launching Ramp Facility, Keawakapu, Maui, Hawaii

Dear Sir:

We have reviewed the referenced Environmental Impact Statement (EIS) for Kihei Boat Launching Ramp Facility at Keawakapu, Maui, and offer the following comments:

Specific Comments

Page 7, Paragraph 4. Indicate source(s) of base course material to be used in paved areas.

Page 13. Indicate source(s) of armor stone for a breakwater and groin.

Page 16, Paragraph 6. The statement in this paragraph that "the existing Kalama Park boat launching ramp is not used due to deficiencies explained previously" does not appear to coincide with the data in Table 1 (Page 5) which indicate that the Kalama facility is the second most popular boat launching site on the island of Maui. This statement should be clarified.

Page 18, Paragraph 4. Considering the distribution of rainfall in the project area, how will paved land areas (access road, parking, washdown, and maneuvering areas) be drained? Storm water runoff from approximately 1.5 acres of impervious asphaltic concrete and washdown wastewater must be collected and discharged without aggravating erosion at the point(s) of discharge. This aspect of project construction must be addressed. Furthermore, the EIS must include a thorough discussion of any plans for realignment or modification of a gully located within the project area. Alterations of a natural drainageway should include landscaping and/or other erosion control measures.

Page 18, Paragraph 5. The source(s) of boulders for a breakwater and groin must be designated and evaluated.

Page 35. Paragraph 5. The "complete list" in Appendix 3 referred to in this section includes no fish nor invertebrates other than corals and echinoderms. A site inspection by a Fish and Wildlife Service biologist revealed that a diverse intertidal/tidepool fauna exists in the project area. Invertebrate fauna not listed in Appendix 3 include grapsid and hermit crabs, anemones, and echinoderms (Colobocentrotus (Podophora) atratus). Fish found in tidepools along the rocky shoreline include Istiblennius zebra, juvenile Acanthurus triostegus sandvicensis, Abudefduf sordidus, A. imparipennis, and several unidentified gobies. The EIS must include a complete list of marine fauna, including but not limited to the above species.

Page 36, Paragraph 4. Area 5, which has 80-100 percent coral coverage on a hard substrate, is the approximate location of the proposed breakwater.

Page 47, Paragraph 1. We question the use of the term "wilderness" as it applies to the project site. This area is actually used as an unauthorized dumping ground.

Page 52, Paragraph 2. The project may have certain unquantifiable indirect impacts on migrating whale populations as a result of increased small boat traffic in Maalaea Bay. This situation should be recognized.

Page 54, Paragraph 1. Alternative sites investigated should be listed along with "critical factors" which precluded their selection.

Page 57, Paragraph 2. If sediment dispersal warrants the use of silt screens but adverse conditions prevent their use, dredging operations should be curtailed pending the resumption of favorable conditions.

Page 57, Paragraph 4. This item states that a water sprinkling system "may" be used to control dust emissions. If such a system is not used, by what means would dust emissions be controlled?

Page 58, Paragraph 2. The habitat which would be provided by a breakwater and groin is not comparable with some of the habitat which would be lost. Therefore, change the phrase "will compensate" to "will mitigate".

We appreciate this opportunity to comment.

Sincerely yours,

Maurice H. Taylor

Maurice H. Taylor
Field Supervisor
Division of Ecological Services

cc: HA, NMFS, HDF&G, EPS, San Francisco

GEORGE R. ARIYOSHI
GOVERNOR

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

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

IN REPLY REFER TO:

August 3, 1979

HAR-ED 476

Mr. Eric Soto, Coordinator
Department of Economic Development
County of Maui
Wailuku, Hawaii 96793

Dear Mr. Soto:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

This is in response to your questions and comments contained in your letter of May 22, 1979.

1. The purpose of the preliminary cost estimate is to indicate how much capital improvement program (CIP) funds will be needed to construct the launching ramp facility. Generally, operation and maintenance costs are not shown.

   Operation and maintenance of the ramp, when built, will become the responsibility of the Maui District Manager, Harbors Division, who will budget for same in his annual oeprations budget. Based on past experience, cost of operating and maintaining the ramp is expected to be nominal.

2. The facility will be used for the launching of trailered boats and is not intended to serve as a small boat harbor. Accordingly, boats would not be moored within the breakwater. Signs will be posted prohibiting boats from mooring in the basin. There should be no problems of pilferage and vandalism if boats are not moored.

3. Floodlights planned at the ramp should sufficiently light up the basin and breakwater for night operations. However, we will monitor the situation after the ramp is in use and will provide additional lights if warranted.

Thank you for your comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC

ELMER F. CRAVALHO
MAYOR

ERIC SOTO
COORDINATOR

COUNTY OF MAUI
DEPARTMENT OF ECONOMIC DEVELOPMENT
WAILUKU, MAUI, HAWAII 96793
TELEPHONE 244-7710

May 22, 1979

Mr. Donald A. Bremner, Chairman
Office of Environmental Quality Control
550 Halekauwila Street Room 301
Honolulu, Hawaii 96813

Dear Mr. Bremner:

The objective of the proposed construction of a boat launching facility at Keawekapu, Maui is consistent with the goals and objectives for Maui County by providing facilities to support boating and fishing leisure opportunities.

Our questions and comments are as follows:

1. Table 2 page 17, preliminary cost estimate does not show the maintenance cost, (a) water, (b) electricity, (c) manpower, and (d) miscellaneous supplies.

2. Policing - we need policing to prevent mooring within the breakwater area and to prevent pilferage and vandalism.

3. For night entrance into the breakwater area, is a range light required?

We hope you find these questions and comments of some help to you. Should you require further discussion on the proposed project, please feel free to contact this office.

Sincerely,

Eric Soto for

ERIC SOTO
Economic Development
Coordinator

cc: Mr. David K. Higa, Chief
Department of Transportation
Water Transportation Facilities Division

GEORGE R. ARIYOSHI
GOVERNOR

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

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

IN REPLY REFER TO

August 3, 1979

HAR-ED 477

Mr. Jim Christman
2960 South Kihei Road
Kihei, Hawaii 96753

Dear Mr. Christman:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

This letter is in response to your comments on the Environmental Impact Statement for the Kihei Boat Launching Ramp Facility at Keawakapu, Maui.

1. Conflict with Swimming and Diving. Minimal conflict with beach users at Kamaole Beach Park No. 3 is anticipated. The proposed project is located approximately 1,400 feet south of Kamaole Beach Park No. 3. Because boating traffic will generally be in the southerly direction, the boats will be traveling away from the park.

2. Whales. It is improbable that the humpback whales actually winter near any beach (within the 80- to 100-foot depth contour). Except for only one specific observation by Hudnall (1978) that describes the birth of a humpback whale in 10 meters of water in Maalaea Bay just east of McGregor Point, there does not appear to be other records of the humpback whales observed near the shoreline at or within the 30-foot depth contour.

   Undoubtedly, there will be some boat-whale interactions throughout the "Four-Island" area. There does not appear to be sufficient information to indicate that the proposed launching facility at Keawakapu will place boating activity at "the very heart of the paths of the whales" and at "apparently one of the centers where whales give birth." As mentioned above, the only recorded birth of a humpback whale took place near McGregor Point, some distance away from boating activities at Keawakapu.

The humpback whales are protected by law from harassment (a term not yet properly defined with respect to the whales) by human activity. Boaters using the waters frequented by the humpback whales will be made aware of the laws now in effect (perhaps a conspicuous sign posted at each launch ramp within the "Four-Island" area) and the consequences incurred if the laws are broken.

3. Pollution. Discharge from boats such as waste oil into coastal waters is prohibited by state and federal regulations. The facility will be used only for launching and recovery of trailered boats and is not intended to serve as a boat harbor. Accordingly, pollution problems associated with moored vessels should not be encountered.

4. Comfort Station. The comfort station will be built with the subject boat launching facility if funds are available. However, if initial funding limitations preclude the immediate building of the comfort station, it will be scheduled for future construction.

5. Site Selection. Prior to preparing the EIS, a comprehensive site selection study and public hearing were conducted. The study report will be added as an appendix to the revised EIS. The proposed project site at Keawakapu was selected as being the most viable and closest to the popular boating areas around Molokini and Kahoolawe islands.

6. Permit for a Buoy. The subject project is not to be built along a swimming beach but along an undeveloped stretch of coastline with a rocky shoreline.

Thank you for your comments.

Very truly yours,

for Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

Mana Kai-Maui

JUN 0 1 27 PM '79

WATER TRANSPORTATION
FACILITIES DIVISION

June 4, 1979

Water Transportation Facilities Division
Department of Transportation
State of Hawaii

Attention: David K. Higa, Chief

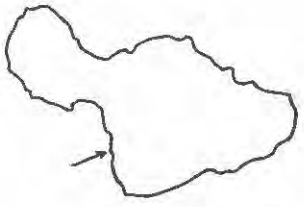
Dear Mr. Higa:

I have recently read the Environmental Impact statement prepared by M & E Pacific, Inc. pertaining to a small boat ramp at Kamaole Beach in Kihei, Maui, Hawaii.

After having reviewed the study I wish to respectfully bring attention to what I believe are certain serious deficiencies in the report. I am further concerned that such a report could be considered (if in fact it has been) acceptable with so many vague positions. The report in my opinion leaves much to be desired in providing a clear picture as to what is considered acceptable or unacceptable.

First of all, why doesn't the report make a clear positive statement about the conflict between boating on the one hand and swimming and diving activities on the other. There are no statistics provided to show the hundreds of swimmers and divers and snorkelers that use the area. It seems to me that if there are no statistics, then some should be developed before any recommendation or report could be prepared. It is my personal belief that this project should in no way be considered for construction by the State of Hawaii unless they have more data on their objectives and the effect on other ocean and beach activities. The safety aspects are a first consideration and not something to be passed over lightly. Statistics should be developed and a full investigation made on this phase before any such environmental impact statement is submitted.

Now if this environmental impact statement dealt only with the environment that would be one thing. But it appears to touch on a little bit of everything. In my opinion it reads more like a real estate MAI appraisal. I readily admit that I do not know what the parameters are to be covered by such a report, but the name Environmental Impact Statement leads one to believe that it is to show what impact it will have on that environment and therefore I will focus on that primarily.



MANA KAI-MAUI, 2960 S. Kihei Road, Kihei, Maui, Hawaii 96753 (808) 879-1561

Why does the report not deal with the fact that the area that the boats and breakwater will be cutting through is the very heart of the paths of the whales. And apparently one of the centers where whales give birth to their young. This seems to be something worth considering. As I understand it, the whales are an endangered species and it would appear to be crime created by man on the environment if it would cause the whales to further diminish because of further interference and interruption of the natural ways and spawning grounds. Where do the whales go to have their young if driven off by all of the boating activity?

The next item is the pollution caused by outboard and inboard motors in a general swimming area. This seems not to have been touched on.

The next thing that seems to be of importance is the fact that there is no recommendation or position regarding the fact that no comfort station is required as a condition even if construction of the boat ramp is allowed. It is preposterous that such an area could be built without a comfort station being an integral part from the beginning. It also makes no explanation from an environmental standpoint as to how such a ramp decreases the environmental protection by adding one more shoreline interruption and change of the natural environment. Why doesn't the report make a recommendation as to whether or not from an environmental standpoint it would be better to concentrate boat facilities in one place and improve such areas such as in Maalaea or Kalama (already existing facilities) rather than interfere with the environment in other places. Which is best. A recommendation and evaluation should be made and not from how good or bad the present facilities are. What has got to be done to protect the present environment is the question.

As to the objective of a boat ramp in the first place (according to the report) it is alleged that the boaters need to be closer to Molokini and Kahoolawe fishing areas. If that is the case then why not put a facility closer and put it in Makena area where the facility would be much closer to those two islands as well as the Big Island of Hawaii.

The environmental impact statement makes no comment or recommendation based on the fact that whatever is put in should be considered on the basis of being there forever and its forever effect. If this were done it seems that a facility located closer to the areas is forever better than one not as close.

This would appear to have the least impact on the environment than something at Kihei in the middle of an already swimming, snorkeling and park area and only 2-plus miles from Kalama. This is no improvement in distances that have to be traveled to and from Molokini and Kahoolawe.

The final consideration should be the impact of gasoline, booze, boats and swimmers and snorkeling. There is no point in kidding anyone--the boaters will have their beer coolers with them, which is OK, but not at the expense of the safety of swimmers and snorkelers in the area.

There is already a position by the Department of Land and Natural Resources on this subject with just one or two boats in which (as I understand it) the Department refused a permit for a buoy on the grounds of the merit of protests from residents along a swimming beach. Is the Department of Land and Natural Resources to be asked to reverse their position? I see the conditions as essentially the same, so on that basis no boating ramp should be installed (See Commissioners Hearings Year '77 & '78 for the record).

I have no objections to a boating ramp. I wonder if all of the things that should be considered have been considered, and I wonder if more time, care and evaluation shouldn't go into this report to make it comprehensive and viable, which it is not at this time. After reconsideration of all of the aspects, then the construction problems, land use problems, zoning problems can be considered at hearings, etc. Right now the environmental study is inadequate and incomplete.

Sincerely,

Jim Christman

Jim Christman
2960 South Kihei Road
Kihei, Maui, Hawaii 96753

/sc

cc: Ryokichi Higashionna, Director
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

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

August 3, 1979

IN REPLY REFER TO:

HAR-ED 478

Honorable Richard L. O'Connell, Director
Office of Environmental Quality Control
State of Hawaii
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

This is in response to your memorandum of June 8, 1979 regarding the above subject EIS.

1. The "Summary" section has been modified to comply with your comments.

2. The estimated water demand for the proposed boat ramp facility, which includes the comfort station, is 6,000 gpd. The sewage flow would be approximately 4,500 gpd.

3. Appropriate paragraphs discussing the impact of the launching ramp on the humpback whales have been added to the revised EIS.

4. The Maalaea boat launching ramp will remain in operation. The Kalama Park boat launching ramp will be utilized only for shallow draft craft. The total number of launchings from the three ramps will be slightly greater than the total from Maalaea and Kalama. When the Kihei launching facility is completed, the number of launchings from Maalaea and Kalama should drop drastically as a large percentage of the boats will be diverted to the new ramp, thereby lessening the impact on the whale habitat.

5. Consideration will be given to minimize construction in the water during the whale's migratory period in Hawaiian waters.

6. We will comply with this requirement and include the required copies in the revised EIS.

Thank you for your comments.

Very truly yours,

Ryokichi Higashionna

cc: M&E Pacific, Inc.

GEORGE R. ARIYOSHI
GOVERNOR

RICHARD L. O'CONNELL
DIRECTOR

TELEPHONE NO.
548-6915

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
OFFICE OF THE GOVERNOR
550 HALEKAUWILA ST.
ROOM 301
HONOLULU, HAWAII 96813

June 8, 1979

MEMORANDUM

TO: Ryokichi Higashionna, Director
Department of Transportation

FROM: Richard L. O'Connell, Director
Office of Environmental Quality Control

SUBJECT: Environmental Impact Statement for Kihei Boat Launching Ramp Facility at Keawakapu, Maui, Hawaii

We have reviewed the subject document and offer the following comments for your consideration:

1. Summary

The EIS states, "No endangered species of flora or fauna were found in the general area." However, it should be recognized that the humpback whales are an endangered species and are often sited off shore in the Kihei area. Therefore, the statement should be modified to reflect humpback whales.

2. Page 10

What are the water demand and sewerage requirements of the proposed project?

3. Page 35

The EIS should discuss the impacts of the boat launching ramp on the humpback whales habitat. Discussion should include the impacts from boats, construction, and dredging. It should also be pointed out that the Maalaea area is being proposed as a marine sanctuary for whales since that area is the prime breeding, calving, and nursing spot.

4. Should the Kihei boat launch ramp be built, will the Kalama and Maalaea boat ramps still be in operation? What will be the total number of launchings from the three ramps? Will the increase of boat launchings affect the whale habitat?

5. Due to the fact that whales migrate annually to Hawaii, consideration must be given to avoiding construction during that period of migration.

6. Page 61

We note on page 61 that government agencies, groups, and individuals were consulted. However, the EIS omits copies of the comments and response as required by EIS Regulation 1:42 m. for the consultation process. We recommend that the revised EIS include the required copies.

We trust that these comments will be helpful to you in preparing the revised EIS.

An attached sheet lists the commenting agencies and/or organizations.

We thank you for the opportunity to comment on the subject EIS and look forward to receiving the revised statement.

Attachment

LIST OF COMMENTING AGENCIES AND/OR ORGANIZATIONS

FEDERAL	
*Department of the Army	May 25, 1979
*Fourteenth Naval District	May 30, 1979
*Department of the Air Force	June 6, 1979
STATE	
Department of Defense	May 21, 1979
*Department of Land and Natural Resources (Historic Sites)	May 29, 1979
*Department of Planning and Economic Development	May 30, 1979
*Department of Accounting and General Services	May 30, 1979
Department of Land & Natural Resources	June 5, 1979
COUNTY OF MAUI	
*Department of Economic Development	May 22, 1979
PRIVATE	
Norma M. Pendleton	May 24, 1979
David E. Kendall	May 24, 1979
Leighton S. King (King Biological Laboratory)	May 28, 1979
Life of the Land	May 30, 1979

*Denotes comment previously forwarded to DOT by reviewer.

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

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

IN REPLY REFER TO:

August 3, 1979

HAR-ED 479

Mr. Philip A. Barrett, President
Kihei Surfside Homeowners Association
Kihei Surfside
2936 South Kihei Road
Kihei, Hawaii 96753

Dear Mr. Barrett:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

We offer the following comments in response to your letter of June 17, 1979 on the above subject:

1. Paragraph 3. Precautions will be taken to mitigate short-term adverse impacts caused by the construction of the subject project, as stated in Section 15: Mitigating Measures Proposed to Minimize Impacts, in the EIS. The information contained in Table 6 on page 39 represents the results of the U.S. Department of Commerce, Bureau of Census, survey conducted in 1970.

   The following is a projection made by the Department of Planning and Economic Development, State of Hawaii, in 1975:

Population (1975)	2,408 (Census Tract 307)
Median Income	$14,908 (Kihei-Kula)
Mean Income	$17,040 (Kihei-Kula)
Housing	$106,000 (average resale value on Maui in July to December 1977)

   Boaters will hardly contribute to traffic congestion on Kihei Road, because they will usually use the ramps on weekends and will travel before dawn and in the late afternoon.

   Traffic disruption during construction will be minimized by scheduling access road construction to Kihei Road during nonpeak traffic hours.

2. Paragraph 4. The 1976 aerial photograph, Figure 9, will be revised to clearly identify the Kihei Surfside and Mana Kai condominiums.

   The subject project will be sited so as not to disturb the existing historic site. It is not planned to move or expand in the southerly direction. Permanent signs will be posted restricting the speed of motor boats within the launching basin.

Thank you for your review and constructive comments.

Very truly yours,

for Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

KIHEI SURFSIDE

BOARD OF DIRECTORS

June 17, 1979

Office of Environmental Control
550 Halekauwila St., Rm. 301
Honolulu, Hi. 96813

Gentlemen:

Your Environmental Impact Statement for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui, May 2, 1979, has been reviewed by our Board of Directors, and was presented to our Annual Homeowners Meeting yesterday. The quorum of 64% of 83 apartment owners unanimously directed the Board to forward our reaction to the EIS to you for your consideration.

In general, we feel the report shows good preparation and covers our concerns for environmental impact. We are pleased that the proposed site as shown in the EIS is on the northern end of undeveloped state land, adjacent to Kamaole Beach Park No. 3 and removed from our waterside homes.

Naturally, we are fearful of the short-term impact of construction, in terms of noise, dust, water and traffic, on our serene environment. We are anxious that every effort be made in construction plans to abate these nuisances. We also urge an additional traffic study on this segment of Kihei Road prior to final contract specification preparation, because the EIS is felt to be inadequate in this regard. Table 6, page 39, for example, is hopelessly out of date. The Kihei-Wailea-Ulupalakua Highway will not have its first phase completed until after the planned boat ramp construction, and all our traffic and Wailea's may experience intolerable delays, unless additional provisions not discussed in the EIS are employed.

Finally, we are deeply disturbed about three aspects of the EIS which can be easily remedied in your final planning stages. First, no mention is made of our condominium. It shows on the 1976 aerieal photograph, Figure 9, as the building closest to the project site. Our tax parcel 3-9-04-28 is listed on Figure 14 under Guenther Schmidt, the original developer. We feel you may be unaware of our year-round residents here. Secondly, the proposed project site should not be moved or expanded southward, further endangering the natural environment or the registered historical site. Third, the EIS proposes a long-term noise level impact mitigating measure on pages S-4 and 58. We believe this measure must be brought out in more detail in project planning. Recent small boat development has in some instances greatly increased the noise level produced. The speed restriction in the basin and channel will not restrict the noise in front of our homes as the boats accelerate toward Kahoolawe, Molokini, or Makena. We suggest permanent signs appealing to the thoughtfulness of users, with perhaps a suggestion of privilege removal for offenders.

2936 SO. KIHEI ROAD • KIHEI, MAUI, HAWAII 96753 • TELEPHONE 879-1488

Thank you for considering our EIS review comments. We hope they will prove useful to you in ensuring minimal environmental impact of this improvement to our community.

Very truly yours,

Philip A. Barrett, President
Kihei Surfside Homeowners Association

cc: Dept. of Transportation
Water Transportation Facilities Division
79 South Nimitz Hwy.
Honolulu, Hi. 96813

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

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

IN REPLY REFER TO:

August 3, 1979

HAR-ED 480

Mr. John Bose II
Maui Group, Hawaii Sierra Club
P. O. Box 416
Haiku, Hawaii 96708

Dear Mr. Bose:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

This letter is in response to your letter of June 21, 1979 regarding the above subject. Our responses are numbered to correspond with your listed comments.

1. We will include appropriate sections pertaining to the humpback whales in the revised EIS.

   Construction activity such as dredging cannot be completed without the addition of particulate matter to the water column. The amount of particulate matter added to the water as a result of the project construction is thought not to be a serious factor with respect to the degradation of the "critical" area (environment) used by the humpback whales. This opinion is based on previous observations of the Maalaea Bay-Kihei nearshore waters during periods of southerly or westerly winds. Such winds are not uncommon during the winter months of December and January and create wave patterns that resuspend large quantities of particulate matter, ultimately resulting in turbid water conditions extending seaward beyond the 30-foot depth contour.

   It is difficult to assess the possible impact of dredging noise on the humpback whales. There does not appear to be any specific information available on the reactions of humpback whales with respect to a noise source. It is known, however, that the whales continue to utilize waters near the coast of the island of Kahoolawe (from information at the public hearing in Lahaina on June 26, 1978). This island has been used by the military as a target complex for many years. Occasionally, ordinances intended

for a terrestrial target fall short and detonate underwater. Such underwater detonations, coupled with aircraft noise and terrestrial explosions apparently have not been a sufficiently strong stimulus to permanently remove the whales from the waters surrounding Kahoolawe. Presumably, dredging in shallow water produces a considerably less intense source of noise that would not seriously degrade the adjacent humpback whale environment.

Use of the present launch facility at Kalama Park is extremely limited because of shallow water and wave generated sand bars. None of the larger trailerable boats can use the Kalama Park facility and are now forced to use the Maalaea Harbor facility. The construction of the proposed facility, however, will enable launching closer to the fishing grounds, thus eliminating the need to cross Maalaea Bay.

It is also improbable that the humpback whales actually winter near any beach (within the 80- to 100-foot depth contour). Except for only one specific observation by Hudnall (1978) that describes the birth of a humpback whale in 10 meters of water in Maalaea Bay just east of McGregor Point, there does not appear to be other records of the humpback whales observed near the shoreline at or within the 30-foot depth contour.

Undoubtedly, there will be some boat-whale interactions throughout the "Four-Island" area and the Penguin Banks area as well. There does not appear to be sufficient information to indicate that the proposed launching facility at Keawakapu will place boating activity at the "breeding, calving, and nursing habitat." As mentioned above, the only recorded birth of a humpback whale took place near McGregor Point, some distance away from boating activities at Keawakapu.

The humpback whales are protected by law from harassment (a term not yet properly defined with respect to the whales) by human activity. Boaters using the waters frequented by the humpback whales will be made aware of the laws now in effect (perhaps a conspicuous sign posted at each launch ramp within the "Four-Island" area) and the consequences incurred if the laws are broken.

It seems inappropriate not to consider the construction of the new launch ramp at Keawakapu, based on the lack of a complete study of the humpback whales. More important is the education of the boating public on peaceful coexistence (nonharassment) with the whales during the part of the year they are present.

2. A comprehensive site selection study and public hearing were conducted prior to selecting the proposed site at Keawakapu. The study report will be added to the revised EIS as an appendix.

3. The fuel shortage has not as yet had any noticeable impact on boating. The State Energy Office has assured local boating organizations that should gas rationing be implemented, boaters will be allocated a fair share of the gas. It should be remembered that boats are not being used only for recreation but as means of gathering food from the sea, not only for the boaters themselves, but for all of the people of Hawaii.

4. The proposed boat ramp facility will be used only for launching and recovery of trailered boats. It is not intended to serve as a boat harbor. Accordingly, pollution problems associated with moored vessels should not be encountered. State and federal regulations prohibit actions of boaters that would pollute the receiving waters.

   The comfort station will be built with the boat launching facility if funds are available. If not, it will be programmed for future construction.

Thank you for your comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

Maui Group, Hawaii Sierra Club
P. O. Box 416
Haiku, Maui, Hawaii 96708
June 21, 1979

Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Comments on Environmental Impact Statement for the Kihei Boat Launching Facility at Keawakapu, Maui.

While this organization supports the construction or improvement of boat launching facilities on the southwest shore, we find this EIS to be seriously deficient for the following reasons:

1. An absolute lack of any mention of impact upon one of the world's most widely recognized endangered mammals – the humpback whale. The waters where the boats will enter and through which they will travel are the breeding, calving and nursing habitat for these whales. The recent designation of this area as a special marine habitat in the Federal Register makes it imperative that a full assessment of impact upon the whales be undertaken in this EIS.

2. Although a more southerly site would be more convenient to fishermen working the Kahoolawe banks and would minimize travel through the whale habitat, Makena and other sites have been summarily dismissed as alternatives without full discussion of their relative merits. A scaled down facility, designed for serious fishermen rather than fuel-wasteful recreational boaters could probably be located at Makena Landing, and a full study of this option is demanded in an adequate EIS.

3. The recreational needs for boat ramps and parking are predicated on a continued abundance of fuel for such purposes. This is an unrealistic view of the future and will prove a waste of resources when fuel becomes short for essential needs, with none to spare for riding around in boats for fun.

4. The study indicates no sewer connection until restrooms are added in a future phase, leaving a question as to disposal of wastewater from the boat washdown area. The draining and washing of bilges, bait wells and fish holding tanks, and the flushing of outboard engines, will certainly involve polutants which must be properly handeled to avoid despoiling both shore beaches and water. Some fuel and oil is invariably involved in such operations, requiring the installation of carefully designed traps to prevent fuel fumes from entering drain lines and to remove oily wastes. The EIS should address this problem.

In summary, we would favor a more southerly, scaled-down facility designed to meet the needs of fishermen, to minimize impact on the whale habitat and to avoid boating activities adjacent to other ocean recreation uses.

John Bose, II
For the Executive Board

cc: Dept. Transportation

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
CHARLES O. SWANSON
WALLACE AOKI
JAMES R. CARRAS
DOUGLAS S. SAKAMOTO

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

IN REPLY REFER TO

August 23, 1979

HAR-ED 1102

Honorable Susumu Ono
Chairman and Member
Board of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Ono:

Subject: EIS for the Kihei Boat Launching Ramp Facility, Keawakapu, Maui

This is in response to your letter of August 3, 1979, Reference No. CPO-682, concerning the subject project.

We offer the following in reply to your comments:

1. A boat launching facility is needed immediately in the Kihei area. Prior to choosing the Keawakapu site, a site selection study was conducted and the Makena landing was considered as a possible location. However the Makena site was rejected due to land limitations and conflicts with future beach users. A boat launching facility may be considered for the La Perouse Bay area in the future if there is a demand for it. The boaters have expressed their acceptance of the proposed Keawakapu site.

2. The appendix of the draft EIS for the subject project contains an archaeological reconnaissance report by the Bishop Museum of the proposed project site addressing various sites including #50-10-1034. The archaeological resources are located on the south side of the drainage gully, whereas the construction will be on the north side.

3. Efforts will be made to minimize the disturbance of the gully located along the southern boundary of the project site. Realignment of this gully is not anticipated.

4. The birds which you mention are not considered endangered species and are fairly common to the region. These fowls are highly mobile and will be able to readily reestablish in other similar habitat nearby. The proposed boat launching facility will not encroach, to any large extent, on the kiawe grove. The major portion of the kiawe grove will remain undisturbed.

5a. The proposed boat launching facility is not intended to be used for any commercial fishing operations. Therefore, a lengthy discussion of commercial fishing was deemed unnecessary. The primary use of the boat launch ramp will be for recreational boaters and sport fishermen.

5b. An expanded list of marine organisms will be added to the revised EIS.

6. The statistics shown in Table 1 indicate a preference of 24.4 percent of the Maui County boaters for the Kalama Park launching ramp. However, the actual number of launchings made in 1970 was about 18.8 percent of the total number of launchings in Maui County. The 5.6 percent difference was due to deficiencies in the launch ramp which restricted the use of the facility.

The above statistics were formulated when the Kalama Park ramp was operative. At the present, use of this ramp is extremely limited because of shallow water and wave generated sand bars. Lack of State land for an adequate backup area negates consideration of Kalama Park as the proposed project site.

Thank you for your comments.

Very truly yours,

Ryokichi Higashionna

cc: OEQC
M&E Pacific, Inc.

DIR 3231

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII

SUSUMU ONO, CHAIRMAN
BOARD OF LAND & NATURAL RESOURCES

EDGAR A. HAMASU
DEPUTY TO THE CHAIRMAN

DIVISIONS:
CONSERVATION AND
RESOURCES ENFORCEMENT
CONVEYANCES
FISH AND GAME
FORESTRY
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT

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

August 3, 1979

REF. NO.: CPO-682

Honorable Ryokichi Higashionna
Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, HI 96813

Dear Sir:

Thank you for allowing us to review the Draft EIS for the Kihei Boat Launching Facility, Keawakapu, Maui, Job H.C. 4053.

We have the following comments to offer:

1. The subject project does not directly involve any State Park projects. Kamaole Beach Park is developed and maintained by the County of Maui. However, since we are developing a major State Park in the Makena area we would be interested in knowing how the subject project relates to the needs and other possible launching facilities south of Kihei.

2. The subject project may impact a known archaeological site on the Hawaii Register of Historic Places (50-10-1034) as well as others that have not yet been located. We therefore recommend that an archaeological reconnaissance be conducted on the project area to ascertain what adverse effects to archaeological resources may be expected by this construction, and what mitigative measures will be taken to either protect the sites or to salvage the archaeological data from the sites prior to impact.

3. The realignment of the gully near the ramp should be designed to carry off the flood waters in accordance with Maui County Standards.

4. The discussions on fauna is totally inadequate in that it merely says "no animals including birds were observed in the project area at the time of the survey". The kiawe-haole koa-lantana-grass vegetative association on the west coast of Maui supports a variety of exotic birds and mammals and the shoreline area is known to be frequented by several species of migratory shorebirds. The elimination of kiawe grasses, etc. will destroy habitat for doves, partridges and songbirds and the launching ramp will, of course, replace natural shoreline. While it is believed that the project will not impact wildlife values severely, the EIS should address the biological aspects in a more responsible manner.

5. The Draft EIS fails to adequately discuss the following aspects within the proposed project site:

   a. The current recreational and/or commercial fishing activities.

   b. The composition of marine organisms, including fish and invertebrates other than corals and echinoderms.

6. In terms of an alternative site, there appears to be a discrepancy in the information provided concerning the Kalama Park site. Of seven launching sites, Kalama Park is ranked second in popularity as a preferred launch site (Table 1, p. 5). The Draft EIS however, states that "the existing Kalama Park Boat Launching Ramp is not used due to deficiencies explained previously(Social Characteristics, p. 16)".

We suggest that further evaluative consideration be given Kalama Park as the proposed project location since the impact of boat launching activities would not be unique to the area.

We hope these comments will help your efforts to improve the document. Should you have any further questions, please feel free to write.

Very truly yours,

SUSUMU ONO, Chairman
Board of Land and Natural Resources

GEORGE R. ARIYOSHI
GOVERNOR

VALENTINE A. SIEFERMANN
MAJOR GENERAL
ADJUTANT GENERAL

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
FORT RUGER, HONOLULU, HAWAII 96816
3949 DIAMOND HEAD ROAD, HONOLULU, HAWAII 96816

HIENG

21 MAY 1979

Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Gentlemen:

KIHEI BOAT LAUNCHING RAMP FACILITY

Thank you for sending us a copy of the "Kihei Board Launching Ramp Facility" Keawakapu, Maui Environmental Impact Statement. We have no comments to offer at this time. The attached document is returned for your use.

Yours truly,

WAYNE R. TOMOYASU
Major, CE, HARNG
Contr & Engr Officer

Enclosure

No response necessary.

DEPARTMENT OF THE ARMY
HEADQUARTERS UNITED STATES ARMY SUPPORT COMMAND, HAWAII
FORT SHAFTER, HAWAII 96858

25 MAY 1979

APZV-EHE-E

Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Gentlemen:

The Environmental Impact Statement (EIS) for the Kihei Boat Launching Ramp Facility at Keawakapu, Maui, Hawaii, has been reviewed and we have no comments to offer at this time. There are no Army installations or activities in the vicinity of the proposed project.

The EIS is returned in accordance with your request.

Sincerely,

Carl P. Rodolph

1 Incl
As stated

CARL P. RODOLPH
Colonel, CE
Director of Engineering and Housing

CF:
Department of Transportation
Water Transportation Facilities Division
79 South Nimitz Highway
Honolulu, Hawaii 96813

No response necessary.

HEADQUARTERS
FOURTEENTH NAVAL DISTRICT
BOX 110
PEARL HARBOR, HAWAII 96860

IN REPLY REFER TO:
002:09F:SH:mm
Ser 1111

30 MAY 1979

Office of Environmental Quality
Control
State of Hawaii
550 Halekauwila Street
Room 301
Honolulu, Hawaii 96813

Gentlemen:

Environmental Impact Statement (EIS)
For The
Kihei Boat Launching Ramp Facility
at
Keawakapu, Maui, Hawaii

The subject EIS, which was received on 21 May 1979, has been reviewed, and the Navy has no comments to offer.

The EIS is being retained for future reference. Thank you for the opportunity to review this EIS.

Sincerely,

J. W. CARL
Lieutenant Commander, CEC, USN
Deputy District Civil Engineer
By direction of the Commandant

Copy to:
Department of Transportation
Water Transportation Facilities
Division
79 South Nimitz Highway
Honolulu, Hawaii 96813

No response necessary.

GEORGE R. ARIYOSHI
GOVERNOR

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. O. BOX 119, HONOLULU, HAWAII 96810

HIDEO MURAKAMI
COMPTROLLER

MIKE N. TOKUNAGA
DEPUTY COMPTROLLER

LETTER NO. (P) 1521.9

MAY 30 1979

Mr. Richard O'Connell
Director
Office of Environmental Quality
Control
550 Halekauwila Street
Honolulu, Hawaii

Dear Mr. O'Connell:

Subject: EIS for Kihei Boat Launching Ramp Facility

Thank you for this opportunity to review the subject document.

We have determined that the subject project will not have any adverse environmental impact on any existing or planned facilities serviced by our department.

Very truly yours,

HIDEO MURAKAMI
State Comptroller

No response necessary.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 15TH AIR BASE WING (PACAF)
HICKAM AIR FORCE BASE, HAWAII 96853

6 JUN 1979

REPLY TO ATTN OF: DEEV (Mr Shiroma, 449-1831)

SUBJECT: EIS for Kihei Boat Launching Ramp Facility

TO: Office of Environmental Quality Control
550 Halekauwila St., Room 301
Honolulu, Hawaii 96813

1. This office has reviewed the subject EIS and has no comment to render relative to the proposed project.

2. We greatly appreciate your cooperative efforts in keeping the Air Force apprised of your project and thank you for the opportunity to review the document.

ROBERT Q. K. CHING
Chief, Engrg & Envmtl Plng Div
Directorate of Civil Engineering

Cy to: Dept of Transportation
Water Transportation
Facilities Division
79 South Nimitz Highway
Honolulu, Hawaii 96813

No response necessary.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P. O. Box 50004, Honolulu, HI 96850

June 8, 1979

Mr. Richard L. O'Connell
Director, Office of Environmental
Quality Control
550 Halekauwila St., Rm. 301
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject: EIS for the Kihei Boat Launching Ramp Facility
Keawakapu, Maui, Hawaii (Tax Map Key: 3-9-04)

We have reviewed the environmental impact statement and have no comments to offer.

Thank you for the opportunity to review this document.

Sincerely,

Donald A. [illegible], acting
Jack P. Kanalz
State Conservationist

Enclosure: EIS

cc:
Department of Transportation
Water Transportation Facilities Division
79 South Nimitz Highway
Honolulu, Hawaii 96813

No response necessary.

UNIVERSITY OF HAWAII

Water Resources Research Center

Office of the Director

26 July 1979

Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

SUBJECT: Review of EIS for Kihei Boat Launching Ramp Facility

Dear Sir:

Thank you for sending the subject EIS for our review and comment. We do not have any comment to offer on this well prepared EIS.

Sincerely,

Yu-Si Fok, Professor
WRRC Faculty EIS Review Coordinator

YSF:jm

cc: Dept. of Transportation, Hawaii State
Dr. Moncur
Mr. Murabayashi
Dr. Peterson
Dr. Yamauchi

No Response Necessary

A P P E N D I C E S

1. Petition from Maui Boat Owners

2. Flora and Fauna Survey of Proposed Kihei Boat Launching Ramp, Keawakapu, Muai, by Beatrice H. Krauss

3. Marine Biological Reconnaissance of Proposed Kihei Boat Launching Ramp, Keawakapu, Maui, by Ralph L. Bowers, Ph.D.

4. Hawaii Register of Historic Places - Archaeological Cover Sheet

   Archaeological Reconnaissance Survey of Proposed Kihei Boat Launching Ramp, Keawakapu, Maui by Aki Sinoto

5. Site Selection Report for a Small Boat Launching Ramp, Kihei Area, Maui

A P P E N D I X 1

Petition From Maui Boat Owners

June 10, 1977

E. ALVEY WRIGHT, DIRECTOR OF TRANSPORTATION
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII
869 PUNCHBOWL
HONOLULU, HAWAII

DEAR SIR:

The enclosed petition is in response to your remarks at the recent Kihei Community Club meeting. The majority of the names were obtained during the past two weekends at Maalaea Boat Harbor.

In talking with the signers of the petition, some of the repeated comments received are as follows:

" Breakwater is needed, otherwise sand will fill the ramp area in a short time."

" We need a small "pleasure" boat harbor on the Kihei coast line. Turn Maalaea Harbor over to commercial boats (fishing and charter)."

" The only two logical harbor areas are Cove Park and Makena Landing."

" Any ramp or harbor should be south of Kalama Park."

" Energy crisis: Since most of the fishing is done around Kahoolawe, a great amount of gasoline and oil would be saved by outboarders if a launching area and harbor were located south of Kalama Park. Boats at present have to contend with strong headwinds on their return to Maalaea Harbor. Winds are not as strong south of Kalama Park."

" We know of friends who would buy a boat if only there was a place to launch and moor it.

Given more time, we are certain we could obtain many more names in support of this effort. We thought it desireable to let you know the community's feeling in this matter as soon as possible, hopefully before your department's priorities are determined for the forthcoming year.

Sincerely,

David F De Vine

DAVID F. DE VINE

1573 N. ALANIU PLACE

KIHEI, HAWAII 96753

TO: E. ALVEY WRIGHT, DIRECTOR OF TRANSPORTATION
DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII

WE, THE UNDERSIGNED, RESIDENTS OF MAUI REQUEST YOUR ATTENTION IN THE IMPROVEMENT OF THE BOAT LAUNCHING RAMP AT COVE PARK, KIHEI, MAUI.

NAMELY, THAT THE AREA BE DREDGED, BREAKWATER CONSTRUCTED, FINGERPIER EXTENDED AND POWER LINE ACROSS RAMP BE REMOVED.

	NAME	ADDRESS
1	Edward Thomson	1566 Alanui Pl Kihei
2	Charles A. Chastain	2152 Iliili Rd Kihei
3	Marty Shaw	1821 Halama St Kihei
4	Eleanor Arigoski	1691 Halama St., Kihei
5	Robert Shimizu	111 Beach rd Kahi
6	Patricia Shaw	P.O. Box 1284, Paia
7	Carl Haug	1574 Alanui Kihei
8	Mary Haug	1574 Alanui Pl., Kihei
9	Richard Kinoshita	R.R. 1 Box 705 HAIKU, MAUI
10	Lydia Kahuhu	Box 802 Kihei, Ha.
11	Charles Cabebe	263 Ani St. Kahului, Maui
12	Spidring Bulda	671 Mokuu Akau Kah
13	Leonard Rabago	P.O Box 173 Hoolimaile
14	Robert Correa	14 MAKOMAKO STR.
15	Conrad Blenkinsop	381 Nahenahe Pl.
16	Stanley K. Omura	P.O. Box 230 Puunene
17	David Ventura Jr.	P.O. Box 301, KIHEI, MAUI
18	Stephen C. Diehl	18 C-A Fleming Rd. CAHAIA
19	Peter Allpass	P.O. Bx 335 KIHEI, MAU
20	Anthony Ventura	1993 Apt 508 Kihei Rd.
21	Donald F. Eder	215 NANILOA DR. Wailuku
22	Herbert Eby	357 Kenolio Rd Kihei
23	Paul McNaughall	357 Box RR1, Kula, Maui
24	Ron Kitagawa	394 Onku St. Kahului, Maui
25	Wally Young	509 P.O Dr. Apt 104 WAILU
26	Henry K. Bal	631 Kaikoo Rd Wailuku
27	Abel Abreu	RR1 Box 595 Makawao
28	Jose Abreu	P.O. BOX 667 Kihei
29	Enid Abreu	
30	[illegible]	181-5 Mokulele Hwy Kihei

PAGE 1.

1	Bob Kuroyama	56 Noho Pl. Pukalani
2	Samuel K. Oh Jr.	546 Aoki Cl Kula
3	Donald Nakagawa	2287 Mokuhau Rd. Wailuku
4	Bruce Hattmann	310 Lanai Dr
5	Lowell Ishimine	353 Puuneue Ave.
6	Dawn Freitas	95 Kane St.
7	Paul Blanch	149 Keola Pl. Kihei
8	Lorus Kawasaki	RR1 Box 353 Wailuku
9	Takeshi Tabuya	Box 1175 Wailuku Maui
10	James L. Leech	P.O. Box 399 Kihei 96
11	Dana Fenn	1819 C North St. Wai
12	Eric Bagge	1930 B North St. Wk
13	Arlene Campos	340 Kaiola Pl. Kihei
14	Frank W. Kalbach	2141 Iliili Rd Kihei.
15	Jaturun Compos	340 Kaiola Pl - Kihei
16	Jane M. Medlock	157C Halama St. Kihei
17	Nick Kalbach	P.O. Box 469 Kahului
18	Jack Beard	PO Box 351 Kihei
19	Carol Beard	1520 Halama, Kihei.
20	Wendy B. Hastings	1576 Halama St. Kihei
21	Murray J. Meekhof	1606 Halama St. Kihei
22	Arlene Meekhof	1993 S. Kihei Rd. Kihei
23	Renata Mattson	1514 Halama S. K. Ga
24	Jeri Williams	400. Mcalaea Bea
25	Ben A. Kotter	R.R. 1 400 Wailuku HI 967
26	Joe Pereira	RR 1 C 150 Wailuku
27	Gene Pereira	RR#1 150-C Wailuku
28		Po Box 519 Wailuku
29		228 A Hana St Kahului
30		94 Ai ST. MAKAWAO

1 Helen DeVeer · 1873 N. Alamu Pl. Kihei
2 Tadashi Tachibana PO Box 648 Haiku, Maui
3 Earl Yamamura P.O. Box 594 Haiku, Hi
4 N. Tavares "
5 L. Botelho P.O Box 314 Makawao Maui 96
6 Lawrence Botelho Jr. 2160 Vineyard St. #204 Wailu
7 [illegible] 182 Ikea Pl. Pukalani, Hi 96788.
8 Charles Kalfourny 448 N. Waiko Kahului
9 Carl Sichl 40 Welakahao Kihei
10 Howard C. Wheaton 3300 Wailea Alanui Kihei
11 Marjorie Wheaton " " " "
12 Philip C. Henry P.O. Box 67, Kihei
13 Don Abrams P.O. Box 1085 Paia
14 Paula Fortescue Gen Del. Kihei
15 [illegible] 111 Kumana Rd Kihei
16 Pam Helgadiack 212 Kupuna Kihei
17 Rich Kelley 97 Kupuna Kihei
18 Theresa Castillo P.O. Box 624 Kihei
19 Sandra Akina PO. Box 933. Kihei
20 [illegible]
21 [illegible] 686 Kahili Way Kahului
22 John C. Baldwin 305 Dairy Rd Kahului
23 George M. Trask P.O. Box 145 - Kula
24 Tom Simons RR1 Box 537-C Makawao
25 James A. McInnis 440 A. Pine Cir. Kih. 96
26 Richard M. Tavares R.R. 1 Box 761 Pukalani
27 [illegible] 2430 S. Kihei Rd Kihei
28 Paul K. Williams PO Box 1151 Lahaina Maui
29 Norman Morioka 720 Onohea St. Kahl.
30 [illegible] 731 Mokai Ave. Pl, Hi

1	Hale L. Lee	P.O. Box 904 - Kihei,
2	Stanley Iwasaki	P.O. Box 18 Wailuku
3	Denise Chun	104 Aiai, Kahului
4	J. Fichner	P.O. Box 419 Kihei
5	Tom Akaka	Box xx Kihei
6	Ricardo M. Torres	PO Box 297 Kihei
7	Bob Hoehn	P.O. Box 538 Kihei
8	Pat Mayer.	515 Mikioi Place, Kihe
9	David K. Nichols	41 Kalelani Pl. Kihei
10	Wayne M. Watanabe	542 Onehee St. Kahului
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PAGE 4

TO: E. ALVEY WRIGHT, DIRECTOR OF TRANSPORTATION
DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII

WE, THE UNDERSIGNED, RESIDENTS OF MAUI REQUEST YOUR ATTENTION IN THE IMPROVEMENT OF THE BOAT LAUNCHING RAMP AT COVE PARK, KIHEI, MAUI.

NAMELY, THAT THE AREA BE DREDGED, BREAKWATER CONSTRUCTED, FINGERPIER EXTENDED AND POWER LINE ACROSS RAMP BE REMOVED.

	NAME	ADDRESS
1	[illegible] Paxton	412 Kinaole Cir. Kihei
2	[illegible]	212 Ohukai Rd.
3	Alex C. Wong	52-B Waimaihaihai Kihei
4	Cathy Paxton	412 Kinaole Circle, Kihei
5	[illegible]	580 Pio Dine Wailuku
6	A. Espiritu	RR1 Box 127, Wailuku
7	[illegible]	162 Kuhula Pl. Kihei
8	ALE/WA Ocean Originals (Wayne Jones)	P.O. Box 922 Kihei
9	Virgy Avera	POBox 864 Kihei
10	[illegible] C. [illegible]	MAUI MEADOWS -
11	William K. Carlson	RR1 Box 127, Wailuku
12	[illegible]	RR-1 Box 27 Waiakoa
13	[illegible]	2152 Iliili Rd. Kihei
14	[illegible] D Elsi	P.O. Box 853 Kihei
15	[illegible]	1493 Kihei Rd., Kihei
16	[illegible]	563 Kaleo Pl, Kihei
17	[illegible]	P.O. Box 10x KIHEI
18	[illegible]	PO BOX 386 KIHEI
19	[illegible]	P.O. Box 156 Kihei
20	[illegible]	" " "
21	[illegible]	2619 S. Kihei Rd. Kihei.
22	Margo J. Stanley	2172 Iliili Rd. Kihei
23	[illegible]	854 Kumulani Dr. Kihei
24	[illegible]	RR1 Box 527 KULA
25	[illegible]	P.O. Box 274 Kihei
26	[illegible]	Keiki, Maui
27	Jacque Gomez	2059 Vineyard St.
28	MARIEEN PATOLE	Kihei Sands P.O.B. 7
29	[illegible]	PO Box 597 - Kihei
30	[illegible]	36 [illegible]

TO: E. ALVEY WRIGHT, DIRECTOR OF TRANSPORTATION
DEPARTMENT OF TRANSPORTATION, STATE OF HAWAII

WE, THE UNDERSIGNED, RESIDENTS OF MAUI REQUEST YOUR ATTENTION IN THE IMPROVEMENT OF THE BOAT LAUNCHING RAMP AT COVE PARK, KIHEI, MAUI. NAMELY, THAT THE AREA BE DREDGED, BREAKWATER CONSTRUCTED, FINGERPIER EXTENDED AND POWER LINE ACROSS RAMP BE REMOVED.

	NAME	ADDRESS
1	Ben Alexander	1794 Halama Ki
2	Peale M. Gibson	1794 Halama, Kihei
3	Mrs. Peggy L. Nelson	RR#1 Box 549 Makaw
4	W. W. Stinson	Box 238 Kihei, Ha
5	Bruce Inihe	1805 Halama Street Ki
6	Vernon Moreira	Apt 210 Kalama
7	Wilbur T. Bart	71 WAIMAHAIHAI ST KHE
8	Ger K. Watkins	71 Waimahaihai St. Kihei
9	Peggy L. Nelson	RR#1 Box 549 Makawao H
10	Moira Paul	1794 Halama Kihei H
11	[illegible]	[illegible]
12	Larry R. Corell	357 Auhana Rd. Kihei
13	David Randall	2173 HAUKAI PL KIHEI
14	David Mayes	305 AUHANA RD Kihe
15	Lauren Mayes	305 Auhana Rd, Kih
16	John F. Moriarty	232 Kanani Rd.
17	Larry Turner	#612 Menehune Shores, Kih
18	Michele Corell	3136 So. Kihei Rd.
19	Marcella Corell	3136 So. Kihei Rd.
20	Allen L. Corell	3136 S. KIHEI RD.
21	Edwin E. Britton	2653 So. Kihei Rd.
22	B. Lynn Brauten	2653 S. Kihei Road, Ki
23		
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A P P E N D I X 2

Flora and Fauna Survey of Proposed Kihei Boat Launching Ramp, Keawakapu, Maui

by

Beatrice H. Krauss

FLORA AND FAUNA SURVEY OF PROPOSED KIHEI BOAT LAUNCHING RAMP, KEAWAKAPU, MAUI

by

Beatrice H. Krauss
Research Affiliate
Lyon Arboretum
University of Hawaii

Prepared for

M&E Pacific, Inc.
Honolulu, Hawaii

June 4, 1978

FLORA

The site consists of an area of about two acres, lying between the ocean and the Kihei county road. On the ocean side, the site includes a narrow jutting land mass ("peninsula") and part of another more extensive land mass, both elevated above the ocean. These two land masses slope toward a rocky cove (the site of the boat ramp itself) which lies between them. The land then slopes very gently upwards toward the road at the northern boundary, with a shallow ravine at the southern boundary.

Along the ocean front, where the "soil" is very sandy, there is sparse vegetation of such species characteristic of strand (shore- or oceanside) flora. In the case of this particular site, these species consist of the low-growing or postrate plants: Australian salt bush (see attached list of all species found on the site for scientific names); and two endemic (native) species, pa'ū-o-hi'i-aha and 'aheahea. Although these last two species are native plants, they are not rare or endangered. These three species occur in scattered clumps.

In the region back of this strand area, the site is distinctly divided almost in half, i.e., along a line from the ocean to the county road, in respect to its vegetation. In the half toward the northern boundary of the site, the dominant, almost exclusive species consists of grasses, making for a low vegetation cover. The grasses found are:

buffalo grass, primarily, with Hilo and panicum in lesser quantities. Scattered, as single specimens or in small clumps, there are such weeds as false mallow, 'uhaloa, very stunted koa-haole, kiawe, and ma'o. These are all common plants and several are considered noxious (obnoxious).

In the southern half of the site, the dominant species is kiawe. These are of fairly good size and form rather an "open" grove, with an undergrowth or -cover of lantana; both the common and hairy morning glory; koa-haole; false mallows; ma'o; grasses (the same listed for the northern half of the site); and 'ilima. Although the last is indigenous (native), it is not rare or endangered. As already noted, kiawe is the dominant species in this southern half, where it forms a partially dense but mostly an "open" grove; the other species listed for this area, grow individually or in small clumps.

To summarize there are few species of plants found on the site as a whole. None are of economic value except kiawe; this is, however, the dominant tree species in the entire Kihei area of which the site under consideration is a minute portion. All other plants in the site, except the endemic and indigenous species noted above, are considered weeds, some of which are considered noxious. The three endemic/indigenous species are noteworthy but not rare or endangered. It is suggested that if it is practical that seeds of pa'ū-o-hi'i-'aha and 'aheahea be collected and scattered along the ocean front sandy strand zone outside the site area.

FAUNA

No land animals of any kind (including birds) were observed in the site area at the time of this survey.

LIST OF PLANTS FOUND IN AREA OF PROPOSED BOAT RAMP
AND INVOLVED SURROUNDINGS
KEAWAKAPU, MAUI

Common Name	Hawaiian Name	Scientific Name	Status #
Grasses			
Buffalo grass	---	Cenchrus ciliaris	Weed
Hilo grass or sour paspalum	Manu'u-malihini or mau'u-Hilo	Paspalum conjugatum	Weed
Panicum	---	Panicum sp.	Weed
Vines and Postrate Plants			
---	Pa'ū-o-hi'i-'aka	Jacquemontia sandwicensis var. sandwicensis	Endemic
---	'Aheahea or 'ahea	Chenopodium sp.	Endemic
Australian salt bush or semi-bacchate salt bush	---	Atriplex semibaccata	---
Common morning glory	Koali-'awania or koali-awa	Ipomoea congesta	Weed
Hairy morning glory or hairy merremia	Koali-kua-hulu-hulu	Merremia aegyptia	Weed
Low Plants and Shrubs			
False mallow	Hauuoi	Malvastrum coromandelianum	Weed
Hairy abutilon	Ma'o	Abutilon grandifolium	Weed
Lei ilima	'Ilima	Sida fallax var. fallax	Indigenous
Lantana	Lukana	Lantana camara	Noxious
Waltheria	'Uhaloa or hi'aloa	Waltheria americana	Indigenous
High Shrubs and Trees			
Algaroba or mesquite	Kiawe	Prosopsis pallida f. pallida	Economic value
Haole-koa or false koa or wild tamarind	Koa-haole or ekoa	Leucaena leucocephala	Noxious

Whether noxious (obnoxious), endemic or indigenous (native), etc. "Weed" usually designates an escaped cultivate which has gone "wild"; it may or may not be obnoxious.

A P P E N D I X 3

Marine Biological Reconnaissance of Proposed Kihei Boat Launching Ramp, Keawakapu, Maui

by

Ralph L. Bowers, Ph.D.

MARINE BIOLOGICAL RECONNAISSANCE OF PROPOSED KIHEI BOAT LAUNCHING RAMP, KEAWAKAPU, MAUI

by

Ralph Bowers, Ph.D.

Prepared for

M&E Pacific, Inc.
Honolulu, Hawaii

December 1978

On December 10, 1978, a brief marine biological reconnaissance of the proposed boat launch ramp construction site was carried out. Qualitative observations of the physical and biological characteristics of the substratum were recorded on underwater slates with the aid of skin diving equipment. The substratum, from the shoreline to approximately 300 feet seaward, was observed and sketched on the underwater slates in the form of a simple "biotic map" that characterizes the different substratum areas within the project site.

In general, the project site is characterized by rocky points to the North and South and a rocky beach to the East. The two rocky points help to enclose the area as the points extend seaward some 100 to 150 feet. A breakwater is to be constructed from the southern rocky point proceeding northerly and terminating so as to allow small boat passage between the breakwater terminal point and the northern rocky point.

Casual observation of the proposed construction site from shore gives the impression of a relatively poor marine biological environment. The turbid and shallow waters do not seem appropriate for healthy coral growth. Underwater observations do not bear this out, however. During the short observational period a total of 16 species of corals and 8 species of echinoderms (Table 1) were noted. Additionally, a common species of coral, Pocillopora meandrina, was present in shallow water (4 to 6 feet) and the individual colonies often

TABLE 1. A listing of the corals and echinoderms observed at the proposed boat ramp construction site.

	Corals	Echinoderms
1.	*Pocillopora meandrina*	*Echinometra mathaei*
2.	*Pocillopora damicornis*	*Echinometra oblonga*
3.	*Pocillopora eydouxi*	*Echinothrix calamaris*
4.	*Porites lobata*	*Echinothrix diadema*
5.	*Porites compressa*	*Heterocentrotus mammillatus*
6.	*Porites (Synaraea) irregularis*	*Echinostrephus aciculatum*
7.	*Leptastrea purpurea*	*Tripnesustes gratilla*
8.	*Leptastrea bottae*	*Holothuria atra*
9.	*Montipora patula*	
10.	*Montipora flabellata*	
11.	*Montipora verrucosa*	
12.	*Pavona varians*	
13.	*Pavona duerdeni*	
14.	*Psammocora (Stephanaria) stellata*	
15.	*Palythea tuberculosa* (soft coral)	
16.	*Anthelia edmondsoni* (soft coral)	

exceeded 30 inches in greatest diameter. By way of comparison, colonies of the same species of coral measured at Sandy Beach, Oahu, generally do not exceed 15 to 20 inches in greatest diameter.

It is important to note that coverage of substratum by live corals is very variable and swimming only a few feet in any direction may lead from nearly 100% live coral coverage to an area of very sparse or no coral coverage. The major factor that influences coral cover appears to be sand movement generated by waves impinging on the shallow substratum. In areas where sand is prevalent, the majority of live corals were found on coral or basalt "islands" that protruded some distance above the sand.

The "Biotic Map" (Figure 1) roughly illustrates the various substratum areas within the project site that appeared to be biologically and/or physically different.

Area 1 consists primarily of basalt cobbles and small boulders (up to 3 feet in diameter) with very little sand present. Occasionally robust colonies (diameters greater than 20 inches) of Pocillopora meandrina were encountered on some of the boulders. The percent coverage of the substratum by live corals was visually estimated at 5 - 20%. The lower percent coverages were observed near shore in the turbid water.

A thin surface layer of fresh water was noted at several locations in area 1 but does not appear to have any detrimental impacts on the coral growth.

Area 2 is generally sandy with some patches of flat hard coral substratum. Live corals covered approximately 5 - 20% of the hard substratum. Some of the coral colonies in this area show damage from sand abrasion.

Area 3 is characterized by "islands" of basalt or dead coral that protrude

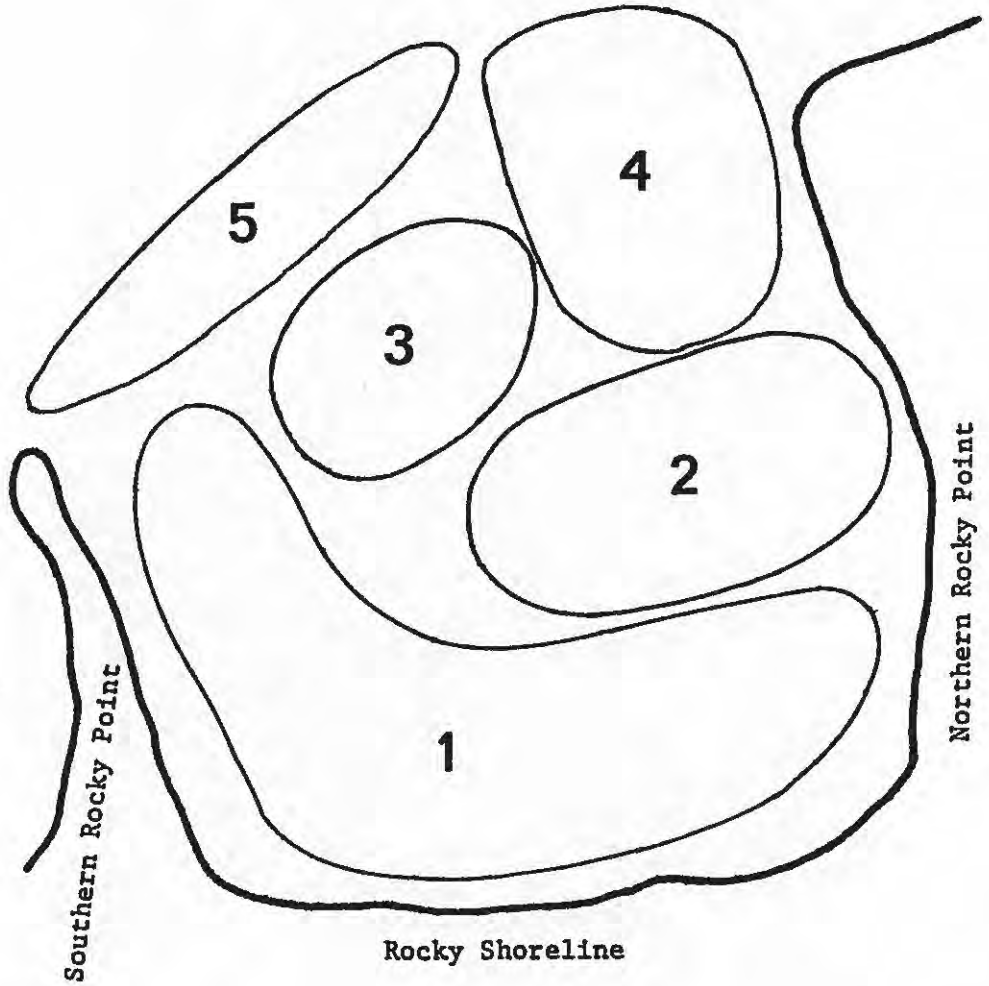


FIGURE 1

A "BIOTIC MAP" THAT ROUGHLY ILLUSTRATES THE VARIOUS SUBSTRATUM CHARACTERISTICS WITHIN THE PROPOSED PROJECT CONSTRUCTION SITE

2 - 4 feet up from a sandy substratum and support good coral growth.

Area 4 is similar to area 3 with the exception that the basalt or dead coral "islands" are separated by greater distances of sandy substratum.

Area 5 contains much irregular hard substratum that supports a rich growth of coral. Live corals were visually estimated to cover 80 - 100% of the hard substratum.

Seaward of area 5, the substratum is dominated by sand with a few, widely spaced "islands" of basalt or dead coral with live corals attached.

It is the author's opinion that the construction and subsequent usage of the proposed boat ramp will not create any long-term negative impacts in the adjacent marine environment. Some of the existing corals will be covered by construction of the breakwater. This loss will be offset by additional habitat space provided by the breakwater. It can be reasonably expected that corals, with the associated fauna and flora, will colonize the breakwater revetment and ultimately reproduce the ecosystem that was covered.

Some live corals will have to be removed to create a channel for boat traffic. The amount of coral to be removed is relatively small and seems justifiable with respect to boating safety.

Marine Biological Observation
Species of Fishes Observed South of the
Project Site at Keawakapu, Maui,
in the Nearshore Environment

The attached list of fishes illustrates those species that were observed in a nearly identical environment at Keawakapu, a very short distance south of the project site. A more extensive field study at the project site most assuredly would produce a fish species list similar to the one annotated for Keawakapu.

Grapsid and pagurid crabs, as well as the sea urchin, Colobocentrotus atrata, undoubtedly occur within and/or adjacent to the project site. Since these organisms were not immediately apparent or observed in the project area, they were not discussed in the original marine biological reconnaissance report.

(Average depth 10 feet)

Family Acanthuridae
- Acanthurus dussumieri
- A. nigrofuscus
- A. sandvicensis
- Ctenochaetus strigosus
- Naso lituratus
- Zebrasoma flavescens
- Z. veliferum

Family Chaetodontidae
- Chaetodon fremblii
- C. lunula
- C. multicinctus
- C. trifasciatus
- C. quadrimaculatus

Family Pomacentridae
- Pomacentrus jenkinsi
- Plectroglyphidodon johnstonianus
- Abudefduf abdominalis
- A. imparipennis
- Chromis leucurus
- Abudefduf sordidus

Family Labridae
- Coris gaimardi
- Halichoeres ornatissimus
- Thalassoma duperreyi

Family Mullidae
- Mulloidichthys samoensis
- Parupeneus chryserydros
- P. multifasciatus

Family Cirrhitidae
- Cirrhitus alternatus
- Paracirrhites arcatus

Family Canthigasteridae
- Canthigaster jactator
- C. amboinensis

Family Tetraodontidae
- Arothroni meleagris

Family Ostraciontidae
- Ostracion meleagris

Family Balistidae
- Rhinecanthus rectangulus

Family Zanclidae
- Zanclus canescens

Family Aulostomidae
- Aulostomus chinensis

Family Monacanthidae
- Cantherhines sandwichiensis

A P P E N D I X 4

Hawaii Register of Historic Places - Cover Sheet

Archaeological Reconnaissance Survey of Proposed
Kihei Boat Launching Ramp, Keawakapu, Maui

by

Aki Sinoto

ARCHAEOLOGICAL COVER SHEET

HC. 4053

HAWAII REGISTER OF HISTORIC PLACES

50 - 50 - 10 - 1034
1 2 3 4 5 6 7 8 9
SITE IDENTIFICATION NUMBER

2 1 PRE-1778
10 11 12 13 14 15 16 17 18 19 20
CARD No. DATE/PERIOD

PRESENT LAND USES: BEACH RESERVE

SITE NAME/TYPE: KAMAOLE HOUSE SITE
DISTRICT: WAILUKU
AREA: 254 square METERS
CATEGORY: ___Single Feature _X_Complex ___Places
OWNERSHIP: _X_Public ___Private
PHOTOGRAPHS: _X_Yes ___No (Temp/Tech) 2,745¢
KNOWN PRESSURES ON SITE: NONE

DESTRUCTION: _X_No Known Future Danger ___Possible Future Danger ___Future Danger Certain ___Present Danger ___Presently Being Destroyed
STATUS: ___Occupied _X_Unoccupied CONDITION: ___Excellent ___Good ___Fair _X_Deteriorat
INTEGRITY: _X_Unaltered, Orig Loc ___Unaltered, Moved ___Altered, Orig Loc ___Altered, Moved
ACCESSIBILITY: _X_Unrestricted ___Restricted ___Inaccessible

LEGENDARY MATERIALS KNOWN: ___Yes _X_No WRITTEN HISTORICAL MATERIALS: ___Yes _X_No
IMPORTANCE AS EXAMPLE OF TYPE SITE: ___Good _X_Moderate ___Poor
SUSCEPTABILITY TO INTERPRETATION: ___Good ___Moderate _X_Poor
RESEARCH POTENTIAL: ___Good _X_Moderate ___Poor
LOCAL ATTITUDES ABOUT SITE: ___Valuable ___Moderate Value ___Low Value ___Ambivalent _X_Unknow
BRIEF DESCRIPTION (Columns 21-80): ENCLOSURE (POSSIBLY A HOUSE), 2 MODERN GRAVES, AND A WALL

STAFF EVALUATION: ___High Value ___Valuable _X_Reserve ___Marginal
SUGGESTED THEMES: HAWAIIAN SITE, HABITATION

DATE SUBMITTED TO REVIEW BOARD: _____

REVIEWER'S RECORD AND EVALUATION

NAME: H. Mark DATE REVIEWED 1 17 79
CATEGORY: ___High Value ___Valuable ___Reserve ✓Marginal
SIGNIFICANCE: ___National ___State ✓Local
RECOMMENDED DISPOSITION: ___Nominate National Register ___State Register ✓Staff Files
RECOMMENDED THEMES: _____

REVIEWER'S COMMENTS: _____

REVIEW BOARD EVALUATION RECORD

DATE REVIEWED: _____ RECORDER: _____
OFFICIAL CATEGORY: ___High Value ___Valuable ___Reserve ___Marginal
OFFICIAL SIGNIFICANCE: ___National ___State ___Local
OFFICIAL THEMES: _____

OFFICIAL DISPOSITION: ___National Register Nomination ___State Register ___Staff Files
REVIEW BOARD COMMENTS: _____

VOTING RECORD: Daws_____ Hormann_____ Jackson_____ Kikuchi_____
Lind_____ Mark_____ Nagata_____ Paglinawan_____
Roche_____ Tuggle_____

ARCHAEOLOGICAL COVER SHEET

HAWAII REGISTER OF HISTORIC PLACES

50 - 50 - 10 - 1034
1 2 3 4 5 6 7 8 9
SITE IDENTIFICATION NUMBER

2 1 2OTHCENT
10 11 12 13 14 15 16 17 18 19 20
CARD No. DATE/PERIOD

PRESENT LAND USES: _____

SITE NAME/TYPE: _____
DISTRICT: _____
AREA: _____ square _____
CATEGORY: ___Single Feature ___Complex ___Places
OWNERSHIP: ___Public ___Private
PHOTOGRAPHS: ___Yes ___No (Temp/Tech)
KNOWN PRESSURES ON SITE: _____

DESTRUCTION: ___No Known Future Danger ___Possible Future Danger ___Future Danger Certain ___Present Danger ___Presently Being Destroyed
STATUS: ___Occupied ___Unoccupied CONDITION: ___Excellent ___Good ___Fair ___Deteriora
INTEGRITY: ___Unaltered, Orig Loc ___Unaltered, Moved ___Altered, Orig Loc ___Altered, Moved
ACCESSIBILITY: ___Unrestricted ___Restricted ___Inaccessible

LEGENDARY MATERIALS KNOWN: ___Yes ___No WRITTEN HISTORICAL MATERIALS: ___Yes ___No
IMPORTANCE AS EXAMPLE OF TYPE SITE: ___Good ___Moderate ___Poor
SUSCEPTABILITY TO INTERPRETATION: ___Good ___Moderate ___Poor
RESEARCH POTENTIAL: ___Good ___Moderate ___Poor
LOCAL ATTITUDES ABOUT SITE: ___Valuable ___Moderate Value ___Low Value ___Ambivalent ___Unkno
BRIEF DESCRIPTION (Columns 21-80): _____

STAFF EVALUATION: ___High Value ___Valuable ___Reserve ___Marginal
SUGGESTED THEMES: _____

DATE SUBMITTED TO REVIEW BOARD: _____

REVIEWER'S RECORD AND EVALUATION

NAME: _____ DATE REVIEWED _____
CATEGORY: ___High Value ___Valuable ___Reserve ___Marginal
SIGNIFICANCE: ___National ___State ___Local
RECOMMENDED DISPOSITION: ___Nominate National Register ___State Register ___Staff Files
RECOMMENDED THEMES: _____

REVIEWER'S COMMENTS: _____

REVIEW BOARD EVALUATION RECORD

DATE REVIEWED: _____ RECORDER: _____
OFFICIAL CATEGORY: ___High Value ___Valuable ___Reserve ___Marginal
OFFICIAL SIGNIFICANCE: ___National ___State ___Local
OFFICIAL THEMES: _____

OFFICIAL DISPOSITION: ___National Register Nomination ___State Register ___Staff Files
REVIEW BOARD COMMENTS: _____

VOTING RECORD: Daws_____ Hormann_____ Jackson_____ Kikuchi_____
Lind_____ Mark_____ Nagata_____ Paglinawan_____
Roche_____ Tuggle_____

DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE PARKS DIVISION

HAWAII REGISTER OF HISTORIC PLACES

ARCHAEOLOGICAL FORMS

FORM 01 12: FIELD SURVEY

4 CORNER

SINGLE POINT COORDINATE LOCATION: N. / . E.

DISTRICT: 5 1 | LOC: 5 | FACTOR: 4 | AREA SQUARE: 2 5 4 . 3 | CATEGORY: | SIG 1: 0 1 | SIG 2: 3 6

DESTR: | LAND CLASS: 7 7 | PHOTOS: 5 | INITIALS: R D C | INSTITUTION: 0 5 | MONTH: 0 6 | YEAR: 7 2

HISTORICAL OR COMMON NAME: K A M A O L E _ H O U S E _ S I T E

FEATURE CLASSIFICATION CODE | COND | INTG | PERIOD

CLASS: Nominated / Accepted — NRHP

Category A / B / C — HRHP

Keypunched

FORM 11 12: FOUR CORNER LOCATION

NW CORNER: N. / . E.

NE CORNER: N. / . E.

SE CORNER: N. / . E.

SW CORNER: N. / . E.

QUAD | NORTH GRID COORDINATE | EAST GRID COORDINATE

50 - 50 - 10 - 1034

ISLAND | QUAD | IDENTIFICATION NO.

FEATURE MAP FORM

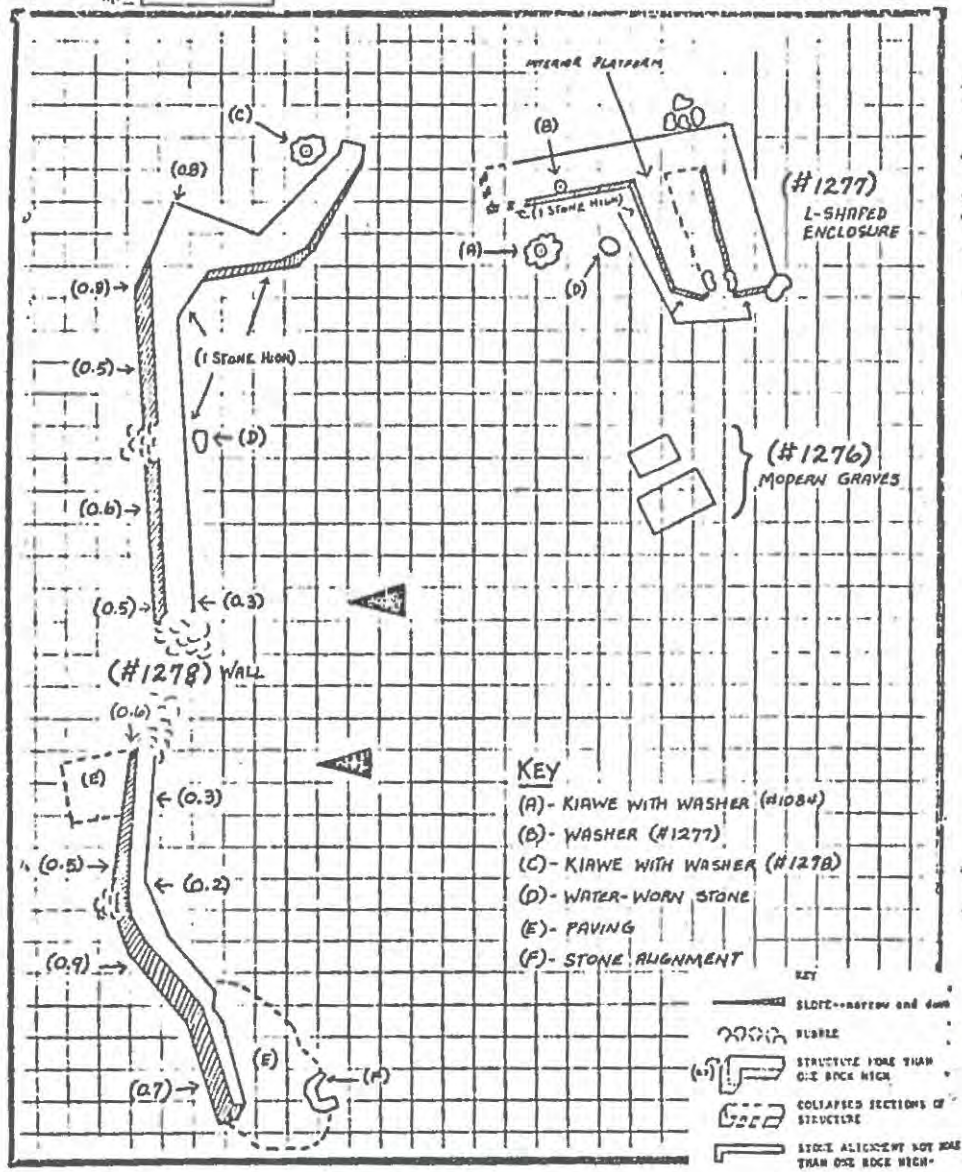
50-50-10-1034

NORTH ARROW — TRUE NORTH

0 1 2 3 4

MAPPING TECHNIQUE: 03

(1) (2)



(1) (3)

COORDINATES: 20°42'37" N 156°26'56" W

FEATURE DESCRIPTION FORM

50 - 50 - 10 - 1014
ISLAND QUAD IDENTIFICATION NO.

VERBAL DESCRIPTION MUST INCLUDE: bearings and sources used to locate feature; size; shape; construction technique; materials used; terrain features; condition; surface artifacts; midden. SIGNIFICANCE STATEMENT MUST INCLUDE: research potential; interpretive potential; unusual or important characteristics; probable function; importance as representative of its class; recommendation of Register status.

DESCRIPTION

This site is called Kamaole House site. It is a complex consisting of an L-shaped enclosure, a wall, and 2 modern graves. We found the site by driving toward Makena from Kihei on Highway 31. About 25 m past Kamaole Park #3, we turned right onto a dirt road, and followed it along the beach. At the first junction, we veered right heading seaward. The road ends at a clearing by the shore, surrounded by kiawe trees. We parked next to an abandoned bus and walked about 75 m north to the site, aproximately 51 m from the water's edge. The L-shaped enclosure, the wall, and 2 modern graves are discussed as separate features on the Supplementary Feature Description forms.

The terrain on which the site was situated has a slight downward slope seaward. Kiawe, which covered the site area, was the only plant form seen.

There was a large amount of surface midden seen in the site area, including coral, old discolored glass, water-worn stones, 'ōpihi,* pipipi,* conus, and cowrie. There were no surface artifacts seen.

SIGNIFICANCE: The research potential of this site is moderate due to the poor condition of the features. However, this site can still be excavated and may yield information pertaining to diet, tool assemblages, etc.

Interpretive potential of the site is low, again due to the deteriorated condition of the structures. The L-shaped enclosure and the wall should receive marginal status; however, because they are within such a short distance from the graves, the site is recommended reserve. This site is not a good representative of a small habitation complex. ?

*ʻōpihi: (Helicioniscus)
*pipipi: (Nerita picea)

Robert D Connaway III -5- 8/17/73

FORM 21: FEATURE COMPLEX

50 - 50 - 10 - 1034 2
ISLAND QUAD IDENTIFICATION NO. PAGE

1	2	7	6	5	4	9	3	2	2	0	1	1	3	2
13 14	15 16	17		18 19	20	21 22	23 24	25	26 27		28	29	30	31 32
1	2	7	7	6	1	0	0		1	9	4	1	4	1
33 34	35	36 37		38 39	40	41 42	43 44	45	46 47		48	49	50	51 52
1	7	7	9	5	2	0	0		1	9	4	1	4	1
53 54	55	56 57		58 59	60	61 62	63 64	65	66 67		68	69	70	71 72
FEATURE NUMBER				FEATURE CLASS CODE					KEY		COND	INTG	PERIOD	QUANT

FORM 21: FEATURE COMPLEX

50 - - -
ISLAND QUAD IDENTIFICATION NO. PAGE

13 14	15 16	17	18 19	20	21 22	23 24	25	26 27		28	29	30	31 32
33 34	35	36 37	38 39	40	41 42	43 44	45	46 47		48	49	50	51 52
53 54	55	56 57	58 59	60	61 62	63 64	65	66 67		68	69	70	71 72
FEATURE NUMBER			FEATURE CLASS CODE					KEY		COND	INTG	PERIOD	QUANT

FORM 21: FEATURE COMPLEX

50 - - -
ISLAND QUAD IDENTIFICATION NO. PAGE

13 14	15 16	17	18 19	20	21 22	23 24	25	26 27		28	29	30	31 32
33 34	35	36 37	38 39	40	41 42	43 44	45	46 47		48	49	50	51 52
53 54	55	56 57	58 59	60	61 62	63 64	65	66 67		68	69	70	71 72
FEATURE NUMBER			FEATURE CLASS CODE					KEY		COND	INTG	PERIOD	QUANT

SUPPLEMENTARY FEATURE DESCRIPTION FORM

50 - 50 (ISL.) - 10 (QUAD) - 1014 (I. D. NO.) - 1276 (FEATURE NUMBER)

VERBAL DESCRIPTION MUST INCLUDE PERTINENT DATA ON: bearings and sources used to locate feature; terrain and vegetation; size; shape; construction technique; materials used; condition; surface artifacts or midden visible.
SIGNIFICANCE STATEMENT MUST INCLUDE: unusual or important characteristics; site's importance as a representative of its class; recommendations for register category.

This feature includes 2 modern graves, both rectangular in shape. They are situated 8 m south of the enclosure (1277). The smaller one measures 0.8 x 1.3 m with a 0.3 m height, while the larger one measures 1.2 m x 2.6 m with a 0.4 m height. The graves were constructed of cement and, according to an inscription at the west end of the large grave, were made on August 28, 1948. Another inscription at the east end of the large grave reads, "Lydith Olsen, born Aug. 30, 1888, died Dec. 30, 1917."

SIGNED:

DATE:

SUPPLEMENTARY FEATURE DESCRIPTION FORM

50 - 50 (ISL.) - 10 (QUAD) - 1014 (I. D. NO.) - 1277 (FEATURE NUMBER)

VERBAL DESCRIPTION MUST INCLUDE PERTINENT DATA ON: bearings and sources used to locate feature; terrain and vegetation; size; shape; construction technique; materials used; condition; surface artifacts or midden visible.
SIGNIFICANCE STATEMENT MUST INCLUDE: unusual or important characteristics; site's importance as a representative of its class; recommendations for register category.

This feature is an L-shaped enclosure with an interior platform. The size of the enclosure is 9 m x 6 m. The interior platform, which measures 4 m x 2 m, is situated at the E end, having the E wall of the L-shape as part of the platform. This enclosure may be a house site.

The walls, which are constructed of basalt, are fairly deteriorated. They are a single rock layer high and are core-filled. The average width of the walls is 1.0 m. Midden material, including nioioi, opihi, coral, cowrie, and water-worn stones were found on the surface in the enclosure. No surface artifacts were seen.

SIGNED: Robert D Connelly III

DATE: 7/6/73

SUPPLEMENTARY FEATURE DESCRIPTION FORM

50 - 50 (ISL.) - 10 (QUAD) - 1034 (I. D. NO.) - 1278 (FEATURE NUMBER)

VERBAL DESCRIPTION MUST INCLUDE PERTINENT DATA ON: bearings and sources used to locate feature; terrain and vegetation; size; shape; construction technique; materials used; condition; surface artifacts or midden visible.
SIGNIFICANCE STATEMENT MUST INCLUDE: unusual or important characteristics; site's importance as a representative of its class; recommendations for register category.

This feature is a wall measuring 32 m in length. Its north end is 4 m west of the enclosure (1277). It is a multiple-stacked stone wall constructed of basalt rocks. The wall is fairly deteriorated and has many fallen areas.* It was difficult to make measurements that reflected the true height and width of the walls; however, we recorded a range in height from 0.5 m to 0.8 m and an average width of 0.9 m. Cowrie shells and water-worn stones were found on the walls. The area uphill from the wall appears to be platformed.

*It has a large break in it due to natural deterioration.

SIGNED: DATE:

FORM 31: PROPERTY OWNERSHIP

50 - 50 (ISLAND) - 10 (QUAD) - 1034 (IDENTIFICATION NO.)

USE 1	USE 2	STAT	OWNR	ATTD	ACCS	zone	sect	plat	parcel
26	27	2	1	1	1	3	9	014	1

TAX MAP KEY

PROPERTY OWNER: HISTATE BEACH RES

STREET ADDRESS:

TOWN OR CITY: WAILUKU HI 96793

STATE ZIP CODE

FORM 41: BACKGROUND DATA

50 - 50 (ISLAND) - 10 (QUAD) - 1034 (IDENTIFICATION NO.)

AHUPUA'A: KAHALAE

PREVIOUS SURVEYS: BPBM SUPV E/ FIELFS

PREVIOUS SITE DESIGNATION(S): MA - 13 1 3 - 4

LAST NAME OF SURVEYOR:

INSTITUTION YEAR FILED AT

FORM 51

50 - 50 - 10 - 1034

1 1
10 11
CARD NO

SITE NAME/TYPE (Columns 12-43) KAMAOLE HOUSE SITE

DISTRICT (Columns 44-55) WAILUKU

AHUPUA'A (Columns 56-80) KAMAOLE

PREVIOUS SITE NUMBER(S) Ma B13-4 NUMBER SYSTEM BISHOP MUSEUM

BACKGROUND DATA

Source	Volume	Page(s)

CONDITION DATA

Extent of Destruction EXTENSIVE

Agent of Destruction NATURAL FORCES

Destruction Reported by _____ (Source/Page)

Date Reported _____

PROCESSING CHECKLIST	DATE	INITIALS		DATE	INITIALS
Literature xeroxed			Form 31 complete	7/1	LM-P
Field Map plot	6/73	LAKU	Form 41 complete	7/1	LM-P
Final Mylar plot			Supplementals complete	6-73	PJC
Final Ink sketch(es)	6-73	JTH	Checked	6-73	[illegible]
Statement drafted	6/73	PJC	To typist	7/1	LM-P
Cover sheet complete	6/73	RDC	Typing complete	7/1	LM-P
Form 01/11 complete	7/1	DK	Typing proofed	7/1	LM-P
Form 21 complete	7/1	LM-P	To xeroxing		
			Xeroxing complete		

DISPOSITION

3 1
10 11
CARD NO

0 / 3 6 / 16 17 / 18 19 / 20 21 / 22 23 / 24 25 26 27 28 19 29 30
12 13 / 14 15
THEME (S) TO REVIEW BOARD

31 32 33 34 35 19 36 37
REVIEWED

STATE CATEGORY 38 SIG LEVEL 39 NAT'L REG NOM 40

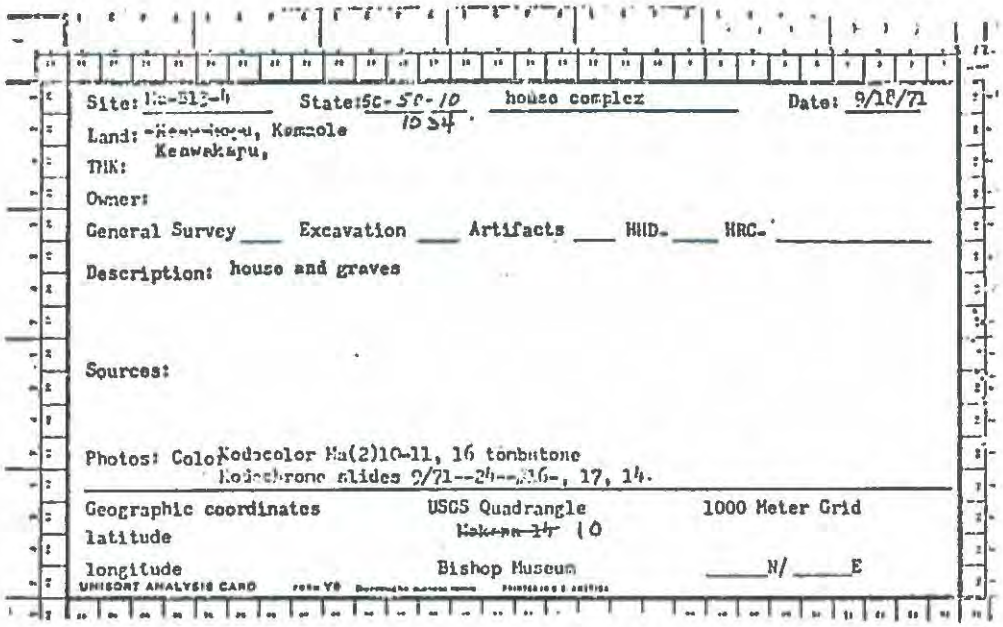
41 42 43 44 45 19 46 47
TO TRUSTEES

48 49 50 51 52 19 53 54
TO STATE LIAISON OFFICER

55 56 57 58 59 19 60 61
TO NATIONAL REGISTER

62 63 64 65 66 19 67 68
NATIONAL REGISTER ACTION

NRHP DISPOSITION: 69 OK 70 NO 71 RET



Site: Ma-B13-4 State: 50-50-10-1034 house complex Date: 9/28/71

Land: Kaonoulu, Kamaole
Kaonakapu,

TMK:

Owner:

General Survey ___ Excavation ___ Artifacts ___ MHD- ___ HRC- ___

Description: house and graves

Sources:

Photos: Color Kodacolor Ma(2)10-11, 16 tonbutone
Kodachrome slides 9/71--24--26-, 17, 14.

Geographic coordinates latitude
longitude

USGS Quadrangle Makena 1st 10

1000 Meter Grid ____N/____E

Bishop Museum

UNISORT ANALYSIS CARD

ARCHAEOLOGICAL RECONNAISSANCE SURVEY OF PROPOSED KIHEI BOAT LAUNCHING RAMP, KEAWAKAPU, MAUI

by

Aki Sinoto

Department of Anthropology
Bernice P. Bishop Museum

Prepared for

M & E Pacific, Inc.
Honolulu, Hawai'i

October 1978

INTRODUCTION

This report presents the results of a one-day archaeological reconnaissance survey of the proposed Kīhei Boat Launching Ramp in Keawakapu, Kama'ole, Maui Island. The survey was conducted on October 12, 1978, by Mr. Aki Sinoto and Ms. Toni Han of the Department of Anthropology, Bernice P. Bishop Museum, at the request of M & E Pacific, Inc., Environmental Engineers.

A walk-through, reconnaissance-level survey permits an in-the-field assessment of existing cultural resources, and facilitates the formulation of recommendations to mitigate the effects of potentially destructive activities, such as proposed development, within specified parcels of land.

DEFINITION OF SURVEY AREA

The survey area is a 5-acre parcel of land (TMK 3-9-04-1, -61, and -87) on the southwestern coast of Maui. The area is in Kama'ole *ahupua'a*, Wailuku District.

The survey area is defined on the north by Kama'ole Beach Park, on the south by the Mana-Kai Maui Condominiums, on the east by Pi'ilani Highway, and on the west by the high-water mark along the shoreline (Fig. 1). At present, aside from frequent temporary use of the shoreline areas by tourists, swimmers, fishermen, and campers, only a small grave site of historic origin is still in use. No other form of permanent usage is evident, although fencing and corrals indicate ranching activities until the recent past.

ENVIRONMENT

The topography of the project area consists of a generally sandy, coastal slope on a volcanic substrate, with intermittent areas of rocks, lava outcroppings, and dunes interspersed with loose aeolian and alluvial soil fill. One small stream-cut gully traverses the central portion of the survey area from east to west. The shoreline areas are rocky with no beaches (Fig. 2). Approximately 50% of the project area has been extensively bulldozed and cleared in the past. Vegetation consists of *kiawe (Prosopis pallida)* as the dominant cover, with *'ilima (Sida fallax)*, *koa haole (Leucaena glauca)*, and klu *(Acacia farnesiana)*. Underbrush consists of dry grasses, weeds, and shrubs. The only fauna encountered were common exotic species of birds. The skeletal remains of cattle were also observed.

METHODOLOGY

The fieldwork involved traversing the area on foot to locate sites, recording brief written descriptions and map locations, and photographing selected sites. Site locations were plotted on a topographic map of the area provided by M&E Pacific (scale: 1" = 90'). All measurements were taken in the metric system and orientations were based on magnetic north. Photographs were taken with black and white film on a 35-mm format. For the two large sites, Ma-Cl-1 and Ma-Cl-2, protective perimeters were marked with pink and blue flagging tape to restrict entry during construction activities. The other sites were marked with pink flagging tape. Numbers were assigned to the sites according to the Bishop Museum Hawaiian Archaeology Series system: 50 = State of Hawai'i; Ma = Maui Island; C = Wailuku District; 1 = *ahupua'a* of Kama'ole. The terminal number is the individual site number in order of recordation within the *ahupua'a*.

SURVEY RESULTS

Six previously unrecorded archaeological surface features were located within the project boundaries. No portable artifacts or exposed subsurface features were encountered. Site locations are shown on Figure 1, and a site listing with brief descriptions follows.

Site 50-Ma-C1-7 (Fig. 3)

A triangular cairn of two to three courses of stacked rock, 3 meters long, 2 meters wide, and .75 meter high, is located on a flat depressed area along the south edge of the gully. A circular feature, located 1.5 meters northwest of the cairn, is 1 meter in diameter with a single alignment of stones and suggests a fireplace.

Site 50-Ma-C1-6 (Fig. 4)

A deteriorated wall runs down the spine of a small ridge along the south edge of the gully. The eastern end of the wall is heavily disturbed and undefinable. At the end of the ridge, a small circular enclosure is incorporated into the western end of the wall, c. 5 meters north of Site C1-7. The enclosure measures 2 meters in diameter and .80 meter in height, and is constructed of large (50 to 75 cm) rocks stacked two to three courses high.

Site 50-Ma-C1-5 (Fig. 5)

Located 12 meters south of Site C1-7 is a low, U-shaped structure on a knoll at the south edge of the gully. This structure is constructed of two to three courses of stacked rock and measures 2.5 by 1.7 meters and .35 meter high. Its opening is oriented to the southeast and the unpaved interior floor exhibits minimal deposits.

Site 50-Ma-C1-4

At the end of a small ridge along the south edge of the gully, 15 meters west of Site C1-5, is a curved wall segment 3.5 meters in total length. It measures .40 meter wide and .80 meter high (two to three courses of stacked rock), and curves into a wide V at the midpoint. This is probably a remnant of a larger wall.

Site 50-Ma-C1-3 (Fig. 6)

This square enclosure is located on a sandy knoll, 33 meters southwest of Site C1-4. The walls are double-faced and rubble-filled and measure 3.6 by 3.6

meters and .80 meter high (four to five courses of rock) with a .75-meter-wide opening at the central portion of the south wall. The interior floor is unpaved with sand/soil fill with a moderate deposit, and a *kiawe* tree is presently growing. This feature is in good condition.

Site 50-Ma-C1-2 (Fig. 7)

A large U-shaped structure with the opening oriented to the south is located east of the grave site in Site C1-1, across the dirt road. This site is very deteriorated and in poor condition. The western wall, 9 meters long, .70 meter wide, and 1 meter high where intact, is constructed of rocks stacked five to six courses high. The northern wall measures 9.5 meters long, .7 meter wide, and 1 meter high. The eastern wall appears to be very deteriorated; it measures .70 meter wide, .60 meter high, and 6 meters long, but probably extended farther south before disturbance. The interior floor has a moderate deposit that exhibits more humus and organic content than other areas that are predominantly sand. Due to the large size of this site, a four-corner perimeter was established (see Fig. 1, Detail A). The corners were recorded and marked with pink and blue flagging tape.

Site 50-Ma-C1-1 (Figs. 8 & 9)

This site was included in the Statewide Inventory of Historic Places in 1973, and was designated reserve/marginal status. For a complete description refer to Hawaii Register of Historic Places inventory form for Site 50-50-10-1034. A protective perimeter was also established for this site and the corners were marked with pink and blue flagging tape (see Fig. 1, Detail 15).

DISCUSSION AND RECOMMENDATIONS

The results of the reconnaissance showed a paucity of surface features and other cultural elements within the project area. This is probably partly due to extensive previous disturbance in the area from bulldozing, clearing, and ranching activities.

Several areas along this coast have been previously studied and exhibit similar trends near the shoreline areas (see references). In many areas,

prehistoric sites have been continuously modified or disturbed by subsequent historic and modern activities. At this preliminary stage of investigation, the origins of the newly recorded sites cannot be determined.

The majority of the sites located are considered marginal in significance and merit no further work at this time since no construction activities are planned in the sited areas. If more development is planned in the future, Sites 50-Ma-C1-1, -2, and -4 through -7 can be salvaged and Site 50-Ma-C1-3 should be preserved.

Since unexposed subsurface features are a possibility, if any archaeological features or artifacts are encountered during construction, a qualified archaeologist should be contacted to monitor the work.

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Sinoto, Aki.
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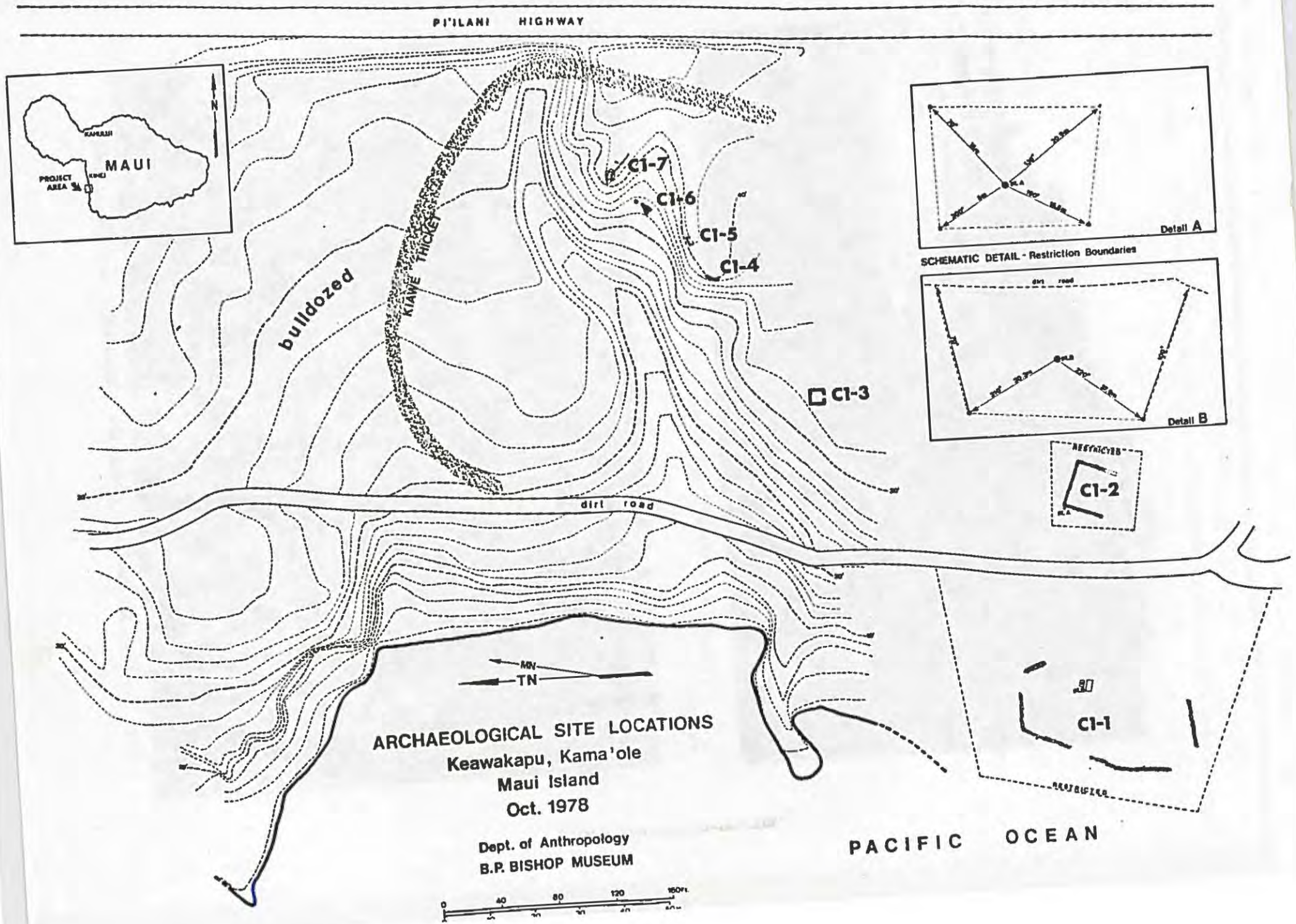
PI'ILANI HIGHWAY
MAUI
KAHULUI
KIHEI
PROJECT AREA
N
bulldozed
KIAWE THICKET
C1-7
C1-6
C1-5
C1-4
C1-3
C1-2
C1-1
dirt road
Detail A
SCHEMATIC DETAIL - Restriction Boundaries
Detail B
MN
TN
ARCHAEOLOGICAL SITE LOCATIONS
Keawakapu, Kama'ole
Maui Island
Oct. 1978
Dept. of Anthropology
B.P. BISHOP MUSEUM
PACIFIC OCEAN

Fig. 2. PROJECT AREA SHORELINE, KIHEI, KEAWAKAPU, MAUI. Overview from northwest.

Fig. 3. SITE 50-Ma-C1-7, CAIRN AND FIREPLACE. View from north.

Fig. 4. ENCLOSURE AT SITE 50-Ma-Cl-6. View from east.

Fig. 5. SITE 50-Ma-C1-5, U-SHAPED STRUCTURE. View from east.

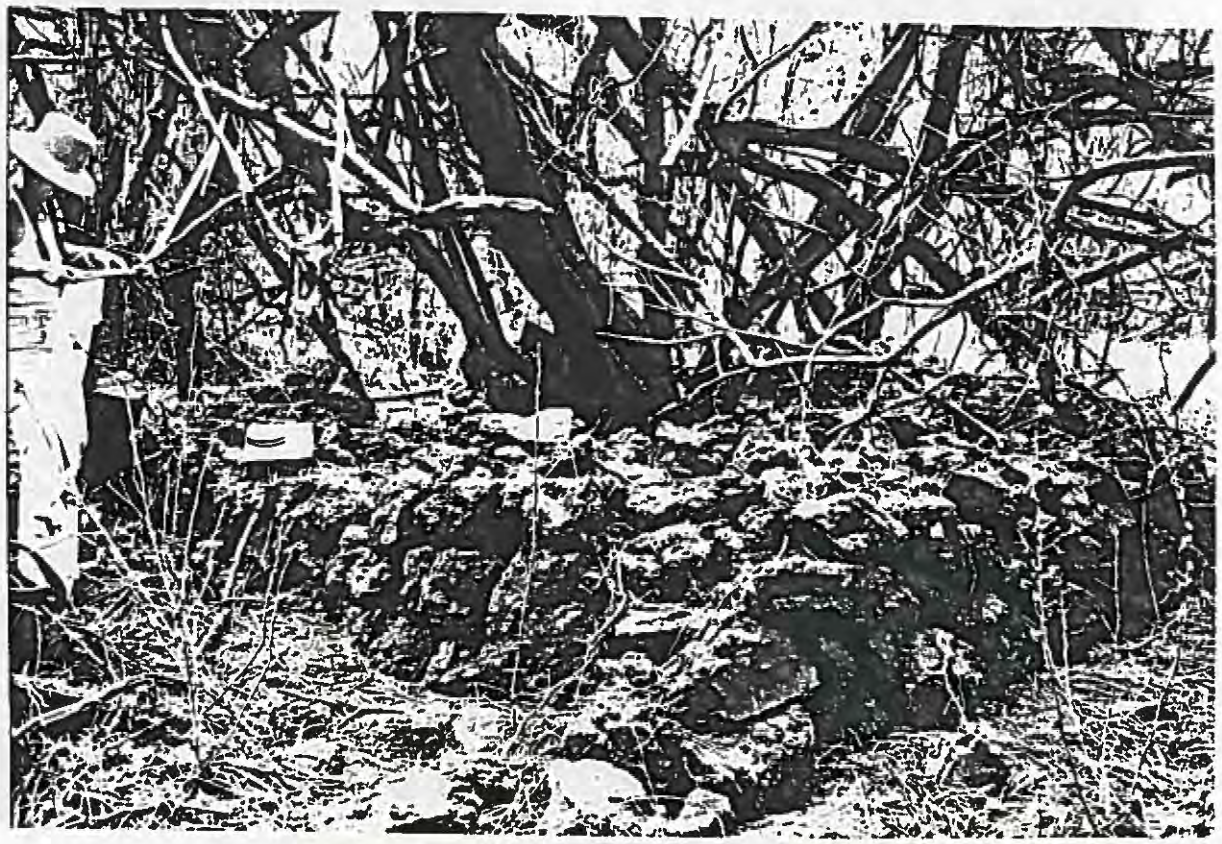

Fig. 6. SITE 50-Ma-C1-3, SQUARE ENCLOSURE. View from north.

Fig. 7. SITE 50-Ma-C1-2, LARGE U-SHAPED ENCLOSURE. View from east.

Fig. 8. SITE 50-Ma-C1-1, KAMA'OLE HOUSE SITE.
View along seaside wall, from north.

Fig. 9. SITE 50-Ma-C1-1, KAMA'OLE HOUSE SITE.
View along seaside wall, from south.

A P P E N D I X 5

Site Selection Report
for a
Small Boat Launching Ramp
Kihei Area, Maui

SITE SELECTION REPORT

FOR A

SMALL BOAT LAUNCHING RAMP

KIHEI AREA, MAUI

Prepared for:

Water Transportation Facilities Division
Department of Transportation
State of Hawaii

Prepared by:

M&E Pacific, Inc.
Environmental Engineers
190 South King Street
Honolulu, Hawaii 96813

April 1978 (Revised)

CONTENTS

TABLES

FIGURES

(Missing pages in report are photographs, which are not included.)

SITE SELECTION REPORT FOR A SMALL BOAT LAUNCHING RAMP, MAUI

INTRODUCTION

This report is the site study and selection portion of phase I, relating to the proposed small boat launching ramp in the Kihei area on Maui, Job H.C. 4053.

Selection studies for a location of a double-lane small boat launching ramp in the Kihei area on Maui were made. The study area included the coastline from the Kihei Wharf to Makena.

Parameters of primary concern in selecting a possible site for a small boat launching ramp are as follows:

1. Oceanographic: Littoral drift, surge, and bathymetry
2. Land: Location, accessibility, availability, and use
3. Requirements of boaters
4. Availability of utilities

The site selected should have adequate area for a complete launching operation, including the launch ramp, a boat washdown area, parking for about 40 cars with trailers, sufficient maneuvering area, and (future) restroom facilities.

PROJECT DESCRIPTION

Site studies along the south coast of Maui from Kihei to Makena (Figure 1) were made for the selection of a suitable site for the construction of a double-lane small boat launching ramp with adequate facilities for a complete ramp operation.

The facilities appurtenant to a complete launching ramp include the following:

1. Double-lane boat launching ramp with a loading dock
2. Parking for about 40 car/trailers
3. Boat washdown area
4. Car/trailer maneuvering area at ramp approach
5. Utilities

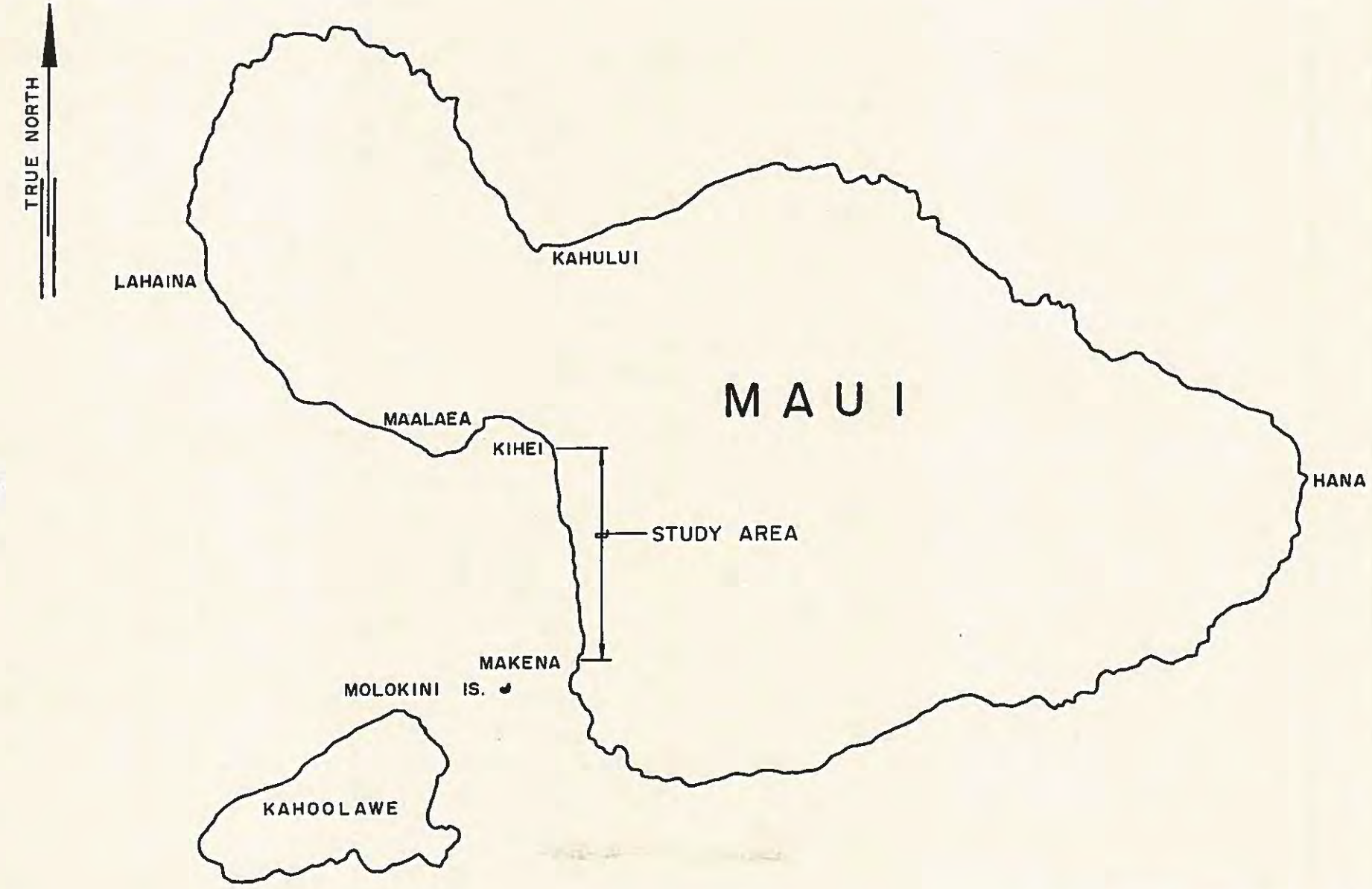

FIGURE 1
STUDY AREA LOCATION MAP

6. Landscaping
7. (Future) restrooms
8. Protective structure (if needed)

The land area requirement for such a facility is about 1.50 acres.

NEEDS, OBJECTIVES, AND REQUIREMENTS

The proposed boat launching ramp is intended to meet the needs of Maui boaters in the Kihei to Makena area. An existing ramp located near Kihei at Kalama Park has deficiencies that render it inadequate most of the time. These include--

1. Accumulation of sand at the ramp and nearshore areas;
2. Hazardous rocks and reefs;
3. Waves breaking just offshore from the launching ramp;
4. Popular surfing site just offshore from launching ramp, causing conflicts between boaters and surfers; and
5. Limited parking area.

The proposed double-lane boat launching ramp should be able to meet the launching requirements of the area until the 1980s. It is expected that after that time another small boat launching facility would be developed at La Perouse Bay according to The Statewide Boat Launching Facilities Master Plan (1972).

Fishing is the predominant boat-related activity in Maui County. Most of this activity occurs between Makena Bay and Nakalele Point and extends offshore to Kahoolawe, Lanai, and Molokai. The popularity of these areas is attributed to their relatively calm waters, where boating activities can be conducted safely and easily, and to the availability of fish. These preferred offshore areas for boating correspond to data regarding frequency of trailer launchings at various locations on Maui. More than 50 percent of the total annual launchings on the island take place along the south coast of Maui.

Maui boaters, in a petition circulated by Mr. H.M. DeVine (see Appendix), have expressed a desire for a boat ramp located south of the

Kalama Park ramp to allow for faster, easier access to popular boating areas around Molokini and Kahoolawe. At the present time, most ramp launchings on the south coast of Maui are from Maalaea Boat Harbor, which is a considerable distance from Molokini and Kahoolawe. Furthermore, boaters returning from these areas in the afternoon encounter "choppy" seas and strong headwinds caused by Maui's unique topography. The result is a considerable expenditure of time and fuel in traveling to and from the fishing areas.

SITE STUDY

Six areas along the south coast of Maui were studied as possible locations for a double-lane small boat launching ramp. These locations include (see Figure 2):

1. Kihei Wharf
2. Kalepolepo area near the old sea wall
3. State of Hawaii (County of Maui) Park adjacent to Kapu Place
4. Kalama Park ramp
5. Kamaole Beach Parks #1-#3 and adjacent lands
6. Makena

The criteria considered in choosing a site for a small boat launching ramp are oceanographic conditions, land availability, boater requirements, and availability of utilities. Public opinion in the form of a petition by Maui boat owners circulated by Mr. H. M. DeVine in 1977 (see Appendix) expressed their desire for a boat ramp south of the existing Kalama Park small boat launching ramp.

Land considerations must take into account location, topography, accessibility, availability, and conflicting use patterns. Oceanographic considerations include littoral drift, wave exposure, bathymetry, coastal morphology, and characteristic of substratum.

(1) Kihei Wharf, (2) Kalepolepo, and (3) State of Hawaii (County of Maui) Park adjacent to Kapu Place. All sites studies from Kihei to Makena exhibited surge problems especially during high wave periods from Kona wind conditions and large northwesterly swells during winter as well as large southerly swells during summer. Morphology of these three sites consists of gently sloping coastal plains terminating seaward at sandy beaches. The sand extends 100 to 400 yards offshore into a broad expanse of shallow water, 2 to 4 feet deep, especially between Kalepolepo and Kalama. The breaker line in these areas is subsequently a considerable distance from the shoreline.

Due to the shallow depths, abundant sand supply, and input of wave energies on the shoreline, littoral transport of sand and sediments pose a definite problem for a boat ramp. The sand movement appears to be predominantly onshore-offshore, with a slight northward drift.

Inland areas adjacent to the shoreline are used for private residences, condominium developments, and state and county owned parks. At the Kihei Wharf site, insufficient land area is available for a double launch ramp facility. The other two sites, however, appear to have adequate areas for parking and appurtenant facilities on state owned lands. All three sites are readily accessible from South Kihei Road or adjacent access roads that are paved and maintained in "good" condition.

There are no land use conflicts foreseen at Kihei Wharf (Figure 3) or the Kalepolepo site (Figure 4). Presently, the lands at these two sites are undeveloped and not in use. The park adjacent to Kapu Place is designated as a "Regulation Reservoir", but sufficient land is available to circumvent intruding into the reservoir area.

The proximity of these sites to the existing Maalaea small boat launching facility would negate most of the land related logistical advantages. Boats going to popular fishing and boating areas around Molokini and Kahoolawe islands would still have a considerable distance to traverse back to launch points north of Kalama. Furthermore, boat owners have expressed a preference for a boat launching ramp south of Kalama Park.

These three sites should not be considered further for a small boat launching ramp. Considerable shallow water combined with an active

sediment transport mechanism in the nearshore zone would cause difficulties in keeping a ramp operational. Public opinion and some land restrictions also negate these sites for further consideration.

(4) Kalama Park (existing single-lane launch ramp). The Kalama Park small boat launching ramp shown on Figures 5 and 6 is inoperative most of the year. The ramp is located at the southern end of a cove oriented towards the west. On the northern perimeter of the cove adjacent to the launch ramp is a narrow, rocky projection extending about 200 feet seaward. Immediately south of the rocky headland is a sandy beach.

Waves breaking off the tip of the rocky projection and extending across the cove offshore from the launch ramp make boating hazardous during high wave periods. The bathymetry of the cove is fairly constant with water depths of about 2 to 3 feet out to the breaker line.

The bottom strata consists of mostly sand and fine sediments interspersed with rocks and coral. Sand accumulation as shown on Figure 6 makes boat launchings nearly impossible during low tides. An active sand transport mechanism operating in the nearshore zone is responsible for this accretion of material in the quiescent section of the cove fronting the launch ramp. The sand movement appears to be mainly onshore-offshore with a northward tendency as observed at sites north of Kalama.

The existing facilities consist of a concrete single-lane launch ramp and parking area for about 10 cars with trailers. A portable toilet and several picnic tables are situated at the far end of the parking lot. The entrance to the launch facility is from Iliili Road.

A popular surfing site is located directly offshore from the launch ramp. This may lead to a conflict between boaters and surfers if this multiple use is allowed.

The existing Kalama Park small boat launching ramp would require redesigning and dredging of the launch basin and entrance channel to make it functional. Due to the limited area available for parking, the site cannot accommodate a double-lane launching ramp. To make the ramp operational, some type of sand bypass system with a protection structure would also be required. Periodic dredging may still be required to maintain launching and manuvering depths.

(5) Kamaole Beach Park #1-#3 and adjacent areas. The next area under consideration will be Kamaole Beach Parks #1 to #3 (Figure 7) and adjacent state owned lands south of Kamaole Beach Park #3.

The shoreline in the Kamaole area consists of sand beaches separated by rocky headlands. These beaches vary in length from approximately 1,500, 1,000, and 800 feet for Kamaole Beach Parks #1 to #3 respectively. Beach widths reach a maximum of about 100 feet.

The bathymtry reveals a rapid increase in water depth in the near-shore area; consequently, the shoreline is directly exposed to breaking waves. These beaches have established a dynamic equilibrium dependent upon the characteristics of the waves and the relative location of head-lands.

Sand deposits, extending offshore from these beaches, are situated in deep waters due to the steep gradients of the bottom contours.

Landward of the sand beaches are grassed picnic areas containing permanent restrooms and shower facilities and playground equipment. Parking areas are provided for beach and park users and are directly accessible from South Kihei Road.

Although there is sufficient land area to support a double-boat launching facility, user conflicts are evident. Presently, these parks are utilized for such recreational activities as picnicking, swimming, diving, and sunbathing. Boating activity in the immediate area will curtail some of these activities.

A site south of and adjacent to Kamaole Beach Park #3 was also investigated. The shoreland here is very irregular and consists of rock outcropping with few sand beaches. A small cove is formed by projections of rocky headlands on either side. Incoming waves break directly off these headlands, as shown on Figures 8, 9, and 10. The entire cove is subsequently subjected to surge as these waves progress shoreward. The bathymetry of the cove varies from about 5 feet off the headlands to about 10 feet in a sand channel between the headlands. The bottom strata in the cove consists largely of rocks and live coral. Preliminary probes

with a steel rod in the sand channel revealed a layer of sand approximately 2 to 3 feet thick overlaying a hard rock base (see Table E in the Appendix). Some water quality measurements were also made in this area showing moderately high nitrogen and phosphorus levels attributable to the turbid conditions (see Table F in the Appendix).

There is ample land area to support a double launch ramp facility at this site. The 180° view shown on Figure 11 reveals that the land is undeveloped and is presently covered with kiawe trees and grasses.

The site is accessible from South Kihei Road via an unpaved road that traverses this area.

If a ramp is built here, dredging would be required in the launch basin and entrance channel. Some type of protective structure would be required due to direct wave expanse of the shoreline. Grading for land facilities would be necessary due to the irregular ground contours and the elevation differential between sea level and adjacent lands.

(6) Makena. The area studied at Makena is the site of the old Makena Landing, which was partially destroyed in the 1946 tsunami (see Figure 12). This site appears to be the best oceanographically; however, it has serious drawbacks in other areas. This particular location does not have sand accumulation problems as does the Kalama Park boat ramp since it is situated on the side of a projecting rocky headland.

Diving surveys conducted during this study showed that the water depth drops to approximately 10 feet fairly close the shore and the near-shore bottom is a mixture of rock and coral. Sand deposits were found some 100 feet offshore but should pose no problems. Surge, which is evident along the entire coast, can be minimized by a groin extending off-shore that could also serve as a loading dock.

Unfortunately, the land area available to the state is only 0.19 acres. Negotiations between Seibu Hawaii, Inc., the County of Maui, and the State of Hawaii to acquire additional land in the vicinity for a boat launching ramp were unsuccessful (see Appendix). Seibu of Hawaii, Inc. has a previous commitment to the County of Maui to provide a beach access at Makena Landing, including a park, shower, and restroom facilities. It was unable to donate more land to accommodate a launching facility.

A possible use conflict may develop between beach goers and boaters should a ramp be constructed in the area.

The road to Makena from Polo Place is paved with only an asphaltic wearing surface, as shown on Figure 13. This road follows the existing ground contours and does not provide sufficient horizontal and vertical sight distance at hills and around corners. It does, however, have sufficient width for two-way traffic, but only at reduced speeds. The road to Makena is to be improved according to the Maui County Planning Department. The proposed improved road is situated at a higher elevation and is thus further from the shore. Unfortunately, no definite timetable has been established.

DISCUSSION AND RECOMMENDATIONS

There are no practical sites for a small boat launching ramp north of Kalama Park because of sand problems, relatively shallow water, and opposing public opinion. Boaters returning to these areas from popular boating areas around Molokini and Kahoolawe would encounter the same difficult conditions as launching from Maalaea Harbor.

Based only on oceanographic considerations, the primary choice for a boat launching ramp site would be Makena. Because of unavailability of land and use conflicts, however, the development of a boat ramp in this area appears unfeasible. One possible alternative is to locate the launch ramp on the state owned parcel of land south of and adjacent to Kamaole Park #3. Ample land is available for a double-lane launch facility, and the area is accessible from South Kihei Road. A visual inspection of the area shows that site grading will be required. Due to direct wave exposure, a protective structure will also be required with dredging of the launch basin and entrance channel. Periodic dredging may be required thereafter.

Another alternative is to redesign and modify the existing Kalama Park ramp to meet operating requirements. The amount of parking area, however, is sufficient for only about 10 cars with trailers. Therefore, a single-lane rather than a double-lane launch ramp would be compatible with the amount of available parking.

An offshore extension and protective structure would probably be required. Depending upon oceanographic conditions and the extent of the structures, periodic dredging may be required after initial dredging operations.

CONCLUSION

Table 1 shows a summary comparison of the major oceanographic and land parameters that should be considered in the site selection process. Note that certain parameters such as sand transport, location, and land area are critical for a launching ramp.

The primary site available for a double-lane small boat launching ramp is the state owned parcel of undeveloped lands adjacent to Kamaole Beach Park #3. The reasons for selecting this site are:

1. Adequate water depths at sand channel location to lessen problem of sand build up at launch ramp
2. Hard rock and coralline bottom found in nearshore areas
3. Preliminary public opinion favors a site south of Kalama Park
4. Land is available in sufficient quantities to support a double-lane launch ramp
5. No significant use conflicts are foreseen at this time since the land is undeveloped and contains no beaches
6. Adequate accessibility can be provided directly from South Kihei Road

Some difficulties related to this site, however, are:

1. Direct exposure of the shoreline to waves causing surge at the launch ramp. A protective structure is required that would be significantly more costly than the present budget allows.
2. Initial dredging of launch basin and entrance channel will be required.
3. Offshore sand deposits may cause some filling of dredged areas that may require periodic dredging.
4. Site grading will be required due to the topography of the land areas.

TABLE 1

SUMMARY OF SITE EVALUATION FACTORS

	Ocean Related Factors					Land Related Factors			
Location	Sand* Transport	Surge	Depth	Substratum	Location*	State Land Available	Land* Area	Conflicting Use	Access
Kihei Wharf	-	-	-	-	-	+	-	+	+
Kalepolepo	-	-	-	-	-	+	+	+	+
Kapu Place	-	-	-	-	-	+	+	+	+
Kalama	-	-	-	-	+	+	-	-	+
Kamaole Parks 1, 2, & 3	-	-	±	-	+	+	+	-	+
Just South of Kamaole #3	±	-	-	+	+	+	+	+	+
Makena	+	±	+	+	+	+	-	-	±

* Critical Factors
+ Favorable Condition
- Unfavorable Condition