

JOHN WAIHEE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 621  
HONOLULU, HAWAII 96802

OFC. OF ENVIRONMENTAL  
QUALITY CONTROL

REF:OCEA:JN

WILLIAM W. PATY, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES

KEITH W. AHUE  
MANABU TAGOMORI  
RUSSELL N. FUKUMOTO

AQUACULTURE DEVELOPMENT  
PROGRAM  
AQUATIC RESOURCES  
CONSERVATION AND  
ENVIRONMENTAL AFFAIRS  
CONSERVATION AND  
RESOURCES ENFORCEMENT  
CONVEYANCES  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
PROGRAM  
LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

FILE: OA-6/21/90-2402  
DOC.: 8771E

JUL 31 1990

MEMORANDUM

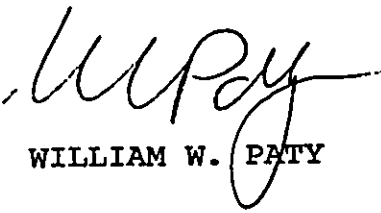
TO: Office of Environmental Quality Control

FROM: William W. Paty, Chairperson  
Board of Land and Natural Resources

SUBJECT: CDUA to Establish an Environmental Education Program  
at Hanauma Bay

The above mentioned Chapter 343 Document was reviewed and a negative declaration was declared based upon the environmental assessment provided with the CDUA.

Please feel free to call me or Ed Henry of our Office of Conservation and Environmental Affairs, at 8-7837, if you have any questions.

  
WILLIAM W. PATY

Enclosure

1990-08-23-0A-FED ~~Harama~~ *Harama* Education Project  
 Haraumea Bay  
**FILE COPY**

February 1983

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

**FOR DLNR USE ONLY**  
 Reviewed by \_\_\_\_\_  
 Date \_\_\_\_\_  
 Accepted by \_\_\_\_\_  
 Date \_\_\_\_\_  
 Docket/File No. \_\_\_\_\_  
 180-Day Exp. \_\_\_\_\_  
 EIS Required \_\_\_\_\_  
 PH Required \_\_\_\_\_  
 Board Approved \_\_\_\_\_  
 Disapproved \_\_\_\_\_  
 Well No. \_\_\_\_\_

DEPARTMENT MASTER APPLICATION FORM

(Print or Type)

I. LANDOWNER/WATER SOURCE OWNER  
 (If State land, to be filled in by Government Agency in control of property)

Name Department of Parks and Rec.  
 Address City and County of Honolulu  
Honolulu, Hawaii 96813  
 Telephone No. 523-4181  
 SIGNATURE \_\_\_\_\_  
 Date \_\_\_\_\_

RECEIVED

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II. APPLICANT (Water Use, omit if applicant is landowner)

Name Mike Markrich/ Allan Tom  
 Address U.H. Sea Grant Extension  
Mar. Sci. Bldg. Rm.219  
Honolulu, Hawaii 96822  
 Telephone No. 956-2870  
 Interest in Property To establish  
an environmental education program at H. Ba  
 (Indicate interest in property; submit written evidence of this interest)  
 \*SIGNATURE Mike Markrich  
 Date June 19 1990

III. TYPE OF PERMIT(S) APPLYING FOR

- ( ) A. State Lands
- (x) B. Conservation District Use
- ( ) C. Withdraw Water From A Ground Water Control Area
- ( ) D. Supply Water From A Ground Water Control Area
- ( ) E. Well Drilling/Modification

IV. WELL OR LAND PARCEL LOCATION REQUESTED

District Maunaloa  
 Island Oahu  
 County Honolulu  
 Tax Map Key 3-8-12  
 Area of Parcel 50 acres  
 (Indicate in acres or sq. ft.)  
 Term (if lease) \_\_\_\_\_

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**CONSERVATION DISTRICT USE APPLICATION**

**V. ENVIRONMENTAL REQUIREMENT**

**1) Identification of applicant:**

University of Hawaii Sea Grant Extension Service  
Hanauma Bay Education Project  
1000 Pope Road  
Rm. 214, Marine Science Building  
Honolulu, Hawaii 96822

- a) Mike Markrich
- b) Allen Tom

Hereafter, to be referred to as the "project".  
Phone: 956-2870  
FAX: 956-2858

**2) Identification of approving agency:**

Department of Land and Natural Resources

**3) Identification of agencies consulted in making assessment:**

Department of Land and Natural Resources  
City and County, Parks and Recreation  
Hawaii Kai Neighborhood Board

**4) General description of the action's technical, economic, social, and environmental characteristics:**

**Technical:** The project consists of organizing and facilitating nature walks on a continuous daily basis within the park boundaries. The touring walks will be organized at and originate from a central location at the top of the bay and terminate in the lower portion of the park near the beach. In the initial stages of the project, covered by this CDUA, the gathering point will not be a permanent or fixed structure requiring building permits. The gathering point will have high quality graphic displays depicting the special nature of the Bay's ecosystem.

**5) Summary description of the affected environment, including suitable and adequate location and site maps:**

The effected area is that land portion of Hanauma Bay City Park generally used by the public. The primary tour assemble area will be at the top of the bay near the service access road, where an informational display will be set up. The informational display will consist of a chair, desk and umbrella, all of a temporary, mobile nature, not to exceed 8 feet by 12 feet. The informational display will be constructed to be as unobtrusive as possible (see attached picture). The proposed location of the booth is indicated on the attached map. This is the same location identified by Wilson Okamoto and Associates in their 1977 Hanauma Bay development plan as an ideal site for a "Security / Information" facility. Tours will travel across the top level of the bay and down the access road to the beach. Tours will end at the water's edge. All tour activity will be restricted to paths and water not more that one foot deep. There will be no detrimental environmental effects associated with these activities.

**6) Identification and summary of major impacts and alternatives considered, if any:**

N/A

**7) Proposed mitigation measures, if any:**

N/A

**8) Determination:**

N/A

**VI. SUMMARY OF PROPOSED USE**

We propose to use the Hanauma Bay park as a site for an educational environmental tour, the purpose of which is to more effectively manage the Bay's visitor population, through education. The multiple daily tours will be organized at a temporary environmental educational display near the top of the road, and a donation will be requested of approximately \$2.50 per person. The walking tours will proceed across the top of the park, descend down to, and then to the beach. Look-boxes will be used by the tour guides to point out various fish species. The tour will consist of natural history and safety information delivered by a "park ranger" tour guide.

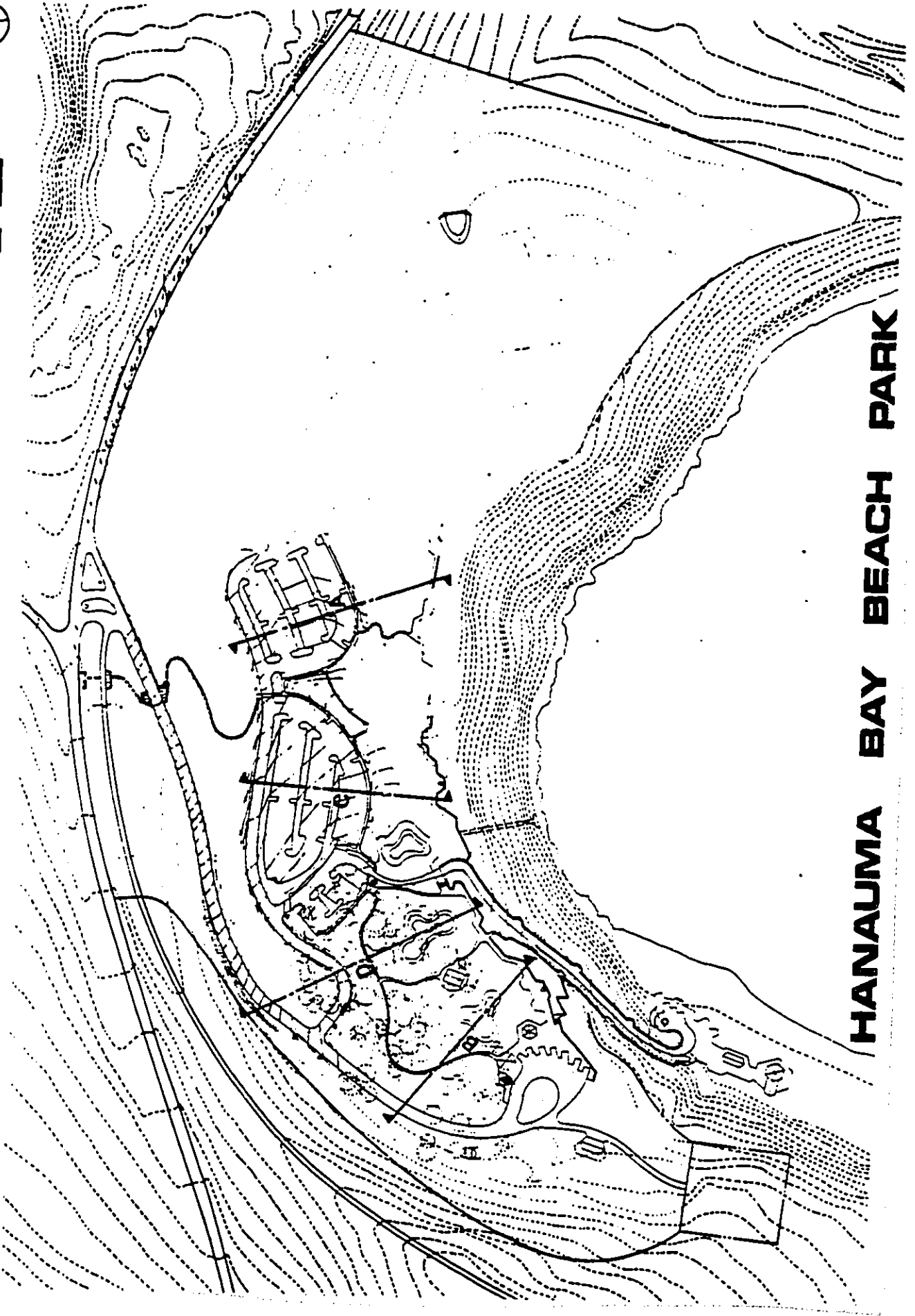
**Economic:** A donation will be requested at the end of the tour of approximately \$2.50 per person to cover expenses incurred in setting up the tours. At the request of the Land Board, all donations will be strictly optional. We will be dependent upon a mixture of public and private funding, for the successful long-term funding of the project. Initial estimates indicate that a tour staff varying from 4 to 9 people, depending upon seasonal demand, would require approximately 50,000 paying tours (<5% of attendance) to break even at a minimal wage compensation rate. This tour rate would require that each guide lead only two tours per day, with 12 people per tour.

**Social:** The use of Hanauma Bay is an emotional issue among Hawaii's citizens. Charges of the overuse, abuse, capitalization and mismanagement of the Bay, have all been leveled at the City and State administrations. The majority of these charges stem from problems relating to the massive numbers of people that visit the Bay each year. This number far out-weighs the capabilities of normal management practices. In anticipation of charges that this project will lead to capitalization and over-use of the Bay, a preliminary presentation was given to the Hawaii Kai Neighborhood board concerning the proposed goals and activities of this project. The response from the board was completely in favor of the proposed project.

Currently, the large number of tourist visiting the bay is a deterrent to local residents who wish to visit the Bay. The project will strive to involve the public through organized school tours and a docent program. In later stages of the project, which may involve permanent structures, the general public will benefit by the educational displays and exhibits of the Bay's physical and social history, depicting its important place in Hawaiian history and culture.

**Environmental:** If the project merely attracts additional tourist to the bay, then the environmental impact will be detrimental. However, the primary goal of the project is to manage through education, thereby minimizing the environmental impact of the visitors on the bay. All activities of the project emphasize the care and respect for the environment through teaching and by example, therefore tourists are less likely to abuse the bay through environmentally poor actions. Among the many topics that will be discussed, plastics in the bay's environment, fish feeding and conservation. An important part of the project will be the description of other marine park areas on Oahu as tourist destinations to help spread out the impact of the tourists.

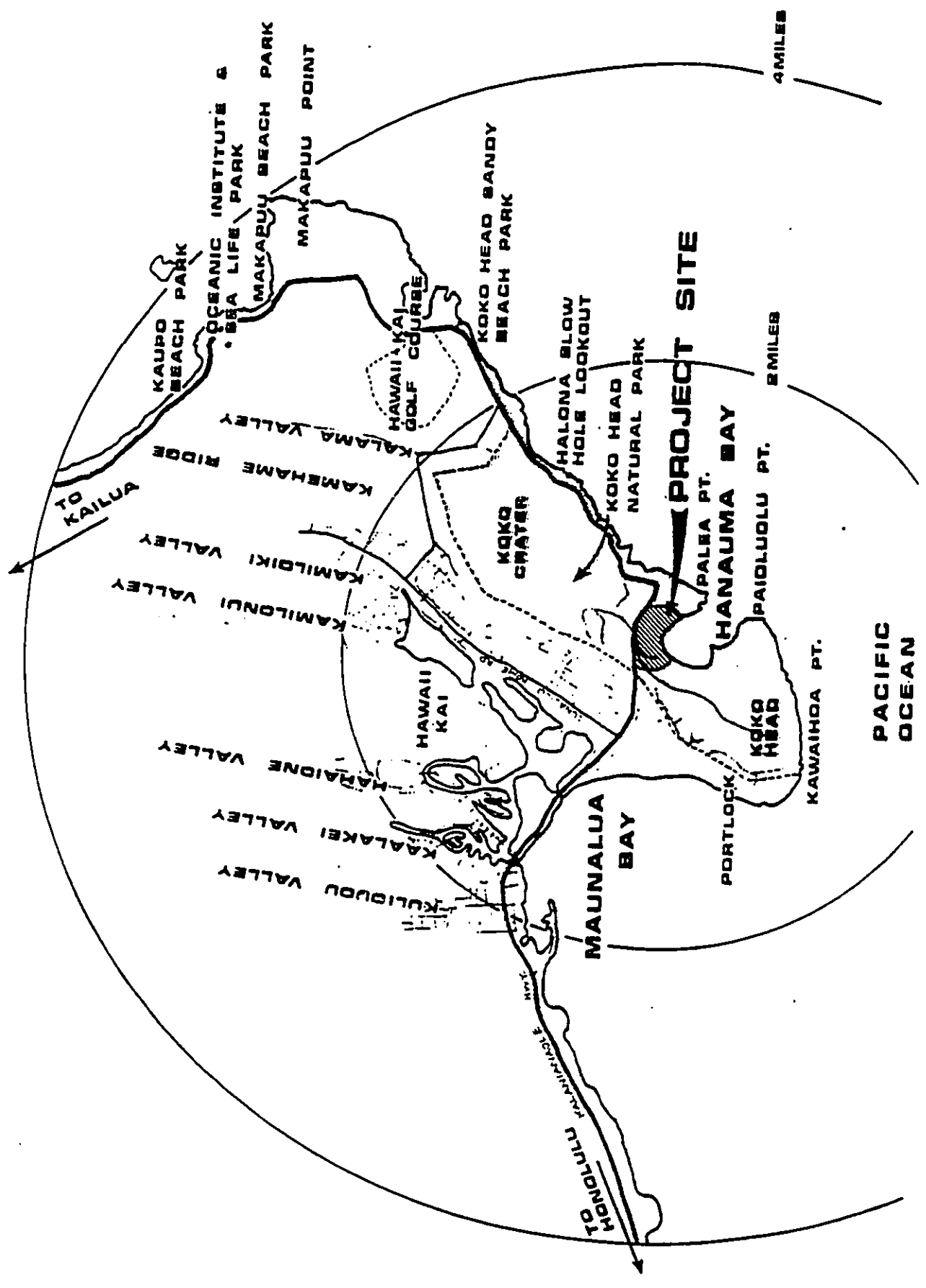
section plan



HANAUMA BAY BEACH PARK



# location map



Taken from:

Hanauma Bay Beach Park Site Development Plan

**existing  
features**

LEGEND

|  |                      |
|--|----------------------|
|  | coral road           |
|  | concrete walkway     |
|  | paved area           |
|  | unpaved parking area |
|  | grass area           |
|  | palea campsite       |

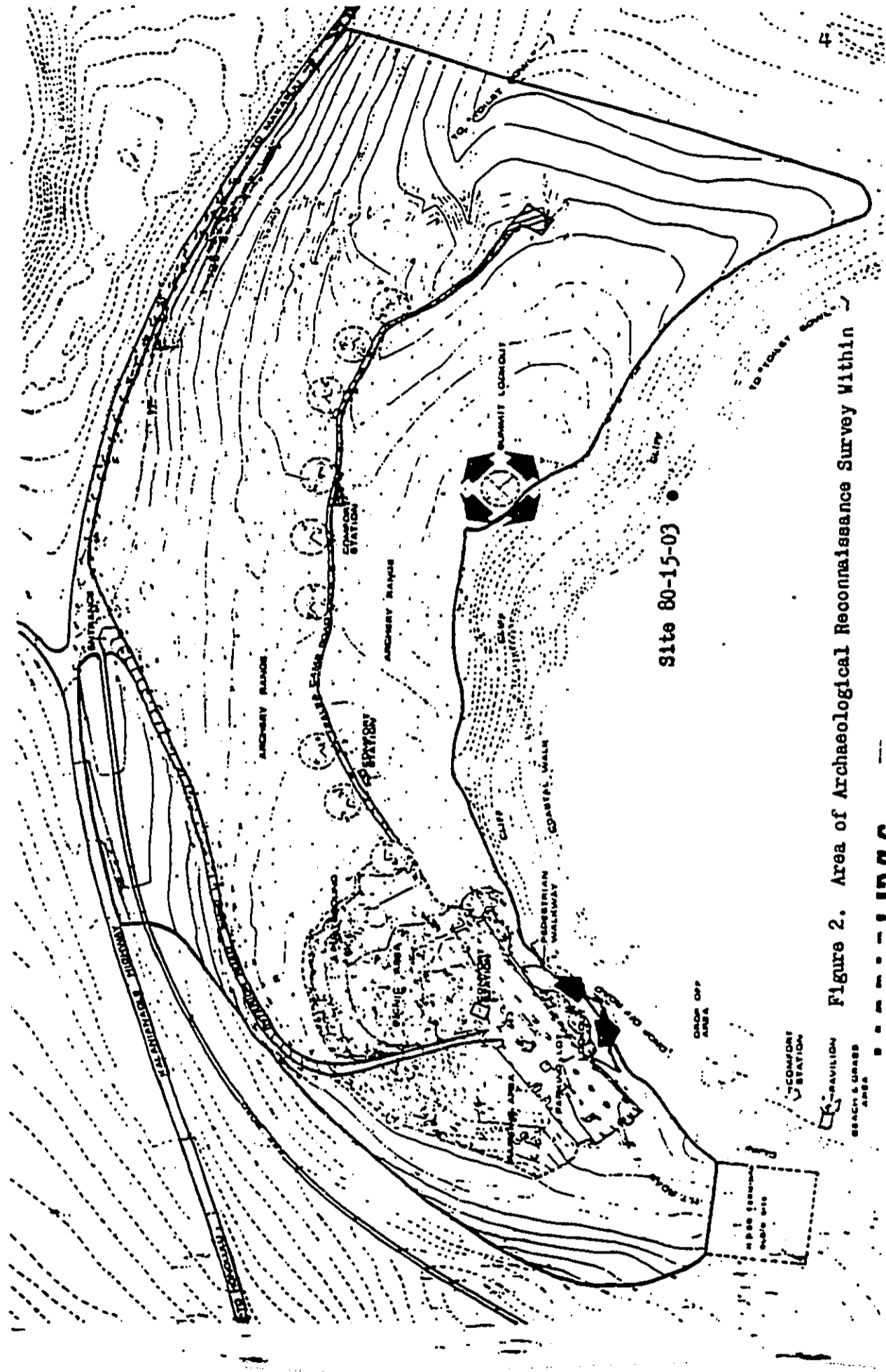


Figure 2. Area of Archaeological Reconnaissance Survey Within



INFORMATION REQUIRED FOR ALL USES

I. Description of Parcel

- A. Existing structures/Use. (Attach description or map).
- B. Existing utilities. (If available, indicate size and location on map. Include electricity, water, telephone, drainage, and sewerage).
- C. Existing access. (Provide map showing roadways, trails, if any. Give street name. Indicate width, type of paving and ownership).
- D. Vegetation. (Describe or provide map showing location and types of vegetation. Indicate if rare native plants are present).
- E. Topography; if ocean area, give depths. (Submit contour maps for ocean areas and areas where slopes are 40% or more. Contour maps will also be required for uses involving tall structures, gravity flow and other special cases).
- F. If shoreline area, describe shoreline. (Indicate if shoreline is sandy, muddy, rocky, etc. Indicate cliffs, reefs, or other features such as access to shoreline).
- G. Existing covenants, easements, restrictions. (If State lands, indicate present encumbrances.)
- H. Historic sites affected. (If applicable, attach map and descriptions).

II. Description: Describe the activity proposed, its purpose and all operations to be conducted. (Use additional sheets as necessary).

III. Commencement Date: January 1991

Completion Date: January 1992

IV. TYPE OF USE REQUESTED (Mark where appropriate) (Please refer to Title 13, Chapter 2)

- 1. Permitted Use (exception occasional use);  
DLNR Title 13, Chapter 2, Section 2; Subzone G, L,&.P
- 2. Accessory Use (accessory to a permitted use):  
DLNR Title 13, Chapter 2, Section \_\_\_\_\_; Subzone \_\_\_\_\_.
- 3. Occasional Use: Subzone \_\_\_\_\_.
- 4. Temporary Variance: Subzone \_\_\_\_\_.
- 5. Conditional Use: Subzone \_\_\_\_\_.

## **INFORMATION REQUIRED FOR ALL USES**

### **I). Description of Parcel**

The parcel qualities including utilities, access, structures, shoreline, historic sites, ect. are adequately described in the Wilson Okamoto and Associates "Hanauma Bay Beach Park" studies of 1977 and 1989 (in press)

### **II). Description (See section VI)**

III). Commencement Date: January 1991  
Completion Date: January 1992

### **IV). TYPE OF USE REQUESTED**

1) Permitted use: DLNR Title 13, Ch. @, Sec. 2: Subzone G, L, & P.  
Area of Proposed Use: 20 acres  
Nearest Landmark: Koko Head  
Nearest Town: Hawaii Kai  
Conservation District Subzone: General, Limited and Protective.  
County General Plan Designation: Parks and Recreation District. Hanauma Bay Beach Park is within the Koko Head Natural Park Conservation District.

V). FILING FEE: \$50.00 attached as a cashier check.

## **INFORMATION REQUIRED FOR CONDITIONAL USE ONLY**

### **I. PLANS**

A) Area Plan: attached  
B) Site Plan: attached  
C) Construction Plans: n/a  
D) Maintenance Plans: n/a  
E) Management Plans: No consumptive use of any animal, plant or mineral resources are anticipated.

F) Historical or Archaeological Site Plan: According to the State Historical Sites branch of DLNR, there is only one historical site located within the project site, (TMK: 3-9-12:2,6,12 site 80-15-03) commonly known as the Hanauma Bay Shelter. This area indicated on the attached map is presently fenced off to the public to prevent injury from falling stones. A study by R.D. Connolly for the Department of Parks and Recreation completed in 1980, found no other archaeological sites within the park area.

### **II. SUBZONE OBJECTIVE**

A major goal of the project is the preservation and interpretation of the natural resources of the area. The intended uses of the park area by the project to attain this goal are consistent with the objective of the subject Conservation District Subzone as stated in Title 13, Chapter 2.

Area of Proposed Use 20 acres  
(Indicate in acres or sq. ft.)

Name & Distance of Nearest Town or Landmark  
Koko head / Hawaii Kai

Boundary Interpretation (If the area is within 40 feet of the boundary of the Conservation District, include map showing interpretation of the boundary by the State Land Use Commission).

Conservation District Subzone General, Limited and Protective  
County General Plan Designation Parks and recreation district

V. FILING FEE

1. Enclose \$50.00. All fees shall be in the form of cash, certified or cashier's check, and payable to the State of Hawaii.
2. If use is commercial, as defined, submit additional public hearing fee of \$50.00.

INFORMATION REQUIRED FOR CONDITIONAL USE ONLY

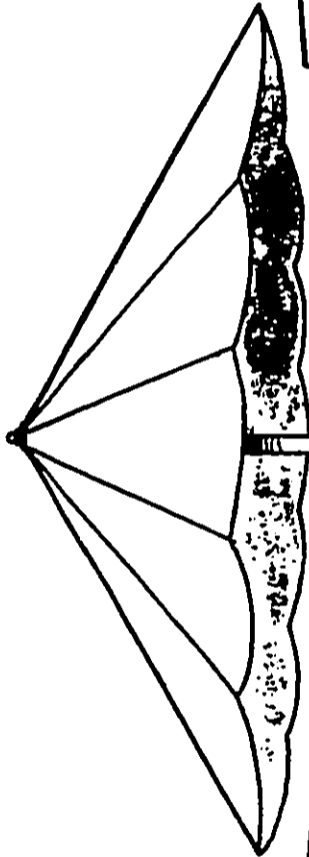
I. Plans: (All plans should include north arrow and graphic scale).

- A. Area Plan: Area plan should include but not be limited to relationship of proposed uses to existing and future uses in abutting parcels; identification of major existing facilities; names and addresses of adjacent property owners.
- B. Site Plan: Site plan (maps) should include, but not be limited to, dimensions and shape of lot; metes and bounds, including easements and their use; existing features, including vegetation, water area, roads, and utilities.
- C. Construction Plan: Construction plans should include, but not be limited to, existing and proposed changes in contours; all buildings and structures with indicated use and critical dimensions (including floor plans); open space and recreation areas; landscaping, including buffers; roadways, including widths; offstreet parking area; existing and proposed drainage; proposed utilities and other improvements; revegetation plans; drainage plans including erosion sedimentation controls; and grading, trenching, filling, dredging or soil disposal.
- D. Maintenance Plans: For all uses involving power transmission, fuel lines, drainage systems, unmanned communication facilities and roadways not maintained by a public agency, plans for maintenance shall be included.
- E. Management Plans: For any appropriate use of animal, plant, or mineral resources, management plans are required.
- F. Historic or Archaeological Site Plan: Where there exists historic or archaeological sites on the State or Federal Register, a plan must be submitted including a survey of the site(s); significant features; protection, salvage, or restoration plans.

II. Subzone Objective: Demonstrate that the intended use is consistent with the objective of the subject Conservation District Subzone (as stated in Title 13, Chapter 2).

## APPENDIX

- 1) Artist rendition of information desk
- 2) Tour outline and map
- 3) Monthly report summary
- 4) Logo for docent program
- 5) Example of fish graphics from the Waikiki Aquarium



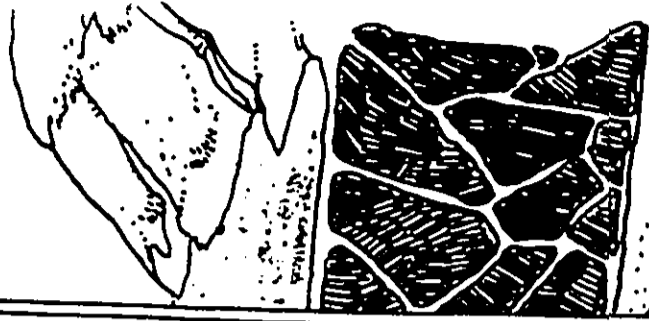
**HANAUMA BAY IS A FRAGILE RESOURCE THREATENED BY OVERUSE. TO PROTECT THE REEF WE ASK:**

- 1) Please do not feed the fish.
- 2) Dispose carefully of any plastic film, food wrappings, disposable diapers.
- 3) Limit your use of sun tan oils that wash off in the water.
- 4) Use the restrooms instead of the water.



**HANAUMA BAY CAN BE DANGEROUS. TO PROTECT YOURSELF, WE ASK:**

- 1) Swim with a friend.
- 2) Be aware of the steep drop off beyond the reef.
- 3) Move carefully on the ledges. Avoid wet spots.
- 4) Avoid the area known as the Toilet Bowl.



The next tour will begin at...  
**00:00**  
Please assemble here. No charge for the tour.  
**DONATIONS ACCEPTED.**

**FREE BROCHURE**  
HANAUMA BAY REEF  
VISIT HERE

CITY AND COUNTY OF HONOLULU PARKS DEPT.

STATE OF HAWAII DEPT. OF LAND AND NATURAL RESOURCES

UNIVERSITY OF HAWAII SEA GRANT EXTENSION SERVICE

C&C 1060 UH 1060

**HANAUMA BAY INTERPRETIVE EDUCATION PILOT PROGRAM**

HANAUMA BAY INTERPRETIVE PROGRAM

The Hanauma Bay tour program is designed to take approximately 20-25 minutes and will involve five stops. At each of these stops a different subject will be discussed. The first stop will be at the top of the Bay looking down. Subsequent stops will be along the turn offs on the road down ridge. The last stop will involve standing knee deep in the Bay with look boxes. The following is the prototype of the tour. A map is included to show the locations of the guide points.

SAMPLE TOUR :

1. Introduction of the Bay.

Subjects Covered:

● Volcanic Cindercone theories.

● Hawaiian Legend

● 1967 designation as MLCD

● Introduction to safety at the Bay.

Location: Staging area at top of the Bay.

Time: 4 minutes

This program at the top of the Bay will introduce the site. The scientific explanation of the origins of Hanauma Bay crater will be discussed. Oahu is estimated to be over 2 million years old. Hanauma Bay is 20-25,000 years of age. An explanation will be made of the way this post erosional volcanic activity formed Hanauma Bay and Koko Head.

A detailed explanation of this natural occurrence will be followed by the telling of an ancient Hawaiian legend dealing with the origin. The legend tells the story of a beautiful young woman whose father is a Kahuna, whose aumakua or bodiless spirit was the mo'o or lizard. Two warriors from rival families compete for her hand. In order to keep the peace, it is decided that to avoid conflict both are to participate in a Hanauma ( traditional Hawaiian arm wrestling contest)

The men struggle until both are near death. In order to save them both, the girl turns herself into a stone. Her father is devastated when he discovers what has happened. To protect her he curls himself into the shape of a lizard around the stone - forming the Hanauma Bay crater.

Additional Hawaiian stories tell of the struggle between Maka O Kahai and her younger sister Pele for supremacy. They battled at the bay and Maka O Kahai was eventually turned into a stone at the bay. Her monument was considered a special 'healing stone' by Hawaiians who

would come to it for solace and prayer when ill. It is said to glow when offerings of awa are made to it. The bay was also a popular place for legendary chiefess Ihihilaakea who was the sister of Makapuu. The introduction to the Bay ends with information that Hanauma Bay was made a marine life conservation district in 1967. It will be noted to tourists that although it looks safe care must be taken because more serious water safety incidents occur at Hanauma Bay than at any other place on Oahu.

2. Geology, Birds and Fauna.

Subjects covered:

- View of flora and fauna
- view of birds and the bringing of the first seeds
- the collapse of the caldera 6,000 years ago.

Location: 1st turn off

Time : 4 minutes

From the first turn off on the road down, note will be made of the white birds in the crater. It will be pointed out that none are seagulls. The theory of the means by which birds brought the first seeds will be related. Then a discussion will follow as to the type of vegetation now found on the sides of the crater. Hawaii has the greatest percentage of endemic plant species in the world. But they are fast disappearing. It is believed by ethnobotanists that at the time of the Hawaiian arrival in approximately 300 AD, there were grasses and wili wili trees, and sandalwood on the sides of the crater. Sadly almost all the endemic plants that once lived in the area are gone. Victims of introduced species or use by man as fuel. What vegetation the visitor sees is mostly introduced species, such as haole koa.

At this point, in the tour program note will be made of how approximately 6,000 years before the wall of the crater collapsed and the sea rushed in. After the sea rushed in the coral reef started to develop. After the reef formed and provided food - fish came. Hawaii has 450 species of fish, almost all of which are similar to fish in the Indo-Pacific region. Although Hawaii is very isolated it's fish are said to be almost identical to those in Okinawa and the Ryukyu Islands of Japan.

### 3. Walk Down

#### Subjects Covered:

- Geology
- Effects of erosion
- Volcanic rock

Location: a few steps from the first turn off.

Time: 2 minutes.

In this stage of the tour visitors will be led to an area adjacent to the first turn off and asked to look at the red rock on the sides of the roadway. This rock is volcanic basalt. It is red because it contains among other things magnesium and iron oxide. If visitors look closely they will see that the rock is made of fine particulate matter. This is because of the force of the explosion. After this explanation. Note will be made of the deep gulleys forming in the crater wall. This is referred to by scientists as dissection or decay of the lava by rainfall. It has been accelerated by the change in the flora and the the impact of man.

### 4. Final Turnoff at bottom of hill.

#### Subjects Covered:

- Human habitation.
- Fishing Techniques
- Coral and fish

Location: Final turn off at the bottom

Time: 4 minutes.

The final portion of the walking tour will concentrate on the role of people in altering the land and sea. From the vantage point of the bottom turn off it is possible to see, the rock overhang of an ancient fishing shelter. This shelter which was discovered in 1952 is an example of the earliest habitation of the Bay. The ancient Hawaiians are believed to have arrived in Hawaii in 300 AD. They brought with them hundreds of years of experience of managing natural resources in Polynesia. On arriving in Hawaii, they found little plant life capable of providing them with food. Because of this they were heavily dependent on the sea. In order to protect the reef from overharvesting. They instituted a rigid kapu system. to control what could be taken. An explanation of the Kapu system will follow. This in turn will be followed by a few statements on the role of women in ancient society who were forbidden to eat certain kinds of fish by the kapu system. They were the shellfish and sea weed gatherers.



Looking down from the top, the guide will note the fish swimming in the bay, and explain how some of them such as the uhu played an important part in Hawaiian ritual. Before going down to the Bay - the guide will note the telephone cable and the holes in the reef, as evidence of man's impact on the natural environment. Before they start down the hill the guide will mention that the group is going to go ankle deep in the water.

### 5 Conclusion/Future

#### Subjects Covered:

- Our fragile Ocean
- What Each Individual Can Do
- The importance of Safety

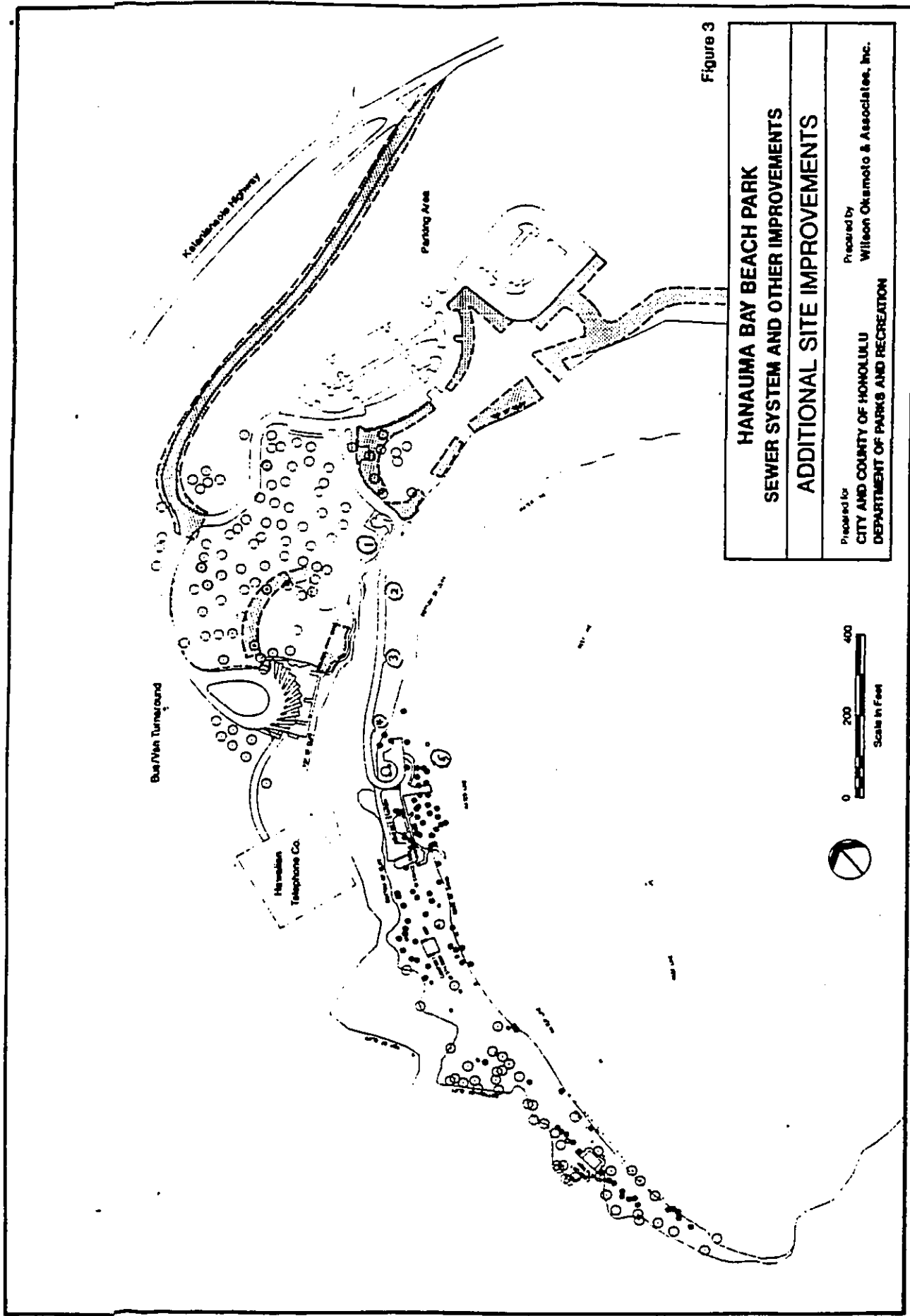
Location: knee deep in the water.

Time: 10 minutes

In this part of the program, the guide will take visitors into the water and through the use of look boxes point out the most common species - ie rudder fish, parrot fish, mullet, small reef fish. The guide will explain characteristics of the fish. Then point out the effects that human beings have on reef life. Feeding fish peas or bread will be actively discouraged and people will be asked to feed animals only those things thought to be good for fish. Information will be given to the public about how in many ways the overuse of Hanauma Bay is a metaphor for the threat to the health of the ocean all over the world due to pollution and overharvesting of fish.

Visitors will be told that there are things they can do in the interests of conservation. They will be asked to make use of the rest rooms and to avoid using excessive amounts of sun tan oil. The oil is said to wash off and stick to floating fish larvae. At the end of the tour, mention will be made about the need to be safe and to avoid areas such as the toilet bowl. Mention will also be made of the ledges on the sides of the bay, and how visitors should avoid any of the areas that are wet or slick. The tour will end with an explanation, that no money is necessary. But if the visitors want to make a donation they can leave one at the top of the hill as they depart. This will greatly help the program to continue.

Copyright University of Hawaii Sea Grant College Program 1990



Stops on walking tour are number 1-5

Appendix 3

Monthly reports will be submitted to the Office of Conservation and Environmental Affairs, for their consideration. The monthly reports will be written during the first week of the following month and shall contain the following information:

- 1) Number of educational tours given each day
- 2) Number of attendees on the tours
- 3) Comments from tour guides, participants and volunteers about the educational program.
- 4) Volunteers at the information desk will keep track the number and type of questions asked.
- 5) Monthly recommendations on how to improve the program.



Examples of the emblems that Crazy shirts Inc. will design for the docent uniforms.

Docents will wear shirt, with logo, caps and matching shorts.

Appendix 5: Illustrations by Suzi Kelley of the Waikiki Aquarium.

Illustrations will be in black and white, on the bottom of the signs.

