KAWELA BAY
OAHU
2 OF 3
G. BALAZ

MURRAY EISNER
57-435 HONO KAWELA DRIVE
KAHUKU OAHU HAWAII 96731

M. Norman Quon
Kuilima Development Company
1001 Bishop St. #2000
Honolulu, Hawaii 96813

April 9, 1990

Dear Norman;

By now I am sure that you are aware that there is considerable opposition to the idea of doing anything at all to Kawela Bay.

There is a growing fear among a large number of North Shore residents that there is considerable risk in desilting the bay, and a concern about future alternative steps mentioned in the EIS report, that could bring devastating consequences.

It is only fair to advise you that a lot of people are now prepared to oppose this on a broad front--raise money, rally broad community support, contact federal, state and city agencies, solicit help from environmental groups, go to the press, and if all else fails, take the issue to court.

There is too much at stake to gamble the future of the bay on the narrow objectives of the resort, not withstanding the reports claim that it would be a better place for turtles when the project is finished.

There is no evidence cited, or precedents shown which would lead one to believe that this would happen. On the contrary, most shoreline activity, and intervention has done immeasurable damage. An entire issue of Smithsonian magazine was devoted to the almost universal failures of these projects.

A fight over this issue cannot possibly benefit the hotel and its image with the public, however, withdrawing the request to desilt would bring with it a groundswell of support that would have considerable value to your respect in the community.

You have an enormous opportunity to capitalize on the unique features of Kawela Bay, which is probably one of the few places of its kind left in the world.

The resort's publicity could feature this sanctuary of untouched natural beauty and environment and with the enormous interest world wide on preserving the environment and endangered species, you would be blazing a new trail of leadership almost unheard of in corporations today. This would not only make your operation unique, but would clearly take your corporation out of the role of suspected greedy, foreign investor, interested only in profits at the expense of the environment and habitats of endangered creatures.

As a public relations tool with brochures, hotel literature, travel agents publicity, press releases, and the real crown jewel, the unique bay itself, unspoiled and untouched, to speak for you, would be a far more powerful marketing strategy than just another pretty swimming pool.

I suspect you would have to develop a strong case to prove that you won't damage the habitat of a federally protected species (green sea turtles) proven to be using the bay in large numbers.

I am sure you realize that those of us that are committed to preserving the bay as it is, will do all in our power to prevent the granting of a permit.

Your enlightened best interest in the face of the negative publicity Asahi Juykens has already received that sense in this community that you attempted to slip this through and the larger issue of the potential destruction of the habitat of an endangered species, is not a prospect you should be to eager to defend in this stage of the hotel's development.

MURRAY EISNER
57-435 HONO KAWELA DRIVE
KAHUKU OAHU HAWAII 96731

I hope you will reconsider the request to desilt the Bay and look at the positive possibilities of saving hundreds of thousands of dollars on this project, plus the potential for huge exposure if it does not work, and endless maintenance costs even if it is not a disaster.

On the positive side, rethink the great advantage the bay in its natural state, defend it rather than exploit it. You would have an army of people to support your assuring that the bay was a pleasant and safe habitat for guests and wildlife.

The failing of Hemmeter's Waikaloa Hotel featuring a phony environment should tell you something. Don't try to improve on nature, use it as an incredibly unique asset--people will respect you and applaud you for it and bring the kind of publicity to your resort you can't buy.

Sincerely,

Murray Eisner

Murray Eisner

Balazs

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center Honolulu Laboratory
2570 Dole St. • Honolulu, Hawaii 96822-2396

March 15, 1990 F/SWC2: GHB

Dr. & Mrs. Eugene Ambard
P. O. Box 856
Haleiwa, HI 96712

Dear Dr. & Mrs. Ambard:

I want to take this opportunity to thank you for the important part you played in rescuing the gillnet stunned and nearly drowned green sea turtle you found floating close to shore at Kawela Bay on Tuesday morning, March 13, 1990. We very much appreciate your assistance in this matter.

GHB

As you may know, all sea turtles in the Hawaiian Island (and elsewhere throughout the United States) are listed and protected under the U.S. Endangered Species Act and wildlife laws of the State of Hawaii. The National Marine Fisheries Service is charged with the responsibility of conducting research fostering the recovery of sea turtle populations and their return to former levels of abundance. I have enclosed several articles about our work, as well as general information about sea turtles, which you may find interesting. If you have any questions, or items of special concern that you would like to discuss, please feel free to call me at 943-1240. Matters relating to law enforcement should be directed to Mr. Gene Witham at 541-2727.

Again many thanks for your help. Henceforth, yo will be considered to be part of our "Hono Ohana" network.

Sincerely,

George H. Balazs
Zoologist and Leader, Hawaiian
Sea Turtle Recovery Team

Enclosure

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center Honolulu Laboratory
2570 Dole St. • Honolulu, Hawaii 96822-2396

April 2, 1990 F/SWC2:GHB

Mr. Don Ho
3954 Gail Street
Honolulu, Hawaii 96815

Dear Mr. Ho:

Thank you very much for once again allowing us access to your property to conduct research of green sea turtles (honu) at Kawela Bay. Our efforts on the night of March 28, 1990, were moderately successful in that one turtle, weighing 77 lbs, was captured and tagged during 8 hours of netting. The turtle showed no signs of disease, which was encouraging news considering that two turtles seriously afflicted with tumors have been documented during recent months by residents at Kawela Bay. One of these sick turtles, an adult male estimated to weight over 200 lbs, has been regularly seen sleeping on the beach at night in the vicinity of where the resort will be built. As you may know, the situation at several other sites, such as Kaneohe Bay, has reached epidemic proportions with regards to life-threatening tumors on resident turtles. The cause of the tumors remains unknown, but is the subject of studies both here and in Florida (see enclosed articles).

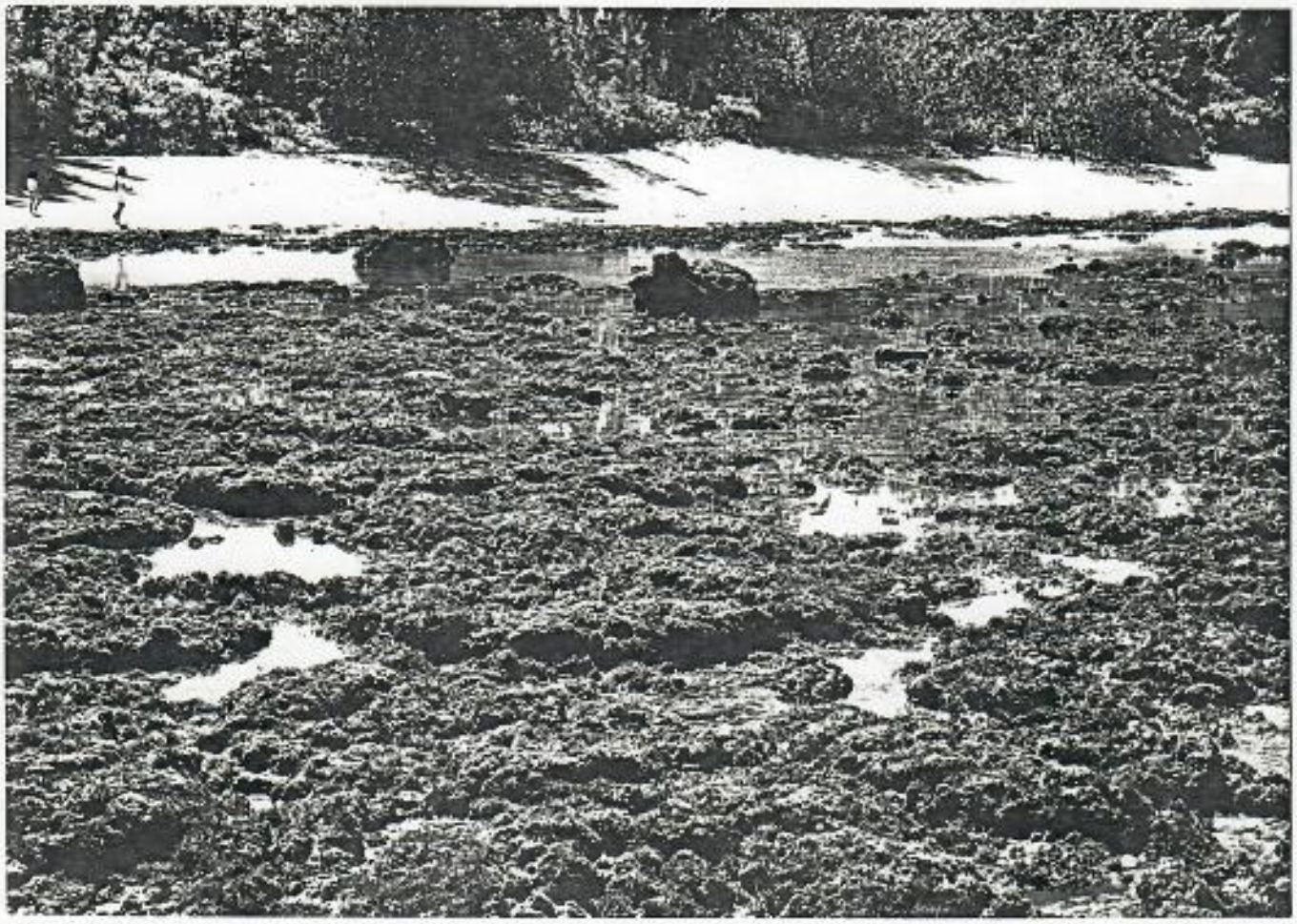
Our work at Kawela Bay on the night of March 28 was complicated by at least two factors. First, shortly after we started monitoring our net, visiting fishermen set a 350-foot gill net perpendicular to shore to the east of our study site. This created a barrier for any turtles approaching from that direction. Fortunately, no small turtles became entangled in the gill net, as their drowning would likely have resulted. Our second problem centered around the presence of high-intensity flood lights from a beachfront house illuminating the bay immediately to the west of our study site. They were turned on and off after dark and it was of interest for us to note that the single capture we made occurred during a period when the lights were off. From experience elsewhere, we know that if a turtle can see a net under water, it will try to avoid it. During our next trip to Kawela, which we are planning for the near future, arrangements will be made for the lights to be kept off while our nets are in the water.

Again, we are most appreciative of your hospitality in allowing us to periodically use your property.

Sincerely,

George H. Balazs
Zoologist and Leader
Marine Turtle Research

enclosures



T. Clay
P.O. Box 1090
Haleiwa, HI 96712
April 27, 1990

Dear George,

Thought you might like to see the finished article. Thanks to you - I couldn't haven't written the piece without the valuable information you provided. Note the turtles in the pictures - Harriet Eisner's.

Thank-you
Tamara Clay

P.S. Also read your editorial on "Why Save Turtles," thought it very good.

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Country JOURNAL

KOOLAULOA / NORTH SHORE OAHU'S FAVORITE COMMUNITY NEWSPAPER SERVING AHUIMANU TO WAIALUA • Established July 1984 April 1990

Pau Honu?

by Tammy Clay

Once there were literally millions of green sea turtles in existence worldwide. Now there may be fewer than 200,000 mature females. The green turtle is listed and protected (since 1978) under provisions of the U.S. Endangered Species Act.

The Hawaiian green sea turtle, Chelonia mydas, or honu, is one of three species of sea turtles native to Hawaii. The honu can be identified by their dark olive or gold flecked carapaces (upper shells). They are primarily vegetarians feeding on algae, or limu, growing on coral reefs and rocks underwater close to shore. The green turtle is a long range migrant breeder who spends most of its life foraging and resting in nearshore benthic habitats.

Earth Day is April 22 - be aware of our Earth everyday!

Although protective laws guard the Hawaiian Green Sea Turtle against capture, they are still facing extinction. This turtle has large life-threatening tumors that obstruct sight and disrupt swimming ability. Pollution is probably the culprit.

Most of the Hawaiian honu, from juveniles (carapaces measured at 35 cm) to mature adults (82 cm carapaces) reside in nearshore habitats of Hawaii, Maui, Kahoolawe, Lanai, Molokai, Oahu, Kauai, and Niihau. They prefer to live near "pastures" of limu that are located in coastal waters. The factors responsible for this distribution of honu around the eight island depends on greater amounts of available habitat, abundance of certain marine vegetation preferred for food, and oceanic currents that appear favorable in transporting young turtles to the main islands for recruitment into coastal habitat.

Only 100 to 350 females nest each year principally at the French Frigate Shoals in the N.W. Hawaiian Islands, part of a National Wildlife Refuge system administered by the U.S. Fish and Wildlife Service.

The males accompany the females in the 800 mile migration (from their feeding areas) and mate with them offshore; accounting for 90% of all reproduction by the Hawaiian green turtles. The females come ashore to nest several times a season but wait two to three years before nesting again. The male migrates annually to mate.

While the female usually deposits about 100 eggs, only a few hatchlings will survive to adulthood. The adult turtles return to their home waters in specific areas when the mating season is pau.

The Hawaiian green turtles grow slowly and may take half a century to reach sexual maturity. Although the life span of the species is unknown, they can weigh up to 400 pounds!

Kawela Bay to be conservation district.
See page 5

The adult honu have only two predators---sharks and people. Tiger sharks feed regularly on all sizes of green turtles.

Sea turtle populations have declined in Hawaii and may be facing extinction. Before protective laws were passed, turtles were killed in large numbers to feed fishing crews in the N.W. Hawaiian Islands, and to sell to restaurants. Some native Pacific Islanders still exploit depleted sea turtle populations for food. Although there exists laws protecting sea turtles, poaching still occurs.

Many sea turtles are injured and drown when accidently captured in shrimp trawls, high-seas drift nets, and other fishing gear. They have also been known to eat large amounts of floating plastic and discarded fishing debris which releases toxic substances and blocks digestion.

Pollution and coastal development have destroyed nesting beaches and feeding areas for sea turtles. Turtles have choked on tar balls from oil spills, as well as from garbage dumped at sea.

Presently Hawaii's green turtle population is suffering from an epidemic of a life-threatening tumor (fibropapillomas). The tumors grow so large they obstruct the turtles vision, and the lumps around the flippers disrupt its ability to swim properly.

Although scientists are baffeled by the etiology of this disease, its mode of transmission, they speculate pollution could be the culprit. It's possible, given the locations where the tumor-covered turtles are found, that pollution could depress the turtles immune system.

George Balazs, leader of marine turtle research for the Federal NOAA Fisheries, said 50% of turtles monitored in Kaneohe Bay have the tumors.

Scientists have also theorized the growths are caused by a virus or a flatworm.

Another turtle related mystery miffing scientists is the 680 (est.)
continued on page 5

Laie Fashionable 4-H er's delighted a Windward Mall audience last Saturday with clothes they sewed and modeled themselves.

Pau Honu?

continued from page 1

turtles that washed ashore choking, comatose or dead on the Pacific coast of Colombia, this past February. Roderic Mast, director of Species Conservation for Conservation International, suggested that the conditions that killed these turtles could threaten other endangered turtles in the Pacific. Mast said unconfirmed sightings suggest this might be happening.

In Hawaii all sea turtles are protected under state laws that prohibit harassing, harming, killing or keeping sea turtles in captivity without a permit for research or educational purposes. Riding turtles is also illegal and can be stressful to the animal.

If you observe these activities call the

Enforcement Division of National Marine Fisheries at 541-5918, or after business hours dial 0 and ask for "Enterprize 5469".

You can aid in sea turtle recovery by reporting nesting or basking activities, and dead, sick, injured or accidently captured turtles to Honolulu Laboratory of National Marine Fisheries Service (NOAA) at 943-1221.

George Balazs suggests if you find a green sea turtle on the beach and its still alive, point it back to the water. If it can't swim away, then call NOAA.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administrati
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center
Honolulu Laboratory
P. O. Box 3830
Honolulu, Hawaii 96812

March 18, 1985 F/SWC2

Dr. James Maragos
U.S. Army Corps of Engineers
Building 230
Fort Shafter, Hawaii 96858

Dear Dr. Maragos:

Recently our Laboratory initiated a study to determine the ecological characteristics of foraging and resting habitat preferentially used by green turtles in the Hawaiian Islands. George Balazs of my staff has been assigned to this project. Two of the study sites chosen on Oahu will include Barbers Point (West Beach) and Kawela Bay. During the course of preliminary interviews with residents of Kawela Bay, George has been repeatedly informed that your staff biologist, Robert Moncrief, is very knowledgeable about sea turtles in the area. Apparently he lived and fished there for many years. George would like to have the benefit of Mr. Moncrief's experience in planning and carrying out his research at Kawela Bay. I am therefore writing to ask if we may call upon Mr. Moncrief for this purpose from time to time.

Thank you for your assistance.

Sincerely,

Richard S. Shomura
Director, Honolulu Laboratory

February 7 1986 F/SWC2:GHB

Mr. Don Ho
3954 Gail Street
Honolulu, HI 96815

Dear Mr. Ho:

I am writing to request permission to use your property at Kawela Bay on the evening of February 20, and morning of February 21, (Thursday and Friday) for the purpose of netting and tagging green sea turtles. Our work would be similar to the periodic monitoring we conducted there during 1985.

I have enclosed a postpaid self-addressed envelope for your response. Or, if you prefer, you may telephone me at 943-1221. Thank you for your consideration.

Sincerely,

George H. Balazs
Zoologist

cc: Balazs
HL

9/11/89
Copy please

Oceanit Laboratories, Inc.

coastal & offshore engineering services • research & development

August 14, 1989

M E M O R A N D U M

To: Mr Norman Quon, KDC

From: Dr. Patrick K. Sullivan, OLI PKS

Re: Meeting to discuss turtle capturing and tagging program for Kawela Bay

On August 11, 1989 I met Dr. Jack Davidson of the University of Hawaii Sea Grant Program (SGP); Dr. Kakkala Gopalakrishnan, director of the University of Hawaii Marine Option Program (MOP); and Mr. John Naughton of the National Marine Fisheries Service (NMFS) at the SGP office.

The purpose of our meeting was to explore how turtle capturing and tagging could be accomplished by MOP, under the technical advisement of NMFS. Dr. Davidson explained that MOP is designed to support the education of students first, and responds to requests from the community as it fits in with interests of the students in MOP. Presently, there are no students in MOP to support a turtle capturing and tagging effort at Kawela Bay. However, under the right circumstances, a turtle capturing and tagging program could fit nicely into a MOP project.

Mr. Naughton expressed NMFS interest in turtle capturing and tagging at Kawela Bay. He had recently spoken with Mr. George Balazs (NMFS turtle expert) who would be available to work with MOP students.

In the interest of creating a turtle capturing and tagging program for Kawela Bay within MOP, Dr. Gopalakrishnan outlined the following procedure that would be initiated by MOP:

1) MOP would place a request for interested students in its newsletter Seawords -- inviting interested MOP students to respond.
2) These students would then formulate a turtle capturing and tagging program under the advisement of Mr. Balazs, who would serve as a faculty advisor.

Century Square 1188 Bishop Street, Suite 2512, Honolulu, Hawaii 96813
TELEX: 7431404 MCI: OCEANIT Ph: (808) 531-3017 FAX: (808) 526-1519

3) These students would submit to MOP the formulated capturing and tagging program to see if it was suitable as a Marine Skill Project, required by MOP.
4) At this point, KDC will have an opportunity to contribute to this program. I mentioned that approximately $5,000 was previously discussed by Dr. Maynard (MOP's director, on leave) and Mr. Balazs as a ball park anticipated budget for this type of program.

Per this procedure, MOP could perform turtle capturing and tagging at Kawela Bay under the technical advisement of Mr. Balazs. The information resulting from this study would add to previous work performed by Mr. Balazs ("Preliminary Assessment of Habitat Utilization by Hawaiian Green Turtles in their Resident Foraging Pastures," NOAA Technical Memorandum, NMFS Department of Commerce, NOAA - TM-NMFS-SWFC-71, 1987). As part of their Marine Skill Project, MOP students would be required to write a report on their results, which would help to document the significance of Kawela Bay to the endangered green sea turtle.

PKS:hk
cc: Dr. Jack Davidson, SGP
Dr. Kakkala Gopalakrishnan, MOP
Mr. John Naughton, NMFS
Mr. George Atta, Group 70

Developers want to dredge

Residents say swapping gravel, sand for silt

By David Waite
Advertiser Capitol Bureau

Can man improve on what nature has wrought?

Developers hoping to build two hotels along Kawela Bay on Oahu's North Shore think they can — by dredging up to a foot of muck from a portion of the bay's bottom and replacing it with gravel and sand.

Consultants for Kuilima Development Co., a subsidiary of Tokyo-based Asahi Jyuken firm, say the project will mean clearer waters for everyone who snorkels in the bay as well as a better "bottom texture" for hotel guests who want to wade or swim in the ocean waters.

The developers' consultants say a side benefit may be an improved feeding area for green sea turtles, an endangered species known to feed in the bay.

Longtime area residents and even some newer arrivals, however, say the project is merely an attempt at creating an illusion of the perfect blue lagoon, one with crystal-clear water and a non-threatening sandy bottom.

Project opponents say that while some portions of the bay are murky, those same areas

The Honolulu Advertiser
TUESDAY, May 22, 1990
Final Edition On Oahu 35¢

Kawela Bay

could devastate ecosystem

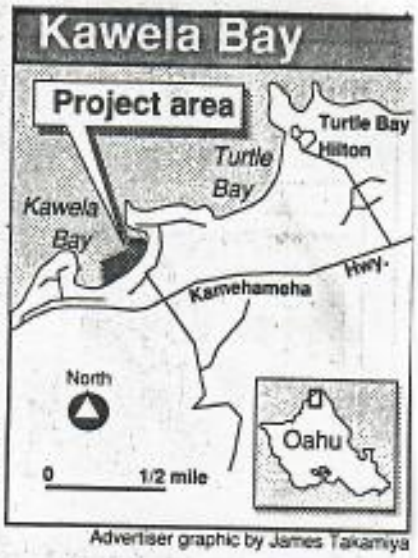
teem with oio, mullet and other fish. They say that if the bay's ecosystem is disrupted, visitors may indeed have a much better view — of a nice sandy bottom devoid of most marine life.

In addition, opponents say the proposed sand and gravel bottom will likely end up on the beach come the first big winter surf.

According to a draft environmental impact statement published in February, the "Kawela Bay Desilting Project" will consist of removing approximately 1,800 cubic yards of silt and clay sediment from a 0.66 acre site in the southeastern portion of the bay.

Plans call for the silt to be replaced by approximately 1,000 cubic yards of crushed

See Kawela, Page A4



Advertiser graphic by James Takamiya

Kawela: Dredging plan draws residents' ire

FROM PAGE ONE

basalt gravel which, in turn, will be covered by 5,000 cubic yards of sand.

Tomorrow is the deadline for submitting comments to the state Office of Environmental Quality Control on the draft impact statement.

Project consultants and Asahi Jyuken officials could not be reached or did not respond yesterday to requests for comments about the plan.

Barbara Evarts, chairwoman of the Beach and Parks Access Sub-committee of the Kuilima-North Shore Strategy Planning Committee, a loosely knit group of some 250-300 area residents, said her committee will urge that the bay be turned into a marine life conservation area similar to Hanauma Bay.

"We're trying to find both the positives and negatives about the project," Evarts said.

So far, the negatives appear to outweigh the positives, she said.

"Negative number one is that we don't feel enough has been done to study the impacts on the bay's ecological system."

The committee is also concerned that the consulting team included a marine engineer but not a marine biologist.

"In our minds, what they are trying to accomplish will have minimum benefit in comparison with the damage that could be done to the ecosystem," Evarts said.

To their credit, the developers pledged at a community meeting May 3 not to proceed with the desilting project until all community concerns are resolved, Evarts said.

Among those opposed to the desilting is Honolulu attorney Judith Pavey, who is the co-owner of one of the private homes fronting the bay.

Pavey wrote to the state D partment of Land and Natu Resources, which must gran conservation district use per if the project is to proceed.

"This is one of the last pr tine spots on Oahu," Pav wrote. "It is incredibly bea ful. Why would the state ev consider letting the Japan mess with this beautiful bay?

The state has not yet form ly accepted the permit appli tion. Once the permit accepted, it must be approv or rejected within 180 days.

The Army Corps of En neers is also reviewing the p ject.

TRANSCRIPT EXCERPTS OF A MEETING ON KAWELA BAY RESORT DEVELOPMENT

Audio-tape recorded by
Harriet and Murray Eisner

December 4, 1989

Sullivan: The important point about this is the lower pockets we're recommending a basalt type material be placed there, about 1000 yards, we're removing about 2000 replacing total of 6000, net change 4000 yards. The lowest pocket we're recommending a crushed basalt material and then a particular type of sand above that. We've looked at the impact from placing sand then in the bay, in addition to the impact from removing fine material. In doing that we've looked at the wave climate and what the waves do to the sand when they come in the bay. As you are aware, the waves will have a tendency to move the sand. We modelled the currents in the bay and how the currents would change under different types of conditions. This particular illustration here is a computer-generated current distribution before desilting and filling. And this is after. And to clue you in, it's hard to see the difference because the difference is very small. And the point of the excercise is to look to see if there is some sort of a second-order artifact or some sort of thing as the result of the activity. And that's a basic run through in a nut shell- have the lights- of what's been ongoing in the bay. So What I'ld like to do is answer some questions or concerns that you might have with respect to what we've found.

Question: (Concerning what will happen to the turtles in the bay)

Sullivan: That's a good question. That particular portion of the bay, from the surveys that were done, we found it to have the least activity

from a marine life standpoint. the turtles, the question of turtles, is something wer've given special consideration to. The green sea turtle is known to use the bay principally as a foraging habitat. It's been under study by the National Marine Fisheries Service and in the document we are putting together for the Environmental Impact Statement we included a relatively detailed report done by the National Marine Fisheries Service as part of the existing body of information of what's occurring in the bay. Now, since the turtles use the bay principally as a foraging habitat, and the productive foraging habitats are found in the northwestern and northeastern portions of the bay, we're looking at removing material and activity in the southeastern portion of the bay. We found that the impact of that activity on the population to be insignificant. Now we went through a quite extensive dialog with the National Marine Fisheries, and the Corps of Engineers, and the Fish and Wildlife Service and several other federal and state organizations, and going through the Corps of Engineers permit. Presently, we are involved in a turtle monitoring program. And the turtle monitoring program includes five days of observations from the shore of turtle activity in the bay. We have completed two of those, the idea is to see if there is a measurable change from the proposed activities, the entire development as a matter of fact, and the National Marine Fisheries is interested in that from a planning standpoint so that in the future they will have a better handle of what to anticipate from development activities. With respect to what we see happening to the turtles, one area that we've given a considerable amount of effort to, is the tradeoff between removing the sand and leaving it, versus removing the sand and replacing it. And what we've determinmed is that the benefit of

removing the sand and leaving it is that you leave a consolidated type of rubble substrate which is suitable for benthic algae which is a preferred dietary item for the turtles. By placing the sand in the bay, you no longer have that substrate and that's a potential.. a.. in terms of increasing foraging habitat it wouldn't do that. One of the things we've looked at, and there's been no final decision on, is planting or transplanting a type of seagrass that the turtles prefer which grow in the sand. Now, one of the interesting tradeoffs that we've found from a design standpoint, is that when you look at all the various parameters in what controls the growth, the limiting factor that we find in this portion of the bay is the available of light for photosynthesis, and we've done some calculations that show that by bringing the bottom up from six feet to three feet there's considerably more light available for photosynthesis which will then result in a more productive benthic habitat. So, we're looking at that as a more proactive way to create more productive benthic or foraging habitat for the turtles as opposed to leaving it, in which case we know that the amount of light available for photosynthesis is..a.. we don't know how well it's going to be colonized or not. Right now it's not a productive area. So that's kind of an extensive answer to the question. It's an area we've looked at in a lot of detail. So I'm trying to address it in enough detail to satisfy your concerns.

Question: (Concerning plans to dredge in the summer and the effect on turtles)

Sullivan: The premonitoring activity will include one year, so it will be four times, five days each, spread out over one year. So it will include a summer season. And then it's going to include two years after the

desilting operation. So the monitoring activities will actually go on until 1993. It will be one year of monitoring prior to any activities in the bay. And I've got some of the data from the July run and interestingly enough what we found is that given the tradeoff between turtles coming in early in the morning versus a high tide, they prefer early in the morning. We suspect it's because of less activity in the bay even though it's harder to come in when the tide is low. On this particular data set we took in July, the tide was low in the morning and we got some interesting findings from that.

Question: (Have you factored in the effects of people on turtles or don't they come in that close?)

Sullivan: If there were no humans, they probably would come in closer. As it is now, the bay is used for fishing, netting, swimming, all sorts of things, and what we find is that the turtles tend to, well there's two ways to look at this. Turtles will tend to shy away from human activity. On the other hand, what's been found from the ongoing monitoring at West Beach is that, they've done some very extensive coastal construction, the turtles, they think, have come in closer and are curious about what's occurring, as opposed to going further out, but you're looking at two different types of actions where it's one thing to have them come in because they're curious, it's another thing to have them sitting right next to you in the water. As it is now, the maximum number of indistinguishable turtles that we've found- indistinguishable meaning we didn't know if the turtles went from zone A up to zone B, within a particular time interval, amounting to say six, starting from 6 in the morning to 6 or 7 at night. Now when the National Marine Fisheries did some studies they counted up to

36 turtles. But they came in very early in the morning at a high tide. We'll be doing some of those measurements too just to see. But the impact from human activity, I think, will far exceed anything from the dredging or desilting operation.

Question: (Concerning the use of black basalt)

Sullivan: The reason for the basalt is because there is significant freshwater intrusion into the bay and at the freshwater substate interface, where the freshwater comes in there is a slightly lower ph. The lower ph will have a tendency to dissolve the carbonate. It's something that we are aware of, we haven't spent a lot of detailed effort looking at it because we don't see it as a problem from the standpoint of putting in the basalt. But the idea is at that lower ph interface, if you've got basalt you won't dissolve the calcium carbonate in the sand, and it'll remain as the hard basalt. So that's the reason for it. We suspect that the interaction between the low ph, the high residence time, and the dissolution of the calcium carbonate at that interface causes this mucky-type material. So that's the reason for the basalt. We don't see any impact from using basalt.

Sullivan: We're estimating 1000 yards of basalt and 5000 yards of sand. And the basalt is just going to cover the lowest part of the bottom. That's all.

Question: What size will it be?

Sullivan: Like crushed rock.

Question: (Concerning diverting the stream that empties into Kawela Bay)

Sullivan: My opinion, though, in terms of impact in the bay from the freshwater intruding into the bay, is that I don't really think it's going

to have a major impact. There's alot of freshwater intruding into the bay from other sources. It's not from direct stram discharge. The stream hasn't discharged into the bay in a long time.

Question: (Regarding movement of basalt and sand-fill from periodic large waves)

Sullivan: ....So it really is going to depend on the specifics, extent of the damage. What we expect in that sort of situation is that most all the material will move in the sand channel that's adjacent to the reef, and will not affect the foraging habitat which is in the northeastern and northwestern portions of the bay.

Question: Will you have to do an Environmental Impact Statement to do it again in the event waves move the basalt and sand?

Sullivan: The Corps of Engineers has required us to monitor the sand kinetics in the bay. How quickly does it flow from where to where, to get an idea of just what we can expect down the road, and I think its really going to depend on what we find. They'll make the determination whether or not they think there needs to be an extensive redoing. To date I think what they've identified, is the sand transport as the key item for understanding the frequency of desilting and other related things in the bay.

Sullivan: Speaking on behalf of the developer, there's an interest in increasing the marine life activilty in the bay and, in order to do that, certain things have to be addressed. For example, fishing with nets. Fishing with nets causes damage to a, you know we got guys out there for five days and they see people catching turtles in nets. They told them we were monitoring this, and the data would go back to the National Marine Fisheries, so they threw the turtles back. I suspect that there will be an

increase in marine life, but it may need some help, and that may require limiting certain activities in the bay, such as net fishing. Because if you're going to just clean out the bay, it's going to be very hard to populate it. Increasing the foraging habitat will make it more suitable for fish, turtles and other marine life. But it's going to take more than that. There's going to be greater access to the bay by everybody. You're going to have people stopping in that can use the bay. There's interest in a conservation designation. But that needs to address alot of different considerations.

Sullivan: I presented a summary of information I thought you would be interested in, but we have alot more information and studies on the bay.

Sullivan: We did extensive interviews before people moved from the leasehold dwellings on the bay.

Summary of green turtles tagged and resighted at Kawela Bay, Oahu
(Report of 4 April 1990)

George H. Balazs
National Marine Fisheries Service
2570 Dole Street
Honolulu, Hawaii 96822-2396

Tag No.	Carapace length (cm) straight	curved	Weight (lb)	Comments
		26-28 March 1985 (19 turtles)		
8751,52	49.9	52.5	--	--
8753,54	44.0	46.0	--	--
8755,56	56.4	61.5	--	--
8757,58	55.9	59.5	--	--
8759,60	59.6	62.5	--	--
8761,62,63	64.0	68.5	--	--
8764,65,66	69.0	72.5	--	Salt gland anomaly?.
8767,68,69	75.1	81.0	--	--
8770,71,72	66.3	70.0	--	Extra plastron scute.
8773,74	38.7	40.5	--	--
8775,76,77	67.5	71.5	--	--
8778,79,80	54.4	57.5	--	--
8781,82,83	72.0	75.5	--	--
8784,85	53.1	56.0	--	Passed monofilament line.
8786,87,88	67.0	71.5	--	Growth band in carapace scutes.
8989,90,91	69.7	75.0	--	--
8992,93,94	74.7	79.8	--	--
8995,96,97	66.3	70.5	--	--
No tags	55.5	59.0	--	Spirorchidae.
		15-16 April 1985 (6 turtles)		
8761,62,63	64.4	--	78	Recapture from 3/26/85.
8798,99 8800	65.7	70.5	82	--
8801,02,03	54.0	58.0	46	--
8804,05	40.4	42.5	24	--
8806,07,08	61.9	65.5	76	--
8809,10,11	67.6	72.5	91	RHF partly missing; 11th MSL missing.

Continued.--Summary of green turtles tagged and resighted at Kawela Bay, Oahu (G. H. Balazs, 4/4/90).

Tag No.	Carapace length (cm) straight	Carapace length (cm) curved	Weight (lb)	Comments
	25 June 1985 (1 hand captured using scuba)			
8489,90	42.5	44.5	--	A. glomerata, C. edule, Pterocladia.
	27-28 June 1985 (5 turtles)			
8493,94	40.8	43.9	--	L. mariannensis - 99%.
8502,03,04	67.7	73.0	--	A. spicifera - 100%.
8499,8500 8501	60.9	65.0	--	A. spicifera - 99%.
8497,98	47.6	50.2	--	A. spicifera - 99%. L. nidifica - 1%.
8495,96	44.9	47.0	--	A. spicifera - 99%, C. edule - 1%.
	2-3 July 1985 (6 turtles)			
8761,63 (8505)	64.5	69.7	--	Recapture from 3/26 and 4/15/85, A. glomerata - 99%, Laurencia sp. - 1%.
8506,07	67.0	70.0	--	A. spicifera - 99%.
8778,79,80	54.6	58.5	--	Recapture from 3/27/85; A. spicifera - 99%.
8508,09	43.4	45.5	--	A. spicifera - 99%.
8510,11	50.2	53.0	--	A. spicifera - 99%.
8512,13	52.9	56.5	--	A. spicifera - 99%, L. nidifica - 1%.
	20-21 June 1986 (1 turtle)			
8851,52	46.3	48.5	--	--
9087,88	39.1	42.0	--	14 March 1990 (1 turtle) Entanglement in gill net.
	28-29 March 1990 (1 turtle)			
Y289,99 Y300	63.0	67.0	77	Salt gland anomaly?

HARRIET EISNER
200 GROSVENOR PLACE
ATLANTA, GEORGIA 30328

HARRIET EISNER
200 GROSVENOR PLACE
ATLANTA, GEORGIA 30328

Dear George,

More about Turtles problems here.
How's everything there? We probably won't be out until Oct - I have 2 shows here in Atlanta the 1st week & 2nd weekend in October so I have lots to paint.

Hope all's well with y'all. Miss my Bay!

Aloha,

Harriet

P.S. Right now we're on our way to Alaska for 2 weeks.
Keep in touch!
Murray wrote a letter to Asahi Jyuken that Barbara Evans is going to translate & send to Japanese management telling them the ENVIRONMENTAL groups will protest any dredging & K. Bay or disturbance of Turtles. Will send you a copy when we return. H.

After seven years of planning and preparation, the mega-expansion of Kuilima Resort is about to become reality.

The launching at Kawela Bay

Management usually winces at the thought of doing things by committee. But *that*, say the planners of Kuilima Resort, is exactly why their project is finally ready to break ground "only" seven years after conception. More than 100 individuals representing the developer, a number of North Shore community groups, and state and county governments were involved in the negotiations, and not too many of them expected the talks to go as smoothly as they did. Some might say that the developer's strategy was not altogether altruistic, and that Kuilima was forced to seek community input or face having its request for land-use changes turned down flat. But Kuilima's supporters say the launching at Kawela Bay is a remarkable accomplishment, especially since it occurred during a period when strong anti-development sentiments prevailed in the Islands.

Norman Quon, project director for Kuilima Development Co.—a local subsidiary of Japan-based Asahi Juken—says Kuilima's approach to resort planning was an adaptive one, formulated during a period when "slow-growth" proponents were becoming increasingly vocal. "You just can't go in and build anything that strikes your fancy anymore," says Quon. "If you don't bring people into the process, they'll force their way in, and then you'll have a war on your hands. We fumbled around a lot in our early meetings, but we also made a lot of progress."

As a result of its efforts, Kuilima's master plan sailed through the review process with little community opposition—a plan that will transform the Turtle Bay Hilton and Country Club on the North Shore into a massive four-hotel complex. The project will include two golf courses, a variety of sports clubhouses,

BY TOM YONEYAMA

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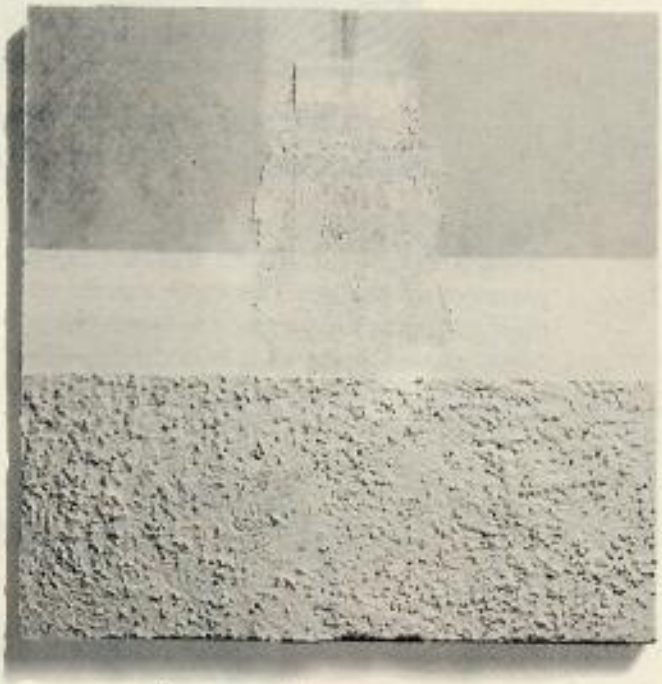

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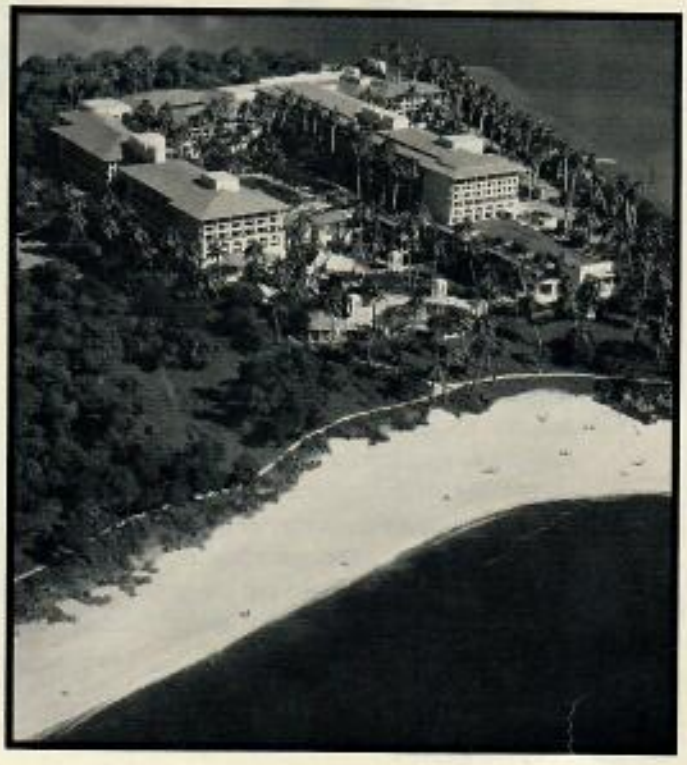

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private and public parks, a shopping village and a 97-acre wildlife preserve. The resort will also eventually house an equestrian center and condominiums. By the time Kuilima Resort is completed around 1999, development and construction costs will total between $600 million to $800 million, according to preliminary estimates. The eye-opening scope of the project will affect Kahuku and other North Shore communities in as dramatic a fashion as the Ko Olina development will affect residents of Ewa.

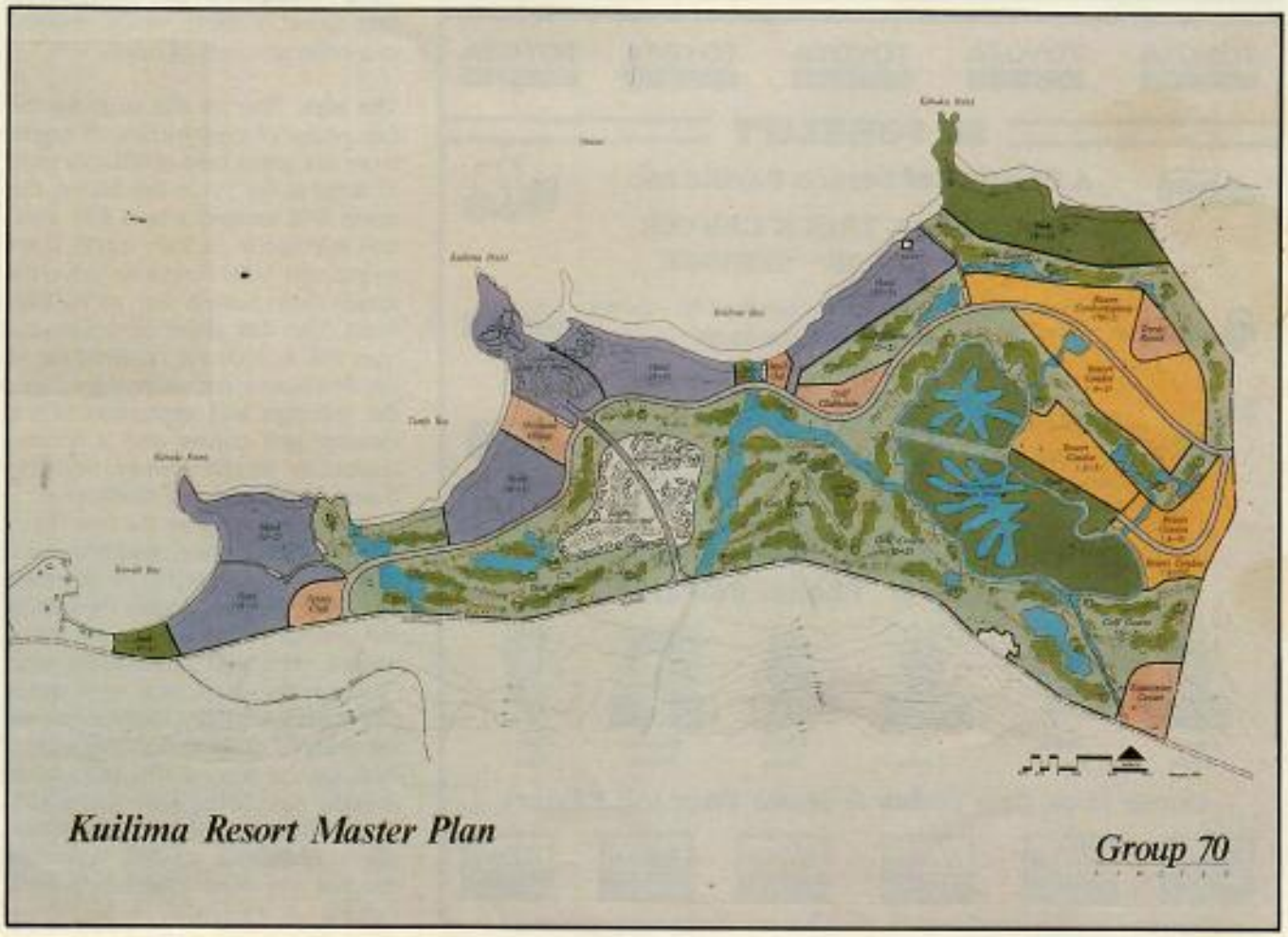
A troubled history. North Shore community leaders, who initially rejected the project outright, realized the significance of those impacts. After Prudential purchased the old Kuilima Hotel from Del E. Webb Corp. in 1976, it conducted studies which suggested that the isolated hotel's sluggish occupancy rates could be increased with the addition of a "critical mass" of hotel rooms, amenities and activities. Subsequently, in 1983, Prudential went before the city Planning Commission to request amendments to the regional development plan, asking for a variety of land-use changes that would allow the construction of as many as 4,000 hotel rooms.

In a series of public hearings, community groups voiced vehement opposition, citing a wide range of environmental and socio-economic concerns. Faced with considerable anti-growth sentiment, Prudential backed off to lick its wounds and rethink its strategy. "The people didn't want the development at all," remembers Meryl Andersen, who has headed the North Shore Neighborhood Board for the past 10 years. "That's when they decided maybe they'd better find out what the people wanted."

A few months later, Prudential hired Quon—a vice president of Honolulu architectural firm Aotani and Associates—to head Kuilima Development. It also hired Raymond "Buddy" Ako—formerly with the Honolulu Action Program, a quasi-public social service agency—as a community relations specialist, and commissioned the Honolulu architectural firm of Group 70 to come up with a master plan. "We literally scrapped everything that came before us," says Quon. "We wanted community input, but how do you go about doing that and make it something that really impacts the planning process? As much as people talked about working with the community, we had no real guidelines."

Since that area of Oahu was economically depressed, Prudential decided to use jobs as its rallying call. At the time, Kahuku was suffering from an unemployment rate of about 7 percent, slightly higher than the state's average. But more significantly, many of the working residents had jobs that were tourism-related, requiring them to commute to downtown and Waikiki. An expanded Kuilima Resort could bring more jobs right to Kahuku's front door, they were told by the developers. The project began to sound more palatable.

Quon and other members of the Kuilima team began meeting on a monthly basis with representatives of the North Shore and Koolauloa neighborhood boards. A Kuilima/North Shore Strategy Plan Community Advisory Committee was formed to provide a forum for discussion. No subject was off limits, says Quon, and talks covered everything from the proposed architectural style of the resort to employee training and afford-



able housing. At times, the meetings were intense and discussions often led to angry words. But, ultimately, the strategy of community participation worked. Prudential won over most of the associations and eventually won the necessary land-use changes.

While some residents continue to oppose the development because of environmental concerns for Kawela Bay and its surrounding waters, there was general agreement that the resort would provide much-needed employment for the economically disadvantaged area. "We have a number of convenants tied in with the land-use changes that guaranteed us things like beach access and public parking," says Andersen, "as well as establishing an employment training facility."

Then in February 1988, the roof appeared to cave in. Prudential announced that it had sold the Turtle Bay Hilton and its surrounding 800 acres to Asahi Juken, a Japan-based real estate firm, for $127.5 million. There was initial anxiety about the change in ownership among the project's participants. But Asahi embraced both the master plan and the continued participation by the North Shore communities and other parties, says Quon, a move which resulted in a collective sigh of relief.

The plan. That set the stage for the first phase of construction to begin. From its current base of 401 rooms on 17 acres at the Turtle Bay Hilton, the resort will expand across 847 acres and eventually include 3,000 hotel rooms and 1,000 condominium units strung from Kawela Bay to Kahuku Point. The first phase of the master plan will include the construction of the two hotels; the shopping village; the redesign and expansion of the existing golf course and a second course by Arnold Palmer; and the tennis, beach and golf clubhouses.

Groundbreaking for the first hotel, a 383-room upscale, mid-rise complex at Kawela Point, is scheduled for early this month. Charles Pankow is the general contractor for the initial project. Although discussions with "a major operator" were well under way in early February, Kuilima was not yet ready to make an announcement. Bids for the second 650-room hotel fronting Kawela Bay were also scheduled to be accepted in March. Subsequent phases—a specific timetable has not yet been established—will include a 530-room hotel along

Turtle Bay, adjacent to the shopping village. A fourth hotel at Kuilima Bay will add 621 rooms to the existing Turtle Bay Hilton and will probably continue to be operated by the Hilton. Another 415-room hotel is planned for Kuilima Bay near Kahuku Point.

As for the luxury resort condominiums, and new golf course and clubhouse, the developers envision a complex similar to Pebble Beach. The resort condominiums inland from Kahuku Point will be surrounded by a shoreline park, the wetland park, and the new golf course. "The two Kawela Bay hotels will be separated from the rest of the resort by parts of the golf course and will have a passive, retreat feel to it," says Quon. "The complexes surrounding Turtle and Kuilima Bay will have a more active emphasis with the shopping village, sports centers and golf courses."

In an era of mega resorts and Disneyland-like experiences, in Hawaii, Kuilima's planners have designed, at least in their first two hotels, a resort more like the old Haleiwa Hotel rather than the grandiose Hyatt Regency Waikoloa. "What we wanted

Quon: "If you don't bring people into the process, they'll force their way in and you'll have a war on your hands."

to create was a resort that blended in with the traditional lifestyle of the North Shore and not something that stuck out like a sore thumb," says Francis Oda of Group 70. Community groups also approve of the design. "It looks like it's going to be very nice, although what's on paper isn't always what you end up with," says Andersen. "But I'm sure they are going to do a good job. They've certainly spent enough money on the project."

There are few residents along the North Shore who believe that the Kuilima Resort expansion will not significantly change the face of the North Shore. Opponents have pointed out that the pressure for more rapid changes along the North Shore will not end with Kuilima, but will only stimulate other developments along its fringe, similar to projects on the outskirts of Waikiki, Lahaina and Waikoloa.

But Kuilima's planners feel that they have provided maximum opportunity for community input—the extent of which they feel is unprecedented locally. "They've (Kuilima) worked with the community for quite a long time, and I feel very comfortable with the amount of community involvement in the project," Andersen agrees. "They brought their designs to us and, if we were not happy with them, they'd go back to the drawing board. I think it's great when these big developers do come to us, sit down and find out what we want. That way, the (development) moves along smoothly, every side is heard, and we all learn something—even the developers." ■

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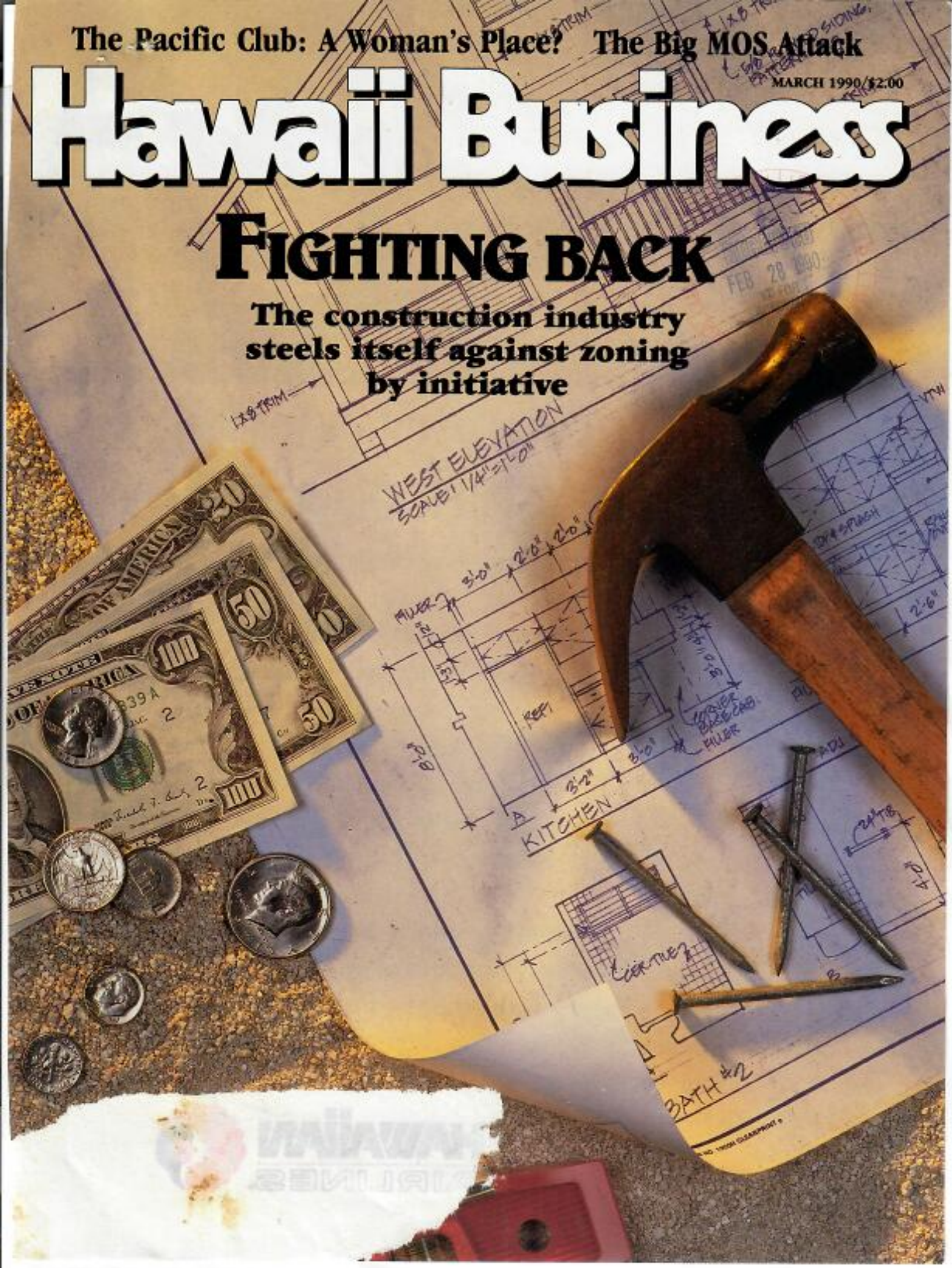


8/16/90 THA A3

Visa-fraud guilty plea

Turtle Bay owner's kin fined $100,000

By James Dooley
Advertiser Staff Writer

More than two years after he was first arrested, a member of the well-to-do Japanese family that controls the Turtle Bay Hilton resort and other island real estate has pleaded guilty in federal court to a visa-fraud charge.

Takao Matsumoto, 53, pleaded guilty yesterday to one of two felony charges lodged against him in a 1988 grand jury indictment. U.S. District Judge Alan Kay, following the terms of a plea agreement reached by lawyers in the case, fined Matsumoto $100,000 but did not sentence him to prison time.

Matsumoto could have been sentenced to a maximum penalty of five years in prison and a fine of $250,000.

He will return to Japan after payment of the fine.

One of Matsumoto's brothers, Takeo, is scheduled to go on trial here in October on similar visa-fraud charges.

Another brother, Kizo, president of Asahi Jyuken, the Japanese development conglomerate that owns the Turtle Bay Resort, was stripped of his visa by U.S. Immigration Service officials here in 1988 after admitting that he had not disclosed an old criminal record in Japan when he applied for a U.S. visa.

As first reported by The Advertiser in 1988, Kizo Matsumoto is a former member of Japan's largest gangster group, the Yamaguchi-gumi, but resigned his membership in the 1960s, at about the same time he founded Asahi Jyuken.

Takao Matsumoto admitted in court yesterday that he falsely claimed to have no criminal record in Japan when questioned by an INS agent at Honolulu Airport on July 16, 1988. He acknowledged yesterday that he was convicted twice in the 1960s of violating Japanese anti-prostitution laws. He was arrested on a similar charge in 1972 but was not convicted, according to Assistant U.S. Attorney Michael Burke.

Takao Matsumoto is not an officer of Asahi Jyuken, but heads a security guard company that is a subsidiary of Asahi Jyuken.

Under normal federal court sentencing guidelines, Kay should have fined Matsumoto no more than $2,500. But the plea agreement signed by Matsumoto and the government, and accepted by Kay, cited several "aggravating circumstances" that allowed the judge to significantly increase the fine.

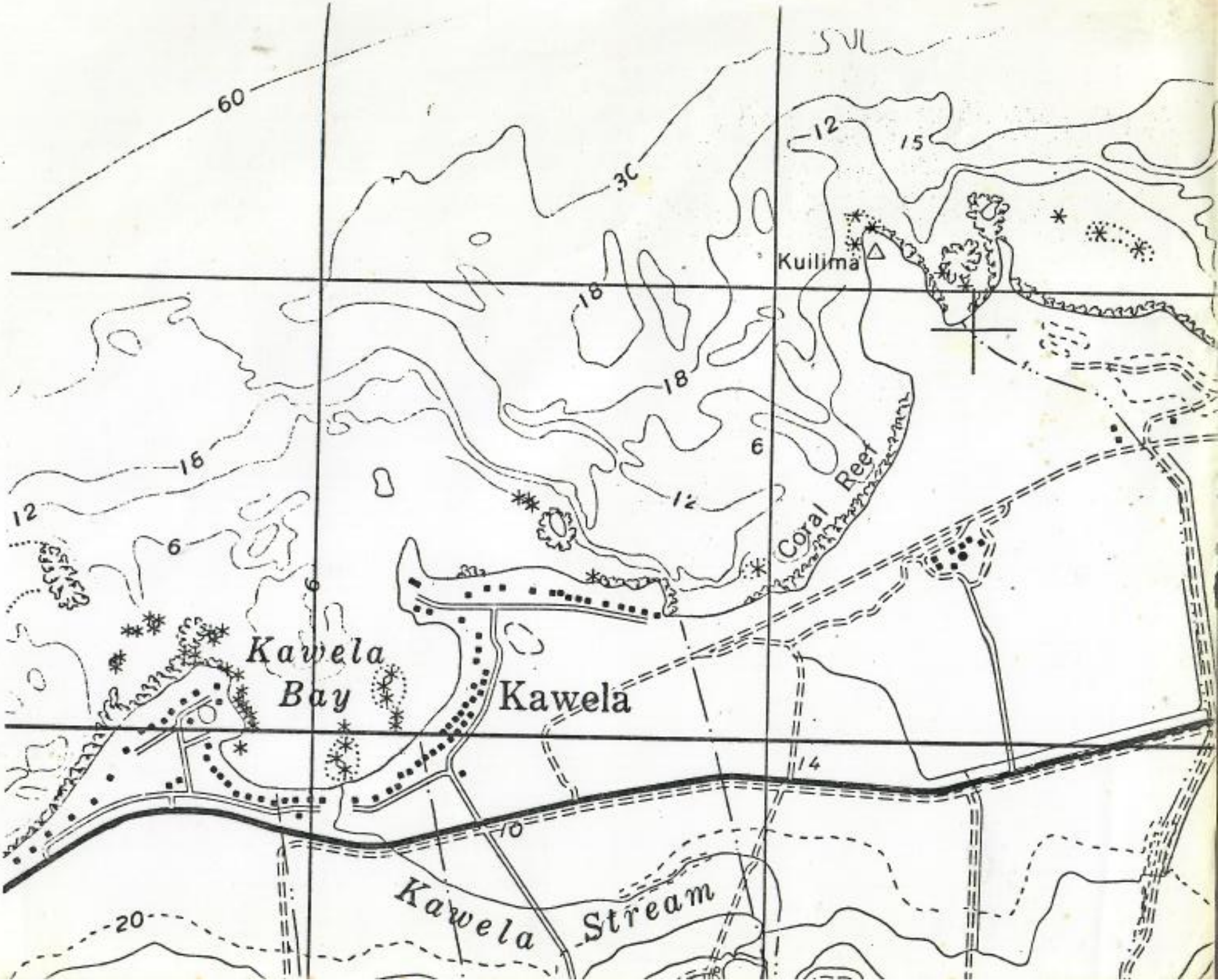
Among them was the "serious regional concern of the U.S. Consulate in Osaka, Japan, regarding admission of individuals with prior criminal records into the United States."

The plea agreement said the heavy fine would serve as a "deterrent factor" for would-be travelers with criminal records.

Another "aggravating factor" was Matsumoto's "substantial" personal wealth. The standard $2,500 fine "would provide little punishment or deterrent effect for him, and importantly, for the individuals from Osaka, Japan, of similar wealth," the plea agreement said.

Burke yesterday attributed much of the delay in prosecuting the Matsumoto criminal cases to difficulties in obtaining official criminal records from Japanese authorities.

He said similar lengthy delays have been experienced in five other pending criminal cases here.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Kawela Stream
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Histology Report Green Turtle (ex Kawela Bay) GT32985

Lungs: There is marked enlargement of the alveolar spaces, associated with greatly increased amounts of smooth muscle in the alveolar walls. The alveolar septa contain numerous embryoated helminthic eggs, most of which are surrounded by multinucleated histiocytes. The pulmonary arteries, especially the large and medium-sized vessels, show extensive intimal thickening by smooth muscle. This almost obliterates the lumens of some vessels.

Liver: The lobular architecture is fairly well preserved, although there are large numbers of hemosiderin-laden histiocytes through all portions of the lobules. Ova similar to those in the lungs are found within the lobules, but are fewer in number and are associated with a less conspicuous host reaction. A single, fairly large segment of the portal vein has a markedly thickened intima and is surrounded by clusters of round cells.

Small Intestine: There is too much autolysis to distinguish much cytologic or even histologic detail in the mucosa. However, the configuration of the villi suggest that there has been marked mucosal damage and inflammation, associated with the accumulation of many round cells in the lamina propria. The mucosa and submucosa contain occasional helminthic ova. They are larger than those in the liver and lungs.

Kidney: The configuration of the glomeruli, some in the process of subcapsular development, suggest that this animal is not yet mature. Present in both the capsule and the interstitium of the cortex are occasional ova similar to those in the liver and lung. The renal artery is markedly thickened in its intimal aspects and also shows distinct endothelial hyperplasia. There is a single glomerulus that shows cellular infiltration, adhesions between capillary and capsule and basement membrane thickening. This glomerulus is surrounded by a dense cuff of round cells. There is one embryoated ovum within a distal convoluted tubule. This egg is not associated with either cell reaction or tubular damage.

Conclusions: This animal apparently succumbed to the effect of cardiovascular fluke infection (Diginea: Spirorchidae). The most extensive tissue damage was found in the lungs, which showed extensive interstitial fibrosis and severe pulmonary sclerosis consistent with debilitating right heart failure; and of the small gut where there was extensive mucosal necrosis and ulceration. The latter would have been inconsistent with adequate nutrition. Renal involvement was associated with focal embolic glomerulonephritis. The presence of embryonated eggs in undamaged distal convoluted tubules suggests that some eggs may be passed in the urine.

Grant N. Stemmermann, M.D.
46-458 Haiku Plantation Drive
Kaneohe, HI 96744

April 14, 1985

NOTES ON KAWELA BAY MORTALITY:

Found in Turtle net 3-28-85 AT KAWELA BAY, OAHU. Comatose when recovered at 0900h. Resuscitated, but died sometime during 3-28 pm. Necropsy conducted 3-29 am.

GI tract filled with food (benthic algae)

Straight carapace length - 55.5 cm

18 other green turtles caught with nets during the same fishing period (3-27/3-28), all of which were able to surface and breathe after becoming entangled.

NATIONAL MARINE FISHERIES SERVICE
HONOLULU LABORATORY
P. O. BOX 3830
HONOLULU, HAWAII 96812

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center
Honolulu Laboratory
P. O. Box 3830
Honolulu, Hawaii 96812

April 1, 1985 F/SWC2:GHB

TO: William G. Gilmartin, Leader, Marine Mammals and Endangered Species Program

FROM: George H. Balazs, Wildlife Biologist

SUBJECT: Results of recent field studies of green turtles at Kawela Bay

A tangle net 200 ft long and 8 ft deep was set and continuously monitored at Kawela Bay from 3:30 p.m. Tuesday, March 26, until 8:00 a.m. Thursday, March 28 (40.5 h). Nineteen green turtles were captured during this period; 10 the first day and 9 on the second day. All but two of the turtles were caught at night between sunset and sunrise. The turtles ranged from 39 to 75 cm in straight carapace length. Except for one turtle, all were found to be vigorous and apparent good health with no signs of injury, tumors or other disease. No tag recoveries were made, although none were expected since this was the first capture and tagging effort ever conducted at Kawela Bay. All turtles were captured while they were coming in to feed in very shallow water close to shore at the west end of the bay. Later this month capture work will take place at the east end of the bay where turtles are also reported to forage close to shore.

On the morning of March 28 a 55-cm turtle was found comatose in the net lying on the bottom. The turtle was only lightly tangled, the net was not snagged on bottom substrate, and there was no apparent reason why the turtle had not swam to the surface to periodically breathe, like all other turtles caught in this manner. Resuscitation efforts were immediately undertaken to ventilate the lungs and stimulate cardiovascular function. After about 60 min of therapy signs of revival were seen in the form of tail contraction and shallow irregular breathing. Improvement gradually continued throughout the morning, and artificial ventilation with a trachea tube in the glottis was discontinued. At noon our activities at Kawela Bay were completed and we departed for Honolulu. Since the turtle was still weak, I made the decision to take it with us to hold in captivity for a few days at Kewalo Basin. The turtle was subsequently left there in a shaded, moist tank. At 4:00 p.m. on that same day it was crawling around this tank and seemed to be well on the road to full recovery. However, when I next saw the turtle at 8:30 a.m. on March 29 it was dead. A necropsy was immediately performed and tissue samples taken of major organs for examination by a pathologist. The turtle had very little fat reserves, unlike the majority of dead stranded green turtles submitted to us for necropsy. Also of possible significance was the presence of a gray-black substance with an odor of hydrogen sulfide in the first 10 cm of the small intestine following the stomach. Two other dead stranded turtles examined in recent months have also been found to contain a similar substance in the same region of the small intestine. Additional data as to the cause of the turtle's death may be forthcoming when the results of tissue examination are reviewed from the pathologist.

Fishery Management - Bob Iversen coordinated processing of the spiny lobster emergency regulations and arrangements for public hearings on the draft bottomfish FMP with the Western Pacific Council and regional office and headquarters personnel. The council has scheduled 10 public hearings on the bottomfish FMP from April 1-29 in Hawaii, Guam and American Samoa.

Habitat Protection - John Naughton conducted a site inspection of Kawela Bay, Oahu, with personnel from the SWC Honolulu Laboratory. Portions of Kawela Bay are proposed for development as a resort hotel complex by Prudential Insurance Company. Two nights of turtle netting in the bay by lab biologists produced 19 green turtles which were measured, tagged and released. Early study results indicate the importance of Kawela Bay as green turtle forage habitat.

Fishery Development - Estimates of 1984 fisheries landings and values for the state of Hawaii were prepared and sent to NMFS headquarters for publication in Fisheries of the U.S., 1984.

Peter Milone prepared the 1984 annual report on NMFS work with island governments to protect and enhance their tuna and billfish fisheries. This report is required by MBO milestone exercises.

Protected Species - Gene Nitta continued work on the FEIS and the proposed rule for designation of critical habitat for monk seals. He also prepared a response to a Sierra Club request for information on current humpback whale management by the NMFS.

Lew Consiglieri continued work on the Hawaiian humpback whales management plan and prepared a draft Section 7 biological opinion covering the effects on monk seals and green turtles of the Fish and Wildlife Service's (FWS) master plan for the Hawaiian Islands National Wildlife Refuge.

Fisheries Development Division

A meeting between lenders and tuna industry representatives was held by the division on March 21 in San Diego. Fifty representatives from commercial banking, farm credit banks and the tuna industry attended; Howard Ness and Lori Roth represented the region. Ness spoke on the current state of U.S. fisheries and the tuna industry in particular, giving a brief presentation on the history of the FLF and FOG programs. Roth presented her views on financial assistance problems within the tuna industry at an afternoon lenders session.

Ness met with Glenn Kiel, NMFS Western Inspection Office, and persons interested in seafood inspection requirements at Kiel's office on March 25. The meeting was prompted by Australia's concern over seafoods exported into the United States.

Industry Analysis and Information Section - Year-end landings and value tables for 1984 were received from the California Department of Fish and Game (CDFG) on March 22. The data were manipulated into our landings and value tables and sent immediately to headquarters. Some of the monthly

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center
Honolulu Laboratory
P. O. Box 3830
Honolulu, Hawaii 96812

March 21, 1985

INFORMATIONAL NOTICE: Research of sea turtles at Kawela Bay and Turtle Bay

Over the next few months, biologists from the Southwest Fisheries Center Honolulu Laboratory, National Marine Fisheries Service, NOAA will be conducting studies of sea turtles at Kawela Bay and Turtle Bay. This work will involve the capture of turtles with nets and by hand, using scuba. Nets will be primarily set during the nighttime hours and watched from shore with a spot light. All turtles captured will be tagged in a harmless manner prior to being released.

If you would like to receive more information about this research project, please telephone George Balazs at 943-1221, or write to the address shown in this letterhead.

All sea turtles in Hawaii are fully protected under the U.S. Endangered Species Act and wildlife rules of the State of Hawaii.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center Honolulu Laboratory
2570 Dole St. • Honolulu, Hawaii 96822-2396

February 4, 1991 F/SWC2:GHB:JLB
DONHO-7L.GHB

Mr. Don Ho
Ho Enterprises
3954 Gail Street
Honolulu, Hawaii 96815

Dear Mr. Ho:

I am writing to once again request permission to use your property at Kawela Bay for an afternoon and evening to capture, tag, and study the Hawaiian honu (green sea turtle, *Chelonia mydas*). Although we have not yet set a specific date, I felt it would be appropriate and courteous to first contact you in writing, since I have not done so for some time.

Thank you very much for your consideration of this request.

Sincerely,

George H. Balazs
Zoologist

HO ENTERPRISES, LTD.

FAX TRANSMITTAL

DATE: 2/25/91

TO: GEORGE BALAZS

COMPANY

ADDRESS

TELEPHONE

FAX NUMBER: 942 2062

TIME: 11:00AM

FROM: HAUMEA

COMPANY: HO ENTERPRISES, LTD.
2005 KALIA ROAD
HONOLULU, HAWAII 96815
TELEPHONE: (808) 923-3981
FAXLINE: (808) 923-4718

NUMBER OF PAGES SENDING (INCLUDING COVER SHEET): 1

PLEASE CALL SENDER IF YOU DO NOT RECIEVE ALL PAGES.

COMMENTS: GEORGE THIS FAX IS TO INFORM YOU THAT HR HO SAID NO PROBLEM FOR YOU TO USE HIS KENEA BAY PROPERTY. SORRY IT TOOK SO LONG TO GET BACK TO YOU.

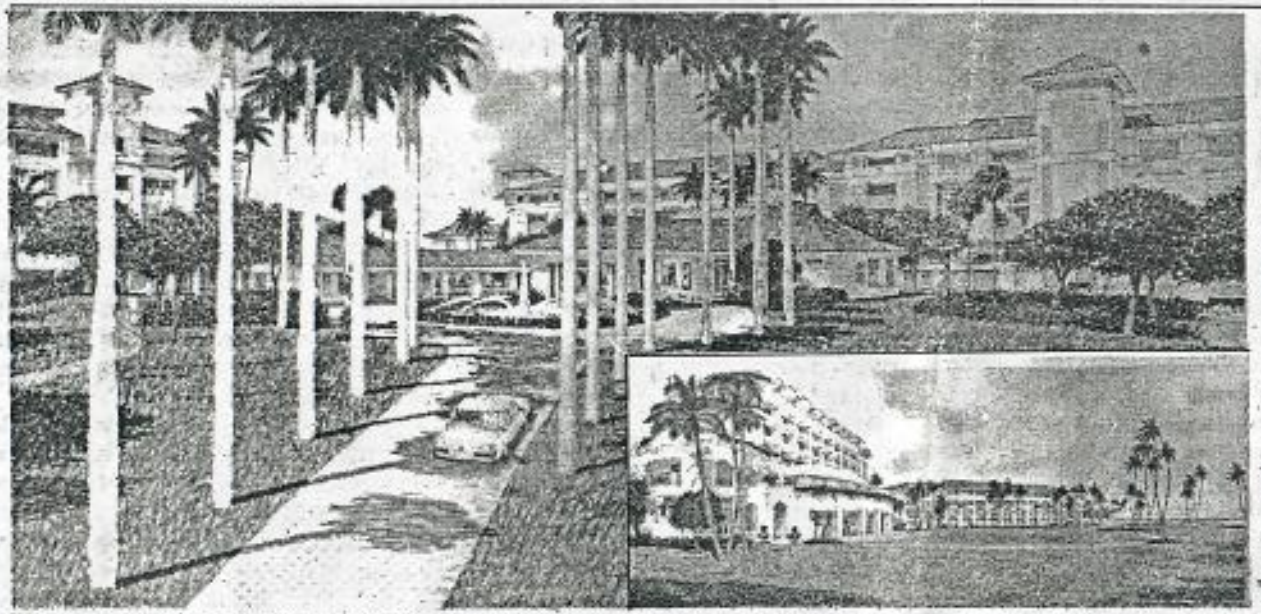
Hau

North Oahu Planet

ALL THE NEWS THAT FITS

Volume 2, Number 3

February 27-March 13, 1991



This is an artist's rendition of Kuilima Resort's planned 383-room luxury hotel to be built along Kawela Bay.

Community Meeting Schedule

February 27, 7 pm, Kahuku Elementary
February 28, 7 pm, Haleiwa Elementary
March 4, 7 pm, Sunset Elementary

These community meetings, sponsored by Senator Gerald T. Hagino and Representative Alex Santiago, will inform the community on upcoming legislative issues. North Shore residents are encouraged to attend and participate in the meetings. "Only with your feedback can we be able to adequately represent our

Santiago.

NORTH OAHU PLANET
27 FEB – 13 MARCH 91

Kuilima Resort Begins Major Expansion Program

KAHUKU -- Kuilima Development Co. project director Norman Quon, and Kuilima Resort Co. owner Asahi-Juken, plan to build five new hotels on the 845-acre Kuilima Resort site during the next 15 to 20 years.

The first hotel will be a 383-room luxury hotel along Kawela Bay, which could bring over 400 new jobs to the North Shore. "Pacific Construction Co. is the general contractor for this hotel, and construction will begin within the very near future," said Buddy Ako, community relations coordinator for Kuilima Development Co.

The Kuilima Resort is "a very unique project. It's been planned with the community to address the interactive and dynamic nature of a resort in Hawaii," said Quon.

Kuilima Development Co., in association with the Kuilima/North Shore Strategy Planning Committee (started in 1983) are integrating every aspect of the new resort into the needs and personality of the North Shore community.

The style of the Resort will be akin to the old Haleiwa Hotel- characterized by the early 1900s "Kamaaina" country estate's hospitality and elegance, yet overlaid with a fundamental simplicity and timeliness. The planned golf clubhouse, which will become the focal point of the Resort, will have an old Victorian character, with lines very similar to the old Haleiwa Hotel.

The new championship golf course, currently under construction, will have a windblown feeling, as it winds around a 100-acre wildlife reserve where four endangered Hawaiian birds make their home.

The first nine holes of the new course could be described as, Scottish Link, 10-14 are wooded with Ironweed trees while the last four holes are amid primary sand dunes overlooking the Pacific Ocean and Kahuku Point. The final holes will be reminiscent of the Pebble Beach Golf Course.

"Plans are also being considered to set up a marine life conservation area at Kawela Bay, where the endangered Green Sea Turtle's live. Like Hanauma Bay, Kawela Bay could be a marine, snorkeling and swimming sanctuary," said Quon.

Also planned is the Arnold Palmer Golf Academy and the Nick Bollettieri Tennis Academy. Bollettieri was named last year's Tennis Magazine's Coach of the Year.

Norman Quon

Quon said the Resort is trying to integrate every aspect that relates to the community, including the physical, the envrionmental, the historical and the economic concerns, while addressing areas such as child care, transportation, housing, employment, beach access and much more.

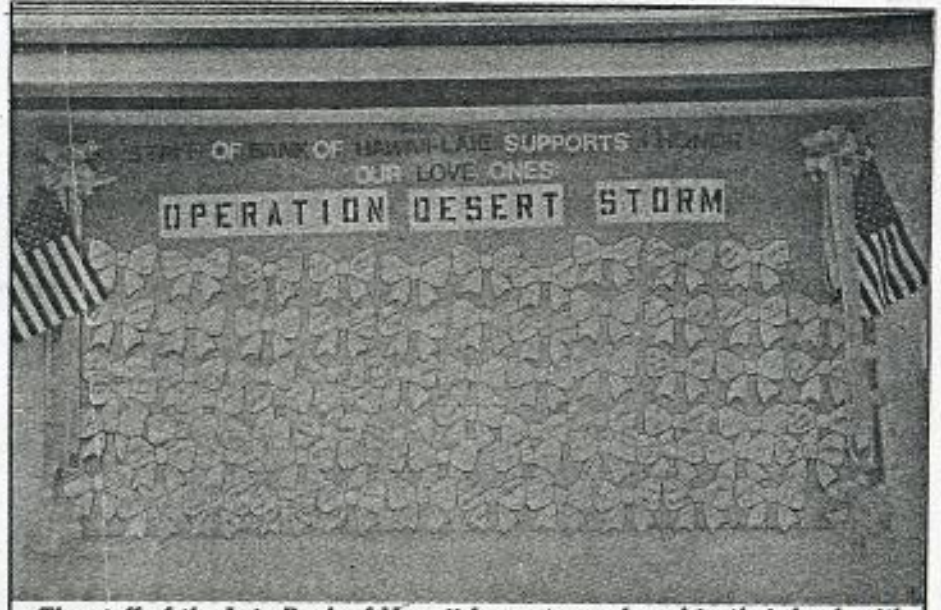
"This is not only good for the region, but also for the marketing of the Resort," said Quon. "It is such a special place . . . They whole philosophy of the Resort is the key."

Located at the northern most tip of the North Shore, the Kuilima Resort has designated 90 percent of its 845 acres to parks, golf couses and open recreation space. When the new 18-hole championship golf course is completed, the existing 18-hole golf course will be completely renovated.

In addition, the Resort will feature a shopping village and an equestrian complex. Spread throughout, in a low-density plan that is in keeping with the broad open spaces of the North Shore, will be the 383-room luxury hotel and 650-room beach hotel along Kawela Bay, a 620-room addition to the existing Turtle Bay Hilton Hotel and 1,000 condominiums stretched along the coast and tucked around golf courses, in a rural setting of marsh and forest lands.

The Kuilima Resort owner and developer is also required by a legally binding agreement dating back to Sept 23, 1986, to provide the North Shore with certain community benefits. In 1986, in order to secure the necessary zoning changes through the City Council and the local government, the Kuilima Resort owner and developer (Prudential Insurance Co. of America at the time) agreed to certain things.

This included an agreement to construct and maintain a specified number of parks, right of ways, public bathrooms and showers, North Shore affordable housing units, a child-care center, and the implementation of an adult education/employment program.



The staff of the Laie Bank of Hawaii has set up a board in their bank with yellow ribbons to honor the North Shore troops at war. The ribbons have the names of the soldiers stationed in the Gulf. Bank Manager Z. Yadao has a son stationed in the Gulf. "We don't all agree with the war, but we want to honor and support the boys over there," said Yadao. "They are doing something great."

Balazs

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center Honolulu Laboratory
2570 Dole St. • Honolulu, Hawaii 96822-2396

March 15, 1990 F/SWC2: GHB

Mr. & Mrs. Murray Eisner
57-435 Honukawela Drive
P. O. Box 42
Kahuku, HI 96731

Dear Mr. & Mrs. Eisner:

I want to take this opportunity to thank you for the important part you played in rescuing the gillnet stunned and nearly drowned green sea turtle you found floating close to shore at Kawela Bay on Tuesday morning, March 13, 1990. We very much appreciate your assistance in this matter.

As you may know, all sea turtles in the Hawaiian Island (and elsewhere throughout the United States) are listed and protected under the U.S. Endangered Species Act and wildlife laws of the State of Hawaii. The National Marine Fisheries Service is charged with the responsibility of conducting research fostering the recovery of sea turtle populations and their return to former levels of abundance. I have enclosed several articles about our work, as well as general information about sea turtles, which you may find interesting. If you have any questions, or items of special concern that you would like to discuss, please feel free to call me at 943-1240. Matters relating to law enforcement should be directed to Mr. Gene Witham at 541-2727.

Again many thanks for your help. Henceforth, yo will be considered to be part of our "Hono Ohana" network.

Sincerely,

George H. Balazs
Zoologist and Leader, Hawaiian
Sea Turtle Recovery Team

Enclosure

Star-Bulletin Thursday, September 26, 1991 □ A-7

INS targets Turtle Bay owner

Star-Bulletin staff

The U.S. Immigration and Naturalization Service is taking steps to assure that a Japanese businessman whose family controls the Turtle Bay Hilton does not return to Hawaii.

Takeo Matsumoto, of Asahi Jyuken Co., was fined $5,000 this week by U.S. Judge Harold Fong after pleading guilty last week to visa fraud.

Matsumoto, whose family has admitted former ties to Japanese organized crime organizations, failed to disclose his own, though distant, criminal record.

INS attorneys were to hold an exclusion hearing today by telephone with a mainland immigration judge to bar Matsumoto from returning to Hawaii.

Matsumoto paid the fine on his misdemeanor conviction Tuesday and posted another $5,000 bond so he could remain free pending the INS administrative hearing.

Two of Matsumoto's brothers also have been prosecuted for visa fraud in Hawaii and sent home.

Asashi Jyuken bought the Turtle Bay in 1988.

View/Edit Stranded Data - Main Screen Ver 1.0

```
Turtle ID:                    Date: 03/28/85

Island stranded: OAHU    Location: Kawela Bay

Species: CM   Sex:                Weight:   0.0

Straight carapace length:  55.5   Straight carapace width:   0.0

Curved carapace length:    0.0    Curved carapace width:    0.0

Notch carapace length:     0.0    Plastron length:          0.0

Width of the head:         0.0    Width of right front flipper:   0.0

Plastron tail length:      0.0    Vent tail length:         0.0

Contact: G. Balazs, G. Stemmermann
```

] UpRec [] DnRec [PgUp] Up 5 Recs [PgDn] Dn 5 Recs
1Scr 2Scr 3Scr 4Scr Add Edit Del View Indx Find Quit
Search stranded database

View/Edit Stranded Data - Descriptive Screen Ver 1.0

```
Turtle ID:                    Date: 03/28/85

Dead or Alive (D/A): A              Entangled or Hook (Y/N/U): Y

Induced by humans (Y/N/U): Y        Debris in guts (Y/N/U): N

Necropsy (Y/N): Y

Description:                        Necropsy report:
Found comatose in net. Resuscitated cardiovascular fluke infection.
but died 8 hrs. later.              Stomach contained Ulva, Pterocladia,
                                    Amansia and Turbinaria.
```

] UpRec [] DnRec [PgUp] Up 5 Recs [PgDn] Dn 5 Recs
1Scr 2Scr 3Scr 4Scr Add Edit Del View Indx Find Quit
View the descriptive screen

View/Edit Stranded Data - Main Screen Ver 1.0

Turtle ID: Date: 03/13/91

Island stranded: OAHU Location: Kawela Bay

Species: CM Sex: U Weight: 0.0

Straight carapace length: 42.5 Straight carapace width: 36.0

Curved carapace length: 44.0 Curved carapace width: 0.0

Notch carapace length: 0.0 Plastron length: 0.0

Width of the head: 0.0 Width of right front flipper: 0.0

Plastron tail length: 0.0 Vent tail length: 0.0

Contact: H. Eisner 57-435 Honokawela (293-5859)

] UpRec [] DnRec [PgUp] Up 5 Recs [PgDn] Dn 5 Recs
1Scr 2Scr 3Scr 4Scr Add Edit Del View Indx Find Quit
Search stranded database

View/Edit Stranded Data - Descriptive Screen Ver 1.0

Turtle ID: Date: 03/13/91

Dead or Alive (D/A): D Entangled or Hook (Y/N/U): N

Induced by humans (Y/N/U): N Debris in guts (Y/N/U): Y

Necropsy (Y/N): Y

Description:
Turtle reported to have been washed ashore along the debris line. Also present was a juvenile hammerhead also a possible gill net fatality. Gill netters were present last wed 3-6-91; came in by boat. Reported to be some what decomposed; head eaten away etc., very smelly. Previously bagged, taken to A2 -

Necropsy report:
Mumified, magotts (still alive), head skeletonized, carapace scutes 80% erroded away (sand scouring?), plastron plating peeling off. Whitish plastron, transparent edges to marginal scutes - likely new recruit. Stomach samples collected, Pterocladia and Amansia? Terrestrial twigs (iron wood?) in feces - also -

] UpRec [] DnRec [PgUp] Up 5 Recs [PgDn] Dn 5 Recs
1Scr 2Scr 3Scr 4Scr Add Edit Del View Indx Find Quit
View the descriptive screen

- freezer, necropsy set for 3-15-91.

- 1 ft. "Mat" of Plastic poly-Propelene line unraveled } EI Tract 1/3 full.

Necro. Kawela Necro.

	Y	3/14/91	(1)	H. Eisner	NEED NECROPSY SHEET *	
OK	Y	3/13/91	(1)	"		
	2/22/91 Y	~~possible~~ Kawela	(1)	R. Sullivan	*	
OK	Y	12/10/90	(1)	NEED NECROPSY SHEET *		
	N	8/28/90	(1) A	R. Sullivan		
No info.	? Y	7/6/90	(1)	sullivan pantzi		
	N	6/19/90	(1) Skel.	Sullivan	skeletonized	
OK -	Y	7/12/87	(1)	Connelly		
	N	3/28/87	(1) A	Allen Yarbury		
	N	6/14/85	(1) But	W Paleloa		
OK -	Y -	3/28/85	(1) A-7	Baley, Stemmermann		
	N	2/15/84	(1) D	Paleloa		

This "kawela" is kawela, molokai

90
62
62
86
180

Oceanit Laboratories, Inc.

TURTLE OBSERVATION

FIELD DAY NOTES

CLIENT: KAWELA BAY

date: Dec 9, 1990

PERSONNEL: LISA MARRACK

time in: 5am depart Honolulu. 6:15am arrive Kawela Bay

time out:

George: Here's a copy of the data sheet on the day the dead turtle was found. Any information you can provide to me concerning this turtle would be of help.

Thanks

Bob Brooks
Oceanic Labs
#2512
1188 Bishop St

WORK DESCRIPTION:

TURTLE OBSERVATION

GENERAL OBSERVATIONS

Wind Speed: Dir: South - SWest	Current Speed: Dir:
Wave Ht: 1/2 - 1 ft in bay, 3-5 outside Dir: S-Swesterly	Tide: High in 1 ft
Sky: Overcast	Other:

Tape tide cycle from calendar here.

COMMENTS: Choppy water. Early a.m. at zone 1 difficult to tell if far out dark spots turtles or shadows. Mid-Zone 4 + 5 water is full of suspended solids.

Home Owner = Harriet Bisser

Found a dead turtle floating in zone 3 at 6:35 am. No wounds visible. Blood from open mouth. Home owner called U.S. Dept Fish & Wildlife. Gill netters?

No Bouys except two in Zone 5.

DAILY SUMMARY

ZONE → / SET	1	2	3	4	5	
AM	7	4	3	1	5	20
MID	3	2	0	2	2	9
PM	0	1	0	3	1	5
	10	7	3	6	8	

Enter estimated number of turtles in each zone during each set.

Turtle Bay Hotel firm exec

By Ken Kobayashi
Advertiser Courts Writer

A member of a well-to-do Japanese family that controls the Turtle Bay Hilton Hotel was fined the maximum $5,000 yesterday for visa fraud for not disclosing his criminal record in Japan from the 1960s.

Takeo Matsumoto, 46, an official of Asahi Jyuken Co. Ltd. and brother of the man who founded the real estate development firm, pleaded guilty last week to the misdemeanor of failing to make the disclosure on his 1983 application for his visa that he used to enter the United States in 1988.

In exchange, federal prosecutors dropped a two-count felony indictment.

Yesterday, federal prosecutors asked for a jail sentence and cited what they called Matsumoto's "family relationship" with others involved in criminal activities.

But federal Judge Harold Fong said he wasn't going to punish Matsumoto for what his relatives did and added that those allegations linking them to Japanese organized crime have yet to be proved.

The judge said it was Matsumoto's connection with his company that has major holdings in Hawaii and the Mainland that brought him to the United States.

And although Matsumoto acknowledged he did "lie" about his criminal past, Fong said Matsumoto's previous convictions in Japan were relatively minor and he found that Matsumoto did not come to the country "for an illegal reason."

Matsumoto, who has been listed as senior managing director for Asahi Jyuken, has also described himself as an executive and as a vice president for the company.

The Honolulu

TUESDAY, September 24, 1991

fined for visa fraud

Asahi Jyuken, a company founded in Osaka in 1968 that built tens of thousands of condominium units in Japan, paid $127.5 million for the Turtle Bay hotel on Oahu's North Shore in 1988. It earlier purchased a 5½-acre property, formerly a car dealership, on Piikoi Street mauka of Kapiolani Boulevard for about $36 million with plans to develop a $100-million-plus project there.

Matsumoto's brother, Kizo, 55, founder and president of Asahi Jyuken, was stripped of his visa in June 1988 after he told U.S. officials he had not disclosed a 30-year-old criminal record.

At the time, The Advertiser reported that Kizo Matsumoto had been a member of Japan's largest yakuza organization, the Yamaguchi-gumi, but left the group in the 1960s, about the same time he formed Asahi Jyuken.

Another brother, Takao, 54, head of a security guard company that is a subsidiary of Asahi Jyuken, was fined $100,000 for visa fraud last year for failing to disclose his criminal record that included violating Japanese anti-prostitution laws in the 1960s.

See Turtle Bay, Page A4

Advertiser

Final Edition On Oahu 35¢

Turtle Bay: Exec with firm that

FROM PAGE ONE

In a sentencing recommendation filed by prosecutors, Assistant U.S. Attorney Michael Burke said Kihachi Matsumoto, "another of Takeo Matsumoto's relations," is believed by federal officials to have been a top leader in two of the Yamaguchi-gumi subgroups.

Burke said a review of the "family relationship" suggests "a distinct possibility that defendant Matsumoto has had ties to Japanese organized crime groups."

He asked the judge to consider "the danger of having alien nationals with unknown criminal records or with ties to foreign organized crime groups controlling millions of dollars of Hawaii business and property."

But Fong indicated that that he wasn't prepared to accept the allegations about Matsumoto's relatives to be true, and was not going to sentence him based on those allegations.

The judge said Matsumoto's two "very minor criminal convictions" from the 1960s included one case in which he hit and probably broke glass at a pachinko parlor and argued with the owner. The other involved Matsumoto hitting an employee in a bar. Matsumoto was fined $40 and $30, respectively, and not sent to jail, according to the judge.

The judge said he was imposing the maximum fine for the misdemeanor because Matsumoto more than once failed to disclose his record.

The charge carried a maximum six-month jail term, but Fong said he didn't think a jail sentence was necessary.

Matsumoto's attorney Sam

controls hotel fined for visa fraud

King Jr. suggested a fine of $500 to $1,000, arguing that the visa-fraud case is almost a "technical violation." He said Matsumoto thought that he didn't have to disclose those cases.

"I did not understand the U.S. law and I am sorry," Matsumoto said when he pleaded guilty through an interpreter last week.

As part of the plea agreement, Matsumoto will not try to seek a waiver of his ineligibility status to enter the United States until November 1994.

Burke said the immigration service in the near future will be conducting hearings aimed at excluding Matsumoto from the country.

He indicated that his office offered the plea agreement dropping two felony counts because "it was conceivable" that the defense might have prevailed on certain pretrial motions that could have led to an acquittal on both charges.

Leave 'enhancement' of wetlands to nature

The imminent sale of the Heeia wetlands and meadowlands by Bishop Estate to a secret buyer represents one of the saddest episodes in the long and sorry history of greed and abuse of the land of Oahu. Should any of this fragile and complex ecosystem be lost to golf course, residential or commercial development, we will all be the poorer — all of us, that is, who do not stand to profit in the short term from the long-term loss of open space, of the buffering of Heeia Fishpond and Kaneohe Bay, of the habitats for four endangered bird species, and of the great natural beauty that the 400 acres of the wetlands provide.

I cannot see the wetlands from my home, I do not "use" them in any way — but I understand the necessity to protect their environmental and aesthetic integrity. They are in trust to us in the present for those who will come in the future. Henry David Thoreau once said that "in wilderness is the preservation of the world."

A spokesman for the secret buyer has said that the buyer wishes to "enhance" the area. The wetlands and meadowlands are fine as they are. They do not need the "enhancement" of yet another golf course playground for the privileged or resort condominiums for the leisured. We have paved enough of paradise.

STEPHEN CANHAM
Kaneohe

Guam flap centers on Turtle Bay owner

Associated Press

AGANA, Guam — Gov. Joseph F. Ada has asked the FBI and the territorial attorney general to investigate the president of a Japanese construction firm planning a $1 billion resort on the island.

Ada said Thursday that his office has learned that Kizo Matsumoto "got into trouble with federal officials in Hawaii" for failing to disclose a felony conviction in Japan.

Matsumoto is founder and president of Asahi Jyuken Co., Ltd., which in 1988 paid an estimated $200 million for the Turtle Bay Hilton Resort on Oahu and other island real estate.

In 1988, Matsumoto, 52, of Osaka, was stripped of his U.S. visa by immigration officials in Honolulu after he failed to disclose a 30-year-old criminal record in Japan. He was returned to Japan by immigration officials.

Ada said Matsumoto's company wants to build a 982-acre resort in the Inarajan area of Guam, an unincorporated U.S. territory about 1,500 miles southeast of Tokyo.

The Taotao resort would include four deluxe hotels, 4,200 condominiums, golf courses and other tourist amenities.

The Territorial Planning Commission has been holding public hearings this week on whether to approve the project.

Ada said in a news release, "Indeed, the 'yakuza' has come up in some allegations which have been made to me. I do not want any question to remain unanswered when we are talking about a project that may affect the lives of everyone on Guam."

The governor said he had asked the FBI and the territorial attorney general to ascertain "the nature and the full extent of any criminal activities for which he (Matsumoto) may have been convicted."

Matsumoto's brother, Takao, a year ago was indicted by a federal grand jury in Honolulu for visa fraud after he allegedly failed to disclose a criminal record in Japan when he applied for a visa to enter the United States.

Takao Matsumoto, head of an Osaka security guard company, pleaded innocent to the charges. His case hasn't come to trial.

RESEARCH ACTIVITIES REPORT

SUMMARY OF RECENT FINDINGS RELATING TO GREEN TURTLES AT KAWELA BAY, OAHU

JANUARY 2, 1990

by
George H. Balazs
Southwest Fisheries Center, Honolulu Laboratory

Kawela Bay on the north shore of Oahu is an important foraging area for green turtles previously identified and studied by Balazs, Forsyth and Kam (NOAA-TM-NMFS-SWFC-71, 1987). Tourist resort development along the eastern half of the bay is forthcoming. The project may also include certain alterations in the nearshore marine habitat. The following recent findings for Kawela Bay are therefore of significance to obtaining a better understanding of habitat use by turtles at this location.

On December 9, 1989 a green turtle severely afflicted with fibropapillomas (tumors) was found by residents to be entangled in the mooring line of a small buoy in the middle of the bay. The turtle was subsequently cut free and seen to swim away in a weakened state. This case constitutes the first known record of a turtle at Kawela Bay to be clearly diseased with tumors.

On December 11, 1989 a Kawela Bay resident reported that large numbers of fecal pellets suspected to be from turtles were washing up on the beach. On December 13 GHB visited with the informants to confirm and investigate this discovery. A walk was made along the entire sand shoreline of the bay between noon and 1 pm, at which time 197 freshly washed-up fecal pellets of green turtles were counted and collected. This density was reported by the informants to be substantially less than what had been present the previous

two mornings. The informants also indicated that they had owned a home at Kawela Bay for over 11 years, but had never before seen a fecal wash-up phenomenon of this nature. GHB and co-workers have documented turtle feces along the shoreline at Kawela in the past (see TM-71), but nothing approaching the magnitude and scope of this recent event. The 197 pellets collected were found to consist of 44 small (less than 0.5 cm diameter), 130 medium (0.5 to 2.0 cm diameter), and 23 large (greater than 2.0 cm diameter). A fecal pellet census made on the morning of December 29 resulted in 83 fresh pieces being seen.

On December 29, 1989 a resident at Kawela Bay reported the presence of turtle tracks on the eastern portion of the beach. The tracks were estimated to be 36 inches wide, which would be indicative of an adult turtle. There were no apparent signs of a nesting excavation having occurred. Fishermen that had set a red twine lobster net overnight in the bay stated that they had seen the turtle on the beach about 20 minutes prior to sunrise. The turtle was estimated to have weighed 300-400 lbs. The reason for the turtle's presence on the beach was not determined by the fishermen. However, assuming that the turtle was healthy (no mention was made of tumors, injury or other problems), the distinct possibility exists that the turtle had simply come ashore to rest ("bask") at night at an undisturbed and acceptable location. Green turtles sometimes come ashore in this manner at other sites in the Hawaiian Islands, most commonly in the Northwestern Hawaiian Islands, but also on the Na Pali Coast during the winter months when human disturbance is at a minimum.

September 12, 1986 F/SWR1:LDC

Everette A. Flanders
Chief
Construction - Operations Division
U.S. Army Corps of Engineers
Fort Shafter, Hawaii 96858-5440

Dear Mr. Flanders,

I acknowledge receipt of your August 29, 1986 letter requesting Section 7 consultation for a permit to construct two drainage outlets at Turtle and Kuilima Bay, and to dredge silt from Kawela Bay. While our office has received neither a State EIS nor a biological assessment for these activities, we find them adequately described in the Kuilima Development Company's May 1986 Application for Special Management Area Use Permit and Application for Shoreline Setback Variance for Replacement of Existing at the East and West Main Drain Ocean Outlets with New Open Channel Outlets (Turtle Bay Resort).

The dredging of fine silt and clay bottom sediments is proposed for a small nearshore area (1.2 acres) in the southeastern corner of the bay. The silt, approximately one foot deep, will be removed by means of a suction dredge after isolating the area with a silt curtain. Silt dredged from the bottom will be pumped via a pipeline to a containment ponds on the adjacent shore, from where it will be taken to a landfill.

The drainage outlets project proposes the replacement of four 72" culverts at the east main drain (Kuilima Bay) and two 48" culverts at the west main drain (Turtle Bay) with new open channel outlets.

Regarding protected species, results from recent research by our Honolulu Laboratory staff show Kawela Bay to be an important nocturnal foraging area for threatened green sea turtles, Chelonia mydas. We have determined that dredging in Kawela is not likely to adversely affect the Hawaiian population of green sea turtles provided such dredging occurs under the following conditions:

1. the area to be dredged is limited to the nearshore, southeastern corner of Kawela Bay as shown in the COE Public Notice No. PODCO-O 1857-SD, 20 February 1985.

2. the dredged area will be isolated by a silt curtain

3. dredging will be limited to the approximately one foot deep layer of silt and sediment, and will not involve alteration or removal of hard substrate

4. removal of silt will be by suction dredge, with spoils dewatered and disposed such that sediments do not re-enter the area

5. dredging and related activities will be limited strictly to daylight hours

We have also determined that the modifications of the drainage outlets are not likely to adversely affect the Hawaiian population of green sea turtles.

This concludes consultation responsibilities under Section 7 of the ESA. However, consultation should be reinitiated if new information reveals impacts of the identified activity that may affect listed species, a new species is listed, the identified activity is subsequently modified or critical habitat determined that may be affected by the proposed activity.

Sincerely yours,

Doyle E. Gates
Administrator

cc: F/SWR, Terminal Is., CA

OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

TO : George

DATE: 9-10-86

FROM : Lew

SUBJECT: Kawela Bay.

Our initiation is to say "not likely to adversely affect" & end consultation - Corps remarks, we can only address the dredging & drainage outlets.

Can we discuss this briefly soon?

5010-109

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

Received
WPPO

SEP 9 1986

National Marine
Fisheries Service

DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
FT. SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF

August 29, 1986

Operations Branch

WPPO	
DHE	
JJN	
RMN	
VAN	
ADO	
EXT	
CFM	

action

Mr. Doyle Gates, Administrator
Western Pacific Program Office
National Marine Fisheries Service
Attn: Endangered Species Coordinator
P.O. Box 3830
Honolulu, HI 96812

Dear Mr. Gates:

We are presently evaluating a permit application (PODCO-O 1857) from Kuilima Development Company requesting authorization to construct two drainage outlets for drainage improvements and to dredged silt from Kawela Bay.

We understand, based on meetings with your agency, that threatened and endangered sea turtles can be found using Kawela Bay. We understand that information from your agency was obtained as part of a survey effort by the applicant, but we have not received the results of the survey from the applicant. The applicant did prepare a State environmental impact statement which, we understand, was provided to your agency for comment.

The proposed drainage outlets are located on the shoreline and will convey water into the ocean at the shoreline outside of Kawela Bay. At present, the applicant proposes to use a suction dredge to remove the silt in Kawela Bay and dewater the material on land. Since there is a possibility that the proposed action could impact on the threatened and endangered sea turtles, we request that consultation be initiated under Section 7 of the Endangered Species Act.

We would appreciate a response to our request by September 20, 1986.

Sincerely,

Everette A. Flanders
Chief, Construction-Operations
Division

October 7, 1986 F/SWR1:LDC

Susumu Ono
Chairperson
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Sus,

We have just provided comments to the Army Corps of Engineers on a permit to dredge silt from Kawela Bay and to improve drainage outlets for the proposed Kuilima Resort Expansion. Kawela Bay is an important nocturnal foraging area for green sea turtles, Chelonia mydas. While we determined that the silt dredging and drainage improvements would not adversely affect the Hawaiian population of Chelonia, we remain concerned about the secondary impacts of development at this site which at present is relatively little used by the public.

I append a copy of George Balazs' recent research results which documents the importance of Kawela Bay to green sea turtles. Immature Chelonia enter Kawela Bay after sunset to feed on the algae growing in the western and eastern ends. They feed until sunrise, at which time they move out of the bay to nearby resting areas.

As we understand it, public access with parking is planned for Kawela Bay. While this will open up a very beautiful portion of Oahu, we are concerned that this use may result in turtles abandoning this area. Night fishing in particular may conflict with the continued use of the bay by turtles.

The avenues available to NMFS to provide protection for this important turtle habitat are limited. Our Section 7 consultation with the Corps of Engineers, by necessity, evaluated only the effects of the permitted actions - dredging and drainage improvements. It could not address the issue of increased use of Kawela Bay, as the Corps permitting process is limited to the project only. Further, designation of critical habitat would require only that federal agencies consult with the NMFS for activities affecting the bay. Such designation would not be effective in preventing undesireable non-federal activities. The only means presently available to protect the turtles at Kawela Bay is our enforcement authority to deal with "take" violations on a case by case basis. Clearly, it is impractical to monitor Kawela Bay full time.

In view of the importance of Kawela Bay to green sea turtles, and our inability to adequately protect their habitat, we recommend that you consider its designation as a Marine Life Conservation District (MLCD). Such designation could include the prohibition on the taking of marine life and the altering of geological features. We believe that designation as a MLCD, along with development of an interpretive program (this could be a responsibility shared by the developer, the DLNR, and the NMFS), would serve to preserve, protect, and conserve the sea turtles which utilize Kawela Bay and eventually become recruited into the adult population.

I would be pleased to discuss this matter at any time with you or your staff.

Sincerely yours,

Doyle E. Gates
Administrator

cc: DLNR, Henry Sakuda
DLU, John Whalen
Kuilima Development Company
FWS, Honolulu
Corps of Engineers, Honolulu

bc: F/SWC2 - Gilmartin ✓

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region • Western Pacific Program Office
2570 Dole St. • Honolulu, Hawaii 96822-2396

February 11, 1987 F/SWR:JJN

Colonel Francis W. Wanner
District Engineer
U.S. Army Corps of Engineers
Fort Shafter, Hawaii 96858-5440

Dear Colonel Wanner:

Subject: PODCO-0-1857-SD. Construct drain outlets and dredge in Kawela Bay, Oahu. Application by Kuilima Development Company.

The National Marine Fisheries Service (NMFS) has reviewed the subject permit application for portions of the proposed expansion of the existing Kuilima Resort Complex, Kahuku, Oahu. The applicant proposes to improve two drainage outlets and dredge silt from a portion of Kawela Bay. We offer the following comments for your consideration.

NMFS has no objections to the two drain outlet improvements proposed for the resort expansion project. However, we continue to be concerned with the proposed dredging within Kawela Bay. As mentioned numerous times, both in writing and at recent meetings, NMFS is concerned with both primary and secondary impacts from dredging on the important green turtle foraging habitat within Kawela Bay. During our most recent site inspection on February 6, a consultant for the developer indicated that approximately 1800 cubic yards of silt material would be removed from the bay during the initial dredging operation. The developer desires the removal of silt in order to: 1) reduce turbidity within the bay, and 2) create a more aesthetically pleasing bottom for swimmers and waders.

In our opinion although the dredging operation will temporarily remove silt from the bottom, it will not significantly reduce turbidity within the bay, particularly during the October to April season when large northwest swells commonly impact the north coast of Oahu. NMFS continues to oppose the planned dredging within Kawela Bay and feels it is a non essential element of the Kuilima Resort expansion project.

In spite of the above, NMFS will not object to the issuance of the subject permit at this time. Our decision is based on the following: a) Recent research conducted by NMFS confirms that the proposed dredging in Kawela Bay will be outside of the major green turtle foraging habitat located in the western and eastern inner portions of the bay. b) Section 7 consultation under the Endangered Species Act (letter to your office dated September 12, 1986) has determined that dredging in Kawela Bay is not likely to adversely affect the Hawaiian population of green sea turtles, provided such dredging occurs under the following conditions:

1. The area to be dredged is limited to the nearshore southeastern corner of Kawela Bay as shown in COE Public Notice No. PODCO-0 1857-SD, 20 February 1985.

2. The dredged area will be isolated by a silt curtain.

3. Dredging will be limited to the approximately one foot deep layer of silt and sediment, and will not involve alteration or removal of hard substrate.

4. Removal of silt will be by suction dredge, with spoils dewatered and disposed such that sediments do not re-enter the area.

5. Dredging and related activities will be limited strictly to daylight hours.

In addition to the above, NMFS suggests a habitat enhancement project be conducted by the applicant as mitigation for potential secondary impacts on foraging habitat in Kawela Bay from dredging and other resort expansion activities. We suggest placing a row of large limestone rocks (one to two meters in diameter) in the shallow nearshore water along either the east or west sides of the bay where significant foraging habitat occurs. The rocks should be close enough to shore to be within the influence of fresh water which percolates through the ground into the bay along the shoreline. Several large limestone rocks already occur in this zone along the west side of the bay. These rocks support several types of benthic algae including Ulva, Acanthophora, and Pterocladia, particularly the latter which is mainly confined to those rocks partially exposed during the lower tides. These algae have been identified as important food sources for green turtles in Kawela Bay.

The habitat enhancement project could be highlighted by a shoreside interpretive display depicting the importance of the nearshore waters off the "Turtle Bay Resort" development to the threatened population of the Hawaiian green sea turtle. Please contact Mr. John Naughton of my staff for additional information or to discuss the above recommended habitat enhancement proposal.

Sincerely yours,

Doyle E. Gates

Doyle E. Gates
Administrator

cc: F/SWR1, Terminal Is., CA
F/M4, Washington, D.C.
EPA, Region 9, (P-5)
FWS, Honolulu
Hawaii State Div. of Aquatic Resources
Department of Land Utilization,
City & County of Honolulu
Kuilima Development Company
Oceanit Laboratories, Inc.

Turtle Bay Hilton looking for partner

Honolulu Star-Bulletin 10/7/87 E1

By Russ Lynch
Star-Bulletin writer

The owner of the Turtle Bay Hilton and the rest of the huge Kuilima resort is looking for a joint venture partner to share the ownership.

Prudential Insurance Co. of America said today that it is "in the market" for a partner to invest in the 808-acre resort on Oahu's North Shore.

The investment advice house of Goldman Sachs has been retained to help find an investor, according to Brian Yanagi, spokesman for Prudential's Kuilima Development Co.

IT IS TOO SOON to say what level of ownership a new joint venture partner might take on, he said. "That really depends on the buyer, what their interests are."

Yanagi said that the 1986 tax law changes "have made real estate holdings and developments not as desirable as in the past" and Prudential "wants to limit their risk."

"It is normal for a development project of this magnitude to seek investors to spread out the risk of developing such a huge project," Yanagi said.

What is offered goes well beyond the existing 418-room hotel and its 18-hole golf course. The joint venture partner would also share in the future development of the entire resort area, which is about one-third bigger than Waikiki, Yanagi said.

Plans already on the books call for a second hotel at Kawela Bay, more low-density hotel and condominium deveolopment, a second golf course, an equestrian facility and other improvements.

THE TURTLE BAY HILTON was opened in the early 1970s as a joint venture of Prudential and Del Webb Corp., and Del Webb managed the hotel. Management shifted to Hyatt Hotels and then, in 1983, to Hilton.

Over the past two years, Prudential has been working on a new master plan for the area, aside from renovating the existing hotel.

The plan does not call for high density. The 808-acre resort will end up with about 4,000 hotel/condominium uniuts, compared to Waikiki's 35,000.

10/4/87 HSSB & A

Builder must save old oak

Associated Press

CANYON COUNTRY, Calif. — Joseph Kashani wood rather do without it, but his new shopping center will include a combination of antique oak and new oak.

The branches of a 300-year-old oak tree have proved a haven to 12 generations of Canyon Country residents and will stand 86 feet tall at the center of the shopping center on Soledad Canyon Road in the Santa Clarita Valley.

Kashani, a Beverly Hills developer, planned to cut down the old oak, but the townsfolk and Los Angeles County Regional Planning Commission had different plans.

In fact, the commission told Kashani last week he not only had to build around the old oak, but preserve nine younger oaks rooted in the path of his 28,000-square-foot shopping center as well.

Residents called the one old tree "just as much a symbol of California as the redwood or the California bear."

LAST WEEK, they rallied around the tree, tying yellow ribbons to its trunk.

Kashani, angry over the commission's ruling, refused to reveal how much money he will lose by having to build around the trees. "I don't want to make them happy by telling that," he said.

His initial plans called for a convenience store and 22 other shops and businesses on the 1.5-acre site. But now, he said, he will lose at least four of those shopping center spaces to the big oak and will have to redesign his plans to make room for the younger trees.

"It's not fair," he said.

Residents disagreed. "They're cutting down the very environment that I moved here for," explained Michael Lyons, a spokesman for the oak tree preservationists.

Kashani disputed the motives of the preservationists. "Behind this oak tree is a political issue in the Santa Clarita Valley because they want to make it a city. The people behind this are trying to make themselves known. They want to make a name for themselves," he said.

Commission hearing officer John Huttinger of the regional planning commission told Kashani the board would have protected the trees even if there had been no resident protest.

"Either change the design or I will deny the case," Huttinger said.

"The hearing officer's word is final. We will accept that," said an associate of Kashani's.

September 3, 1987 F/SWC2:GHB

MEMORANDUM FOR: F/SWR1 - John J. Naughton

THRU: F/SWC2 - William G. Gilmartin
F/SWC2 - Richard S. Shomura
F/SWR1 - Doyle E. Gates

FROM: F/SWC2 - George H. Balazs

SUBJECT: Kawela Bay sea turtle foraging habitat

Thank you for the recent copied letter concerning Kawela Bay. As I mentioned to you earlier, I'll be meeting with Dr. Sherwood Maynard (MOP-Manoa) to plan for a project at Kawela patterned after my work at Punaluu on the Big Island.

One point of clarification is needed. The letter from Kuilima Development states, "...that the recommended habitat enhancements include placing a row of large limestone rocks in the shallow nearshore water...." I'm not sure now many they mean by "a row." However, please note that my earlier verbal suggestion to you was for a few coral rocks (3-5) the size of the natural one there now. Also, I want to stress again that this is strictly experimental habitat enhancement.

The educational and display segment of their proposal sound excellent.

GHB:ey
cc: Balazs
HL

U.S
Nat
NAT
Sou
257

GEORGE H. BALAZS
ZOOLOGIST
MARINE MAMMALS AND
ENDANGERED SPECIES PROGRAM

MEMBER IUCN MARINE TURTLE SPECIALIST GROUP

NATIONAL MARINE FISHERIES SERVICE
2570 DOLE ST.
HONOLULU, HAWAII 96822-2396

TELEPHONE
(808) 943-1221
(808) 395-6409

2 Sept. 87

Sherwood -

You will recall that I telephoned you a few months ago and suggested the idea of a sea turtle monitoring/research project at Kawela Bay patterned after my work with Hilo MOP at Puna. Also, now a similar project has been arranged with HPA students for Kiholo Bay in collaboration with your former fine MOP student, now science teacher, Dave Gulko. The attached letter suggests that funding of a monitoring project at Kawela may indeed be possible in the foreseeable future.

(over)

We need to meet in person, just the two of us, in the near future to map out strategy. Until that time, please keep the attached letter confidential.

Call me to schedule a convenient time for both of us.

Aloha, George

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region • Western Pacific Program Office
2570 Dole St. • Honolulu, Hawaii 96822-2396

September 29, 1987 F/SWR1:ETN

MEMORANDUM FOR: F/SWC2 - Richard S. Shomura

FROM: F/SWR1 for John J. Naughton

SUBJECT: Kawela Bay Site Inspection

There is a site inspection of Kawela Bay scheduled for October 6, 1987 to evaluate foraging habitat enhancement sites for green turtles. The developer's consultant, Dr. Pat Sullivan, the Corps of Engineers, and WPPO will participate. We would like to have George Balazs assist us in evaluating habitat substrate and placement within the Bay since he has an ongoing study there.

Approved Richard S. Shomura
29 Sept. '87

GHB

~~RR~~ 28Sept87

TO: RSS

FROM; GHB

John Naughton recently tel. me to request I meet with him and Kawela Bay developer at Kawaela Bay for a few hours on 6Oct. ~~to~~ discuss attached ideas. Should he be requesting my presence in writing thu you, or is his verbal to me ok?

George
Have John M.
write to me. -

September 3, 1987 F/SWC2:GHB

MEMORANDUM FOR: F/SWR1 - John J. Naughton

THRU: F/SWC2 - William G. Gilmartin
F/SWR1 - Doyle E. Gates

FROM: F/SWC2 - George H. Balazs

SUBJECT: Kawela Bay sea turtle foraging habitat

Thank you for the recent copied letter concerning Kawela Bay. As I mentioned to you earlier, I'll be meeting with Dr. Sherwood Maynard (HOP-Manoa) to plan for a project at Kawela patterned after my work at Punaluu on the Big Island.

One point of clarification is needed. The letter from Kuilima Development states, "...that the recommended habitat enhancements include placing a row of large limestone rocks in the shallow nearshore water...." I'm not sure how many they mean by "a row." However, please note that my earlier verbal suggestion to you was for a few coral rocks (3-5) the size of the natural one there now. Also, I want to stress again that this is strictly experimental habitat enhancement.

The educational and display segment of their proposal sound excellent.

GHB:ey
cc: Balazs
HL

November 9, 1987 F/SWC2:GHB

MEMORANDUM FOR: F/SWR1 - John Naughton

THROUGH: F/SWR1 - Doyle E. Gates
F/SWC2 - Richard S. Shomura
F/SWC2 - William G. Gilmartin

FROM: F/SWC2 - George H. Balazs

SUBJECT: Kawela Bay site inspection

I would appreciate knowing the outcome of the site-inspection meeting I was asked to attend (9/29/87 WPPO memo) at Kawela on October 6, 1987. It was my understanding that consultant, Dr. Pat Murphy, was going to report back to you, either verbally or by letter, after conferring with the management agent representing the Kawela Bay developer. As we discussed, I need this follow-up information for planning purposes with the Marine Option Program.

GHB:gr

bcc: GHB
HL

US Army Corps
of Engineers
Honolulu District

Public Notice

Public Notice No. PODCO-O 1857-SD Date: 11 December 1986

Reply to: District Engineer (PODCO-O)
U.S. Army Corps of Engineers
Building 230
Ft. Shafter, HI 96858

Respond by: 10 January 1986

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

1. APPLICANT: Kuilima Development Company, 1001 Bishop St, Suite 1930, Pacific Tower, Honolulu, HI 96813.

APPLICANT'S AGENT: EDP Hawaii, Inc., 1164 Bishop Street, Suite 1515, Honolulu, Hawaii, 96813.

2. APPLICABLE STATUTORY AUTHORITIES: Section 10 of the River and Harbor Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act. (33 U.S.C. 1344).

3. LOCATION OF PROPOSED ACTIVITY: Kuilima Resorts, Kahuku, Oahu, Hawaii, Island of Oahu, State of Hawaii.

4. DESCRIPTION OF PROPOSED ACTIVITY: The applicant has requested authorization to discharge dredged or fill material in diverting Kawela Stream into the West Main Drain, to improve the outlets of both the West and East Main Drains, and to dredge silt from a location in Kawela Bay. The applicant has also requested authorization to maintain the new drains, outlets, wier and the bay. The activities will occur in conjunction with the applicant's plans to expand Kuilima Resort.

When removing the silt from Kawela Bay, the applicant will surround the dredge site with a silt curtain. The work will be limited to the nearshore, southeastern corner of Kawela Bay as shown on Sheet 1 (Attached). Dredging will be limited to approximately one foot depth of sediment and will not involve modification of the solid substrate. The material from the bay will be hydraulically pumped from the bay to an upland dewatering site located on the applicant's property. The material will either be used on the property or disposed on at an existing sanitary landfill. Dredging will be limited to daylight hours.

This public notice revises an earlier applicant request contained in a Public Notice dated February 20, 1985. The applicant has deleted all fill in Punahoolapa Marsh related to golf course development at the resort. Based on U.S. Fish and Wildlife recommendations for endangered waterbird habitat improvements in Punahoolapa Marsh, all fill in the Punahoolapa Marsh was eliminated. A second wetland area at the mouth of Kawela Stream will not be filled.

5. IMPACTS OF PROPOSED ACTIVITY: Both Kawela Stream and the West and East Main Drains are intermittent tributaries that discharge into coastal waters. Diverting Kawela Stream into the West Main Drain will divert any intermittent stormwater presently entering Kawela Bay into Turtle Bay. Both the existing East and West Main Drains will be widened to meet County Drainage Standards. These activities will remove existing vegetation and wildlife habitat creating intermittent stream habitat and some intertidal habitat within the channels. Both the existing East and West storm drain outlets will be replaced with open channel outlets that will periodically fill up with sand. Pedestrian movement and littoral drift, if any, along the shoreline would not be impacted by the new drainage structures as the shoaled outlets would permit continued passage along the shoreline. A wier would prevent salt water intrusion into Punahoolapa Marsh.

The dredging is intended to remove accumulated silt in Kawela Bay and does not involve removal of significant coral or algae communities. The silt curtains will contain any turbidity plumes. Hydraulic dredging will also tend to remove suspended sediments for dewatering in an upland area. The effluent from the dewatering area will percolate into the ground. Work is confined to the silt site and will be performed during daylight to avoid impact on any threatened green sea turtles.

6. IMPACTS ON CULTURAL RESOURCES: The proposed activities will not have direct impact on archaeological sites eligible for inclusion on the National Register that were found on the property. However, due to the significance of the archaeological finds in the area, a Memorandum of Agreement between the applicant, State Historic Preservation Officer, U.S. Army Corps of Engineers and the U.S. Advisory Council on Historic Preservation will be developed in accordance with Section 106 of the National Historic Preservation Act and the U.S. Advisory Council on Historic Preservation guidelines. The Memorandum of Agreement will be executed prior to any final action on the permit application.

7. IMPACT ON ENDANGERED SPECIES: Endangered Hawaiian waterbirds are known to occur in Punahoolapa Marsh. The proposed activities do not result in the discharge of fill or dredged material into Punahoolapa Marsh. The applicant is working with the U.S. Fish and Wildlife Service to set aside and improve the marsh for waterbird habitat to supplement the existing wildlife refuges in the Kahuku area. The U.S. Fish and Wildlife Service indicated that consultation under Section 7, Endangered Species Act, was not required for the proposed activities.

The National Marine Fisheries Service indicated that the threatened green sea turtles were found in Kawela Bay andsurrounding coastal waters. Section 7, Endangered Species Act consultation with the National Marine Fisheries Service was completed on September 12, 1986, resulting in a determination that the proposed activities would not jeopardize the continued existence of the threatened green sea turtles. Recommendations from the National Marine Fisheries Service were made a part of the proposed activity.

8. OTHER GOVERNMENT AUTHORIZATIONS: Before taking final action on the permit application, the applicant has to obtain a Coastal Zone Consistency Statement from the State of Hawaii, Department of Planning and Economic Development, and a Water Quality Certification from the State of Hawaii, Department of Health.

a. The applicant has obtained a Coastal Zone Consistency certification from the State of Hawaii, Department of Planning and Economic Development, in accordance with the Coastal Zone Management Act.

b. Pursuant to a Settlement Agreement, effective May 19, 1986, regarding a complaint filed in U.S. District Court, Civil No. 85-1523, and in accordance with the terms of the Agreement, the public is informed that a Water Quality Certification or waiver of the certification for any individual Department of the Army permit under Section 404, Clean Water Act, is required from the State of Hawaii, Department of Health. The applicant must apply for the certification in accordance with State of Hawaii, Department of Health Interim Certification Procedures dated October 31, 1986.

c. In accordance with State and City and County regulations, the permit applicant must also request authorizations and concurrences for the proposed permit activities from the following agencies:

(1) Special Management Area (SMA) permit from the City and County of Honolulu, Department of Land Utilization.

(2) Shoreline Setback Variance from the City and County of Honolulu, Department of Land Utilization.

(3) Conservation District Use Application (CDUA) from the State of Hawaii, Department of Land and Natural Resources.

9. NEED FOR A FEDERAL ENVIRONMENTAL IMPACT STATEMENT. Based upon the revised scope of work, a Federal Environmental Impact Statement will not be prepared for the proposed activity. This Public Notice retracts the Notice of Intent to prepare a Federal Environmental Impact Statement, dated February 20, 1986.

10. EVALUATION FACTORS: The decision whether to issue a permit will be based on a evaluation of the probable impact including cumulative impacts of the proposed activity on the public interest. This evaluation will include the application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof: among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people. Those concerns received in response to the Public Notice dated February 20, 1985, will also be considered.

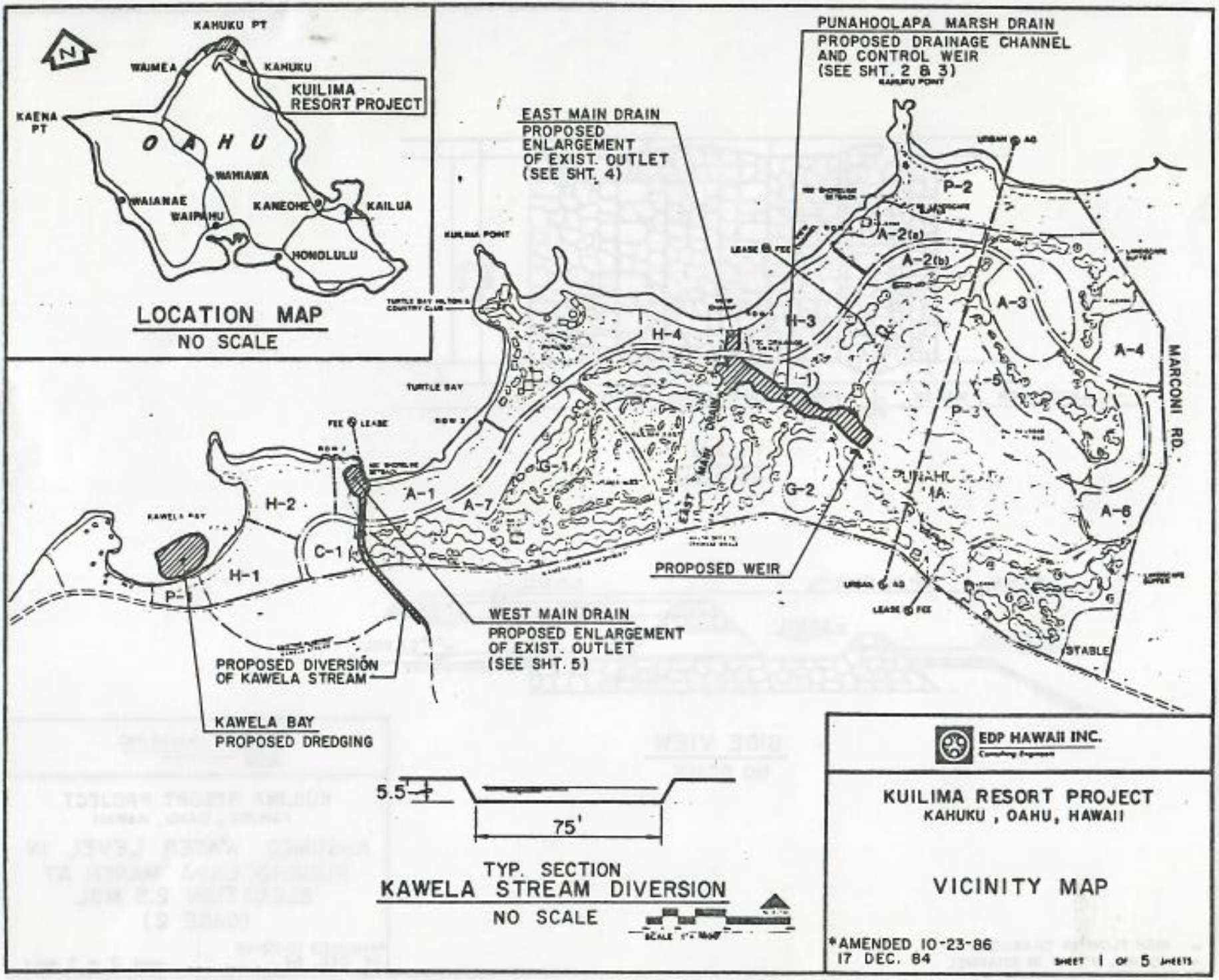
11. COMMENTS AND INQUIRIES: Interested parties may submit in writing any comments that they may have on the proposed work. Comments should be submitted to this District no later than 30 days from the date of this notice. Written inquires and comments should be mailed to the address indicated in the letterhead and should make reference to this public notice number.

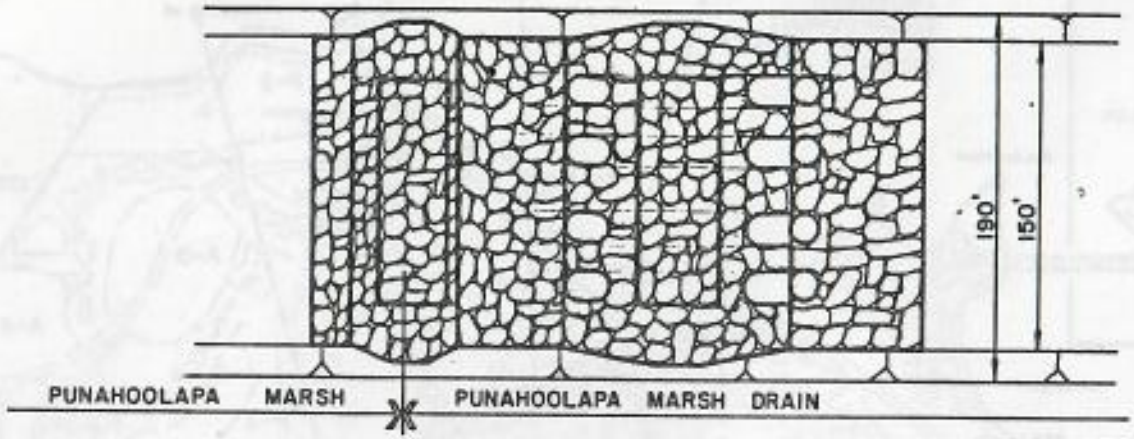
Further information may be obtained from the Operations Branch, Honolulu District, Room 205, Building 230, Fort Shafter, telephone 438-9258.

It is Corps of Engineers policy that any objections will be forwarded to the applicant for resolution or rebuttal before a final decision is made on the application. If the objecting party so requests, all personal information will be deleted from the forwarded letter or the objections will be paraphrased in summary form.

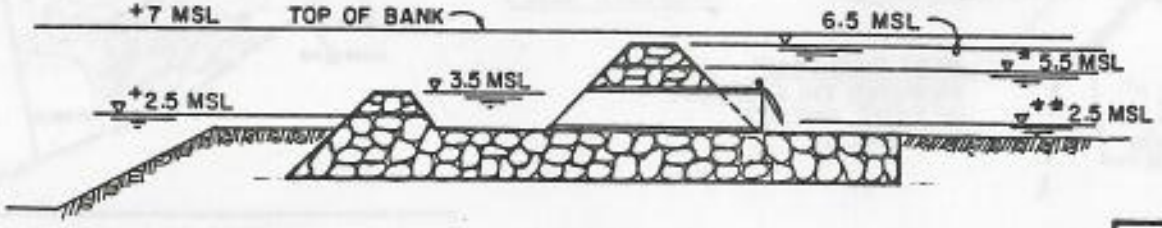
11. REQUEST FOR PUBLIC HEARING: Any person may request, in writing, within 30 days from the date of this notice, that a public hearing be held by the Honolulu District, U.S. Army Corps of Engineers, to consider this Department of the Army permit application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

1 Incl
Drawings (5 sheets)


KAHUKU PT
WAIMEA
KAHUKU
KUILIMA RESORT PROJECT
KAENA PT
O A H U
WAHIAWA
WAIANAE
WAIPAHU
KANEOHE
KAILUA
HONOLULU
LOCATION MAP
NO SCALE
PUNAHOOLAPA MARSH DRAIN
PROPOSED DRAINAGE CHANNEL AND CONTROL WEIR (SEE SHT. 2 & 3)
EAST MAIN DRAIN
PROPOSED ENLARGEMENT OF EXIST. OUTLET (SEE SHT. 4)
KUILIMA POINT
TURTLE BAY
P-2
A-2(a)
A-2(b)
A-3
A-4
A-5
P-3
A-6
H-3
H-4
H-2
H-1
A-1
A-7
G-1
G-2
C-1
P-1
MARCONI RD.
PROPOSED WEIR
WEST MAIN DRAIN
PROPOSED ENLARGEMENT OF EXIST. OUTLET (SEE SHT. 5)
PROPOSED DIVERSION OF KAWELA STREAM
KAWELA BAY
PROPOSED DREDGING
STABLE
5.5
75'
TYP. SECTION
KAWELA STREAM DIVERSION
NO SCALE
EDP HAWAII INC.
KUILIMA RESORT PROJECT
KAHUKU , OAHU, HAWAII
VICINITY MAP
*AMENDED 10-23-86
17 DEC. 84
SHEET 1 OF 5 SHEETS



PLAN
NO SCALE



SIDE VIEW
NO SCALE

* HIGH FLOW IN CHANNEL
** NORMAL FLOW IN CHANNEL

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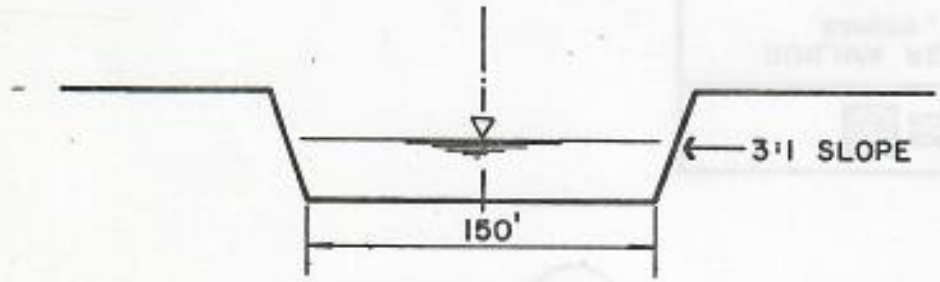
Consulting Engineers

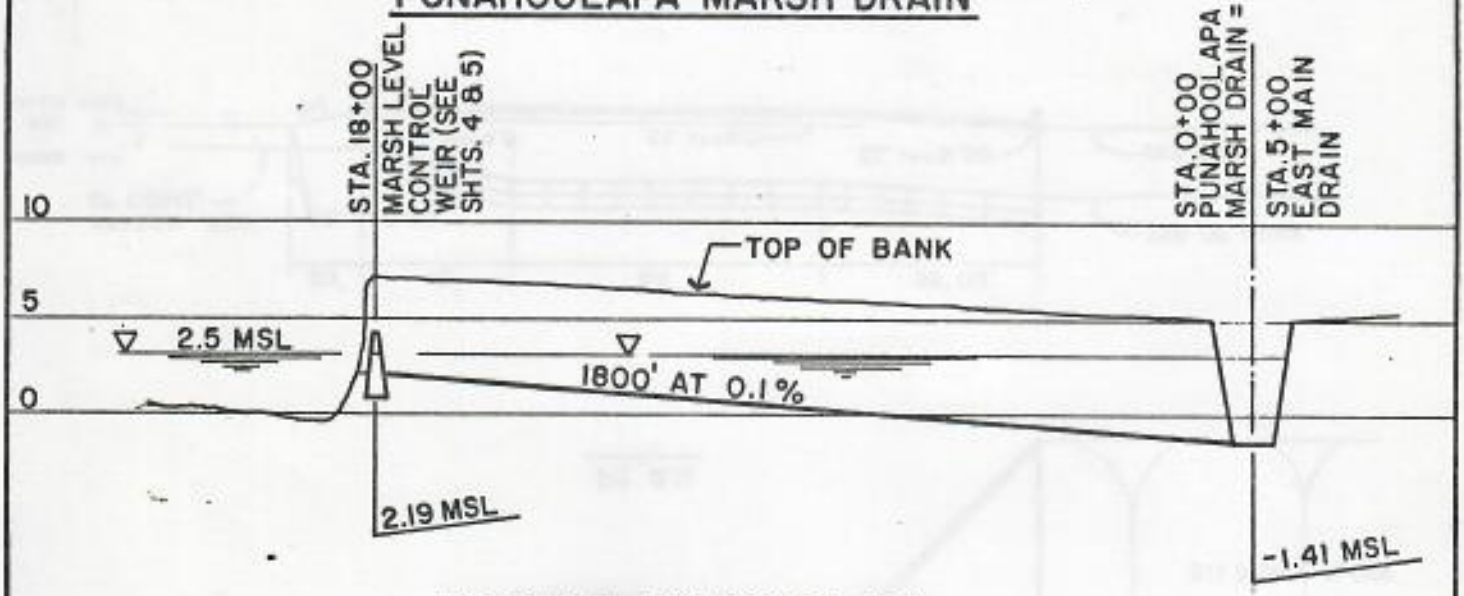
KUILIMA RESORT PROJECT
KAHUKU, OAHU, HAWAII

ASSUMED WATER LEVEL IN PUNAHOOLAPA MARSH AT ELEVATION 2.5 MSL (CASE 2)

+AMENDED 10-23-86
17 DEC. 84



TYPICAL SECTION
PUNAHOOLAPA MARSH DRAIN



PROFILE PUNAHOOLAPA
MARSH DRAINAGE CHANNEL

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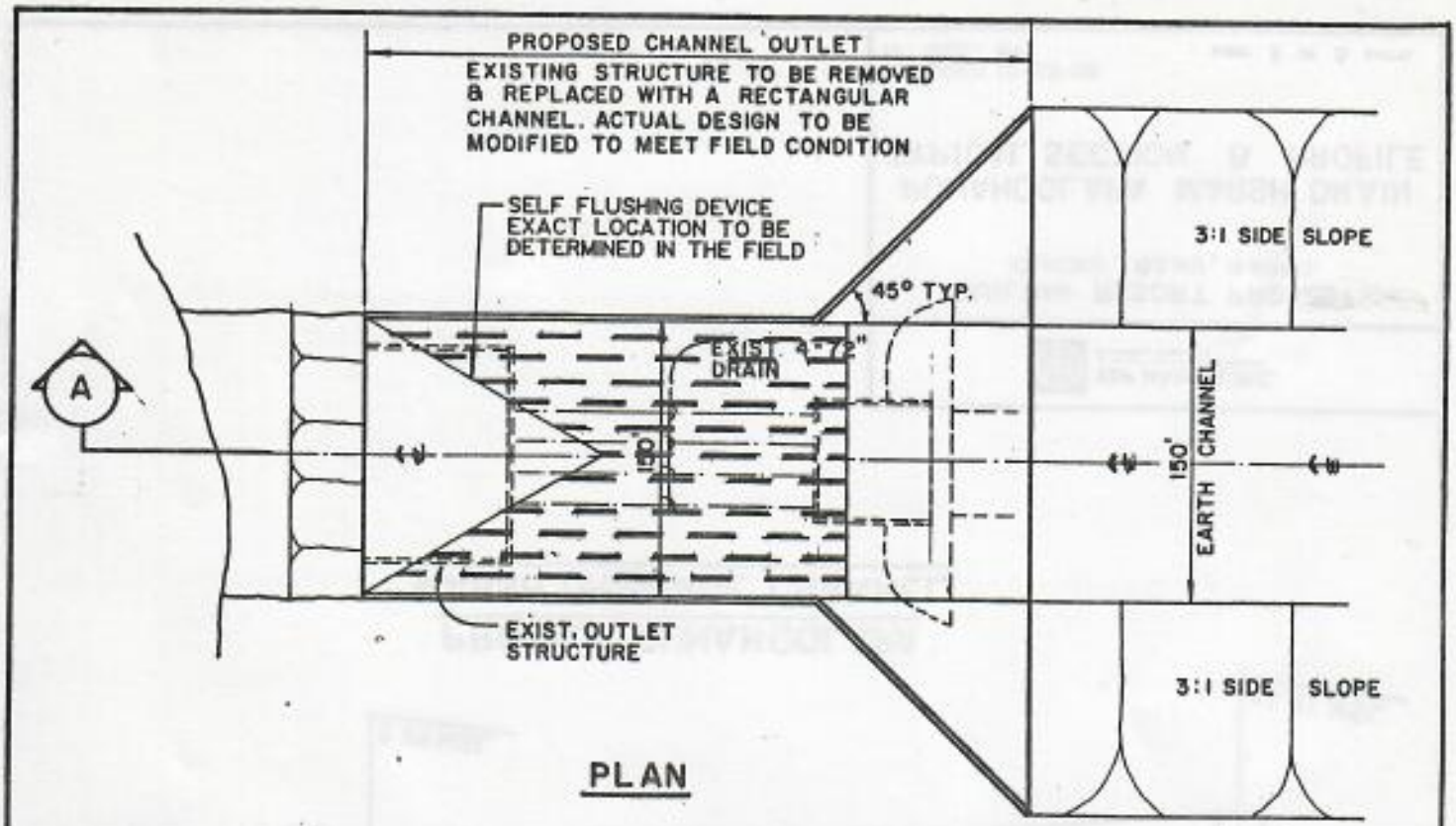
KUILIMA RESORT PROJECT
KAHUKU, OAHU, HAWAII

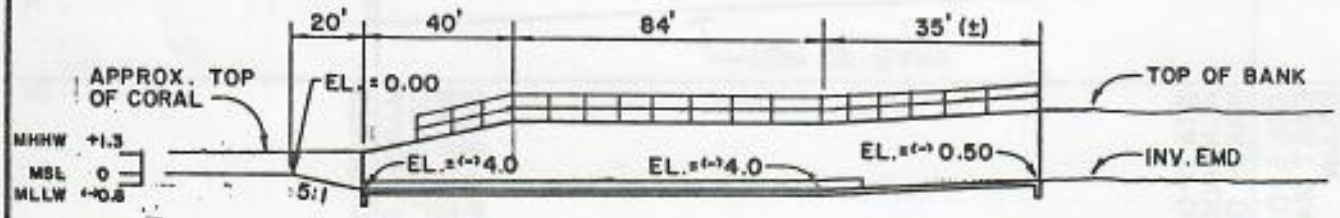
PUNAHOOLAPA MARSH DRAIN
TYPICAL SECTION & PROFILE

*AMENDED 10-23-86
17 DEC. 84

SHEET 3 OF 5 SHEETS



PLAN



SECTION A

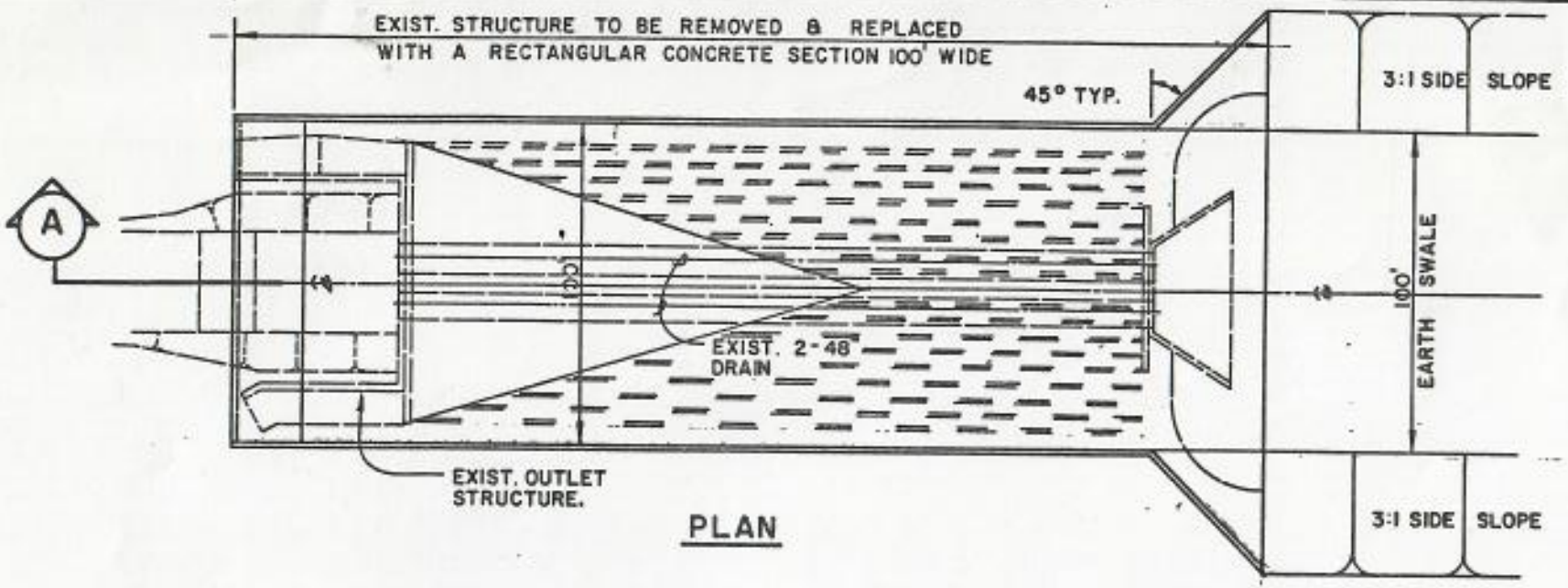
NOTE:
SIZE OF FLUSHING DUCTS TENTATIVELY SET AT 8"×5', FLUSHING INLET TO BE MODIFIED IN THE FIELD TO PERMIT CONNECTION TO THE GOLF COURSE IRRIGATION SYSTEM

EDP HAWAII INC.
Consulting Engineers

KUILIMA RESORT PROJECT
KAHUKU, OAHU, HAWAII

PROPOSED RECTANGULAR CHANNEL OUTLET FOR THE EAST MAIN DRAIN

*AMENDED 10-23-86
17 DEC. 84



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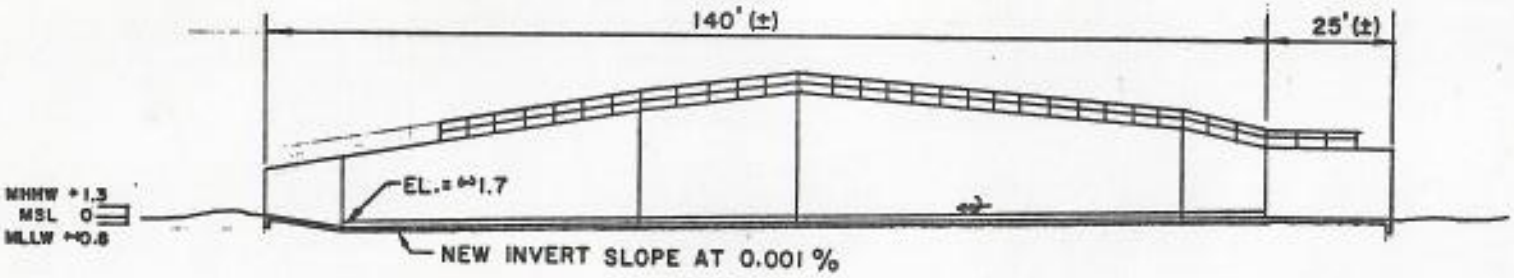

SECTION A

NOTE:
SIZE OF FLUSHING DUCTS TENTATIVELY SET AT 8"×5', FLUSHING INLET TO BE MODIFIED IN THE FIELD TO PERMIT CONNECTION TO THE GOLF COURSE IRRIGATION SYSTEM

EDP HAWAII INC.
Consulting Engineers

KUILIMA RESORT PROJECT
KAHUKU, OAHU, HAWAII

PROPOSED
CHANNEL OUTLET FOR THE
WEST MAIN DRAIN

* AMENDED 10-23-86
17 DEC. 84

SHEET 5 OF 5 SHEETS

DRAFT

Oceanit Laboratories, Inc.

coastal & offshore engineering services • research & development

NEARSHORE OCEANOGRAPHIC MONITORING PROGRAM FOR THE KUILIMA RESORT DEVELOPMENT KAHUKU, HAWAII

July 1989
Version 1.3

Century Square 1188 Bishop Street, Suite 2512, Honolulu, Hawaii 96813
TELEX: 7431404 MCI: OCEANIT Ph: (808) 531-3017 FAX: (808) 526-1519

SUMMARY

The Kuilima Development Company (KDC) received approvals for the Kuilima Resort Development, located on the North Shore of Oahu, from various Federal, State and County agencies for construction activities either in or adjacent to the nearshore marine environment. Specific actions addressed in these permits include modifications to the east and west main drains, and Kawela Bay. Proposed construction activities for the east and west main drains are needed to accommodate the increase in runoff from the adjacent lands resulting from improvements to the property. The west main drain size will be increased to accommodate discharge diverted from Kawela Bay. Desilting the southeastern portion of Kawela Bay is expected to improve water clarity, which typically is low due to fine silt and clay sized materials that are easily brought into suspension. The desilting activity is designed to remove these fine materials from an approximate 0.66 acre area without removing hard substrate or impacting other more productive parts of the bay.

As a result of these activities, KDC has been requested to monitor the nearshore marine environment. This document summarizes KDC's comprehensive monitoring program, including data collection, processing and reporting.

General monitoring parameters include water quality, sedimentation and marine life. Special attention will be given to the green sea turtle (Chelonia Mydas) because of its noted use of Kawela Bay as a foraging habitat. This information will also supports KDC's interest in preserving and maintaining Kawela Bay. Monitoring schedules include periods of pre-, during and post construction. Results will be published quarterly.

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I. BACKGROUND

The Kuilima Resort Development is located on the North Shore of Oahu and includes approximately 808 acres at the extreme northern point of the island of Oahu (see Fig. 1). The proposed resort development expansion requires modifications to both the west and east main drains because the present drains are unable to accommodate anticipated increases in discharge due to drainage system changes and difficulty in maintaining the present culvert design.

Kawela Bay is a shallow coastal water body that encompasses approximately 50 acres on the north shore of Oahu at the Kuilima Resort Development, west of the Turtle Bay Hilton. Because of poor water clarity and deposits of very fine silt and clay sized material in the southern portion of the bay, approximately 1,800 cubic yards of fine sediments need to be removed from an approximate 0.66 acre area. Desilting equipment will remove the top 6 to 12 inches of sediment using a suction device. Spoils from this operation will be pumped into a containment area on a 0.34 acre parcel adjacent to the beach. This containment facility will allow for dewatering of sediments along with drying and compaction.

Nearshore water quality monitoring enables Kuilima Development Company (KDC) to minimize impacts resulting directly or indirectly from any development related activities. Permits that recommend water quality monitoring include:

- Department of the Army
  U.S. Army Engineer District, Honolulu
  Section 10 of the Rivers and Harbors Act of 1899
  Section 404 of the Clear Water Act (33 USC 1344)
  Permit No. PODCO-O 1857-SD
- Department of Health, State of Hawaii
  Section 401 Water Quality Certification
  Turtle Bay Resort Development Drainage Facilities
  WQC No. 110
- Department of Land and Natural Resources, State of Hawaii
  Conservation District Use Application
  Document No. 0597E
- City and County of Honolulu
  Council Resolution No. 86-308
  Shoreline Variance
  Shoreline Management Permit

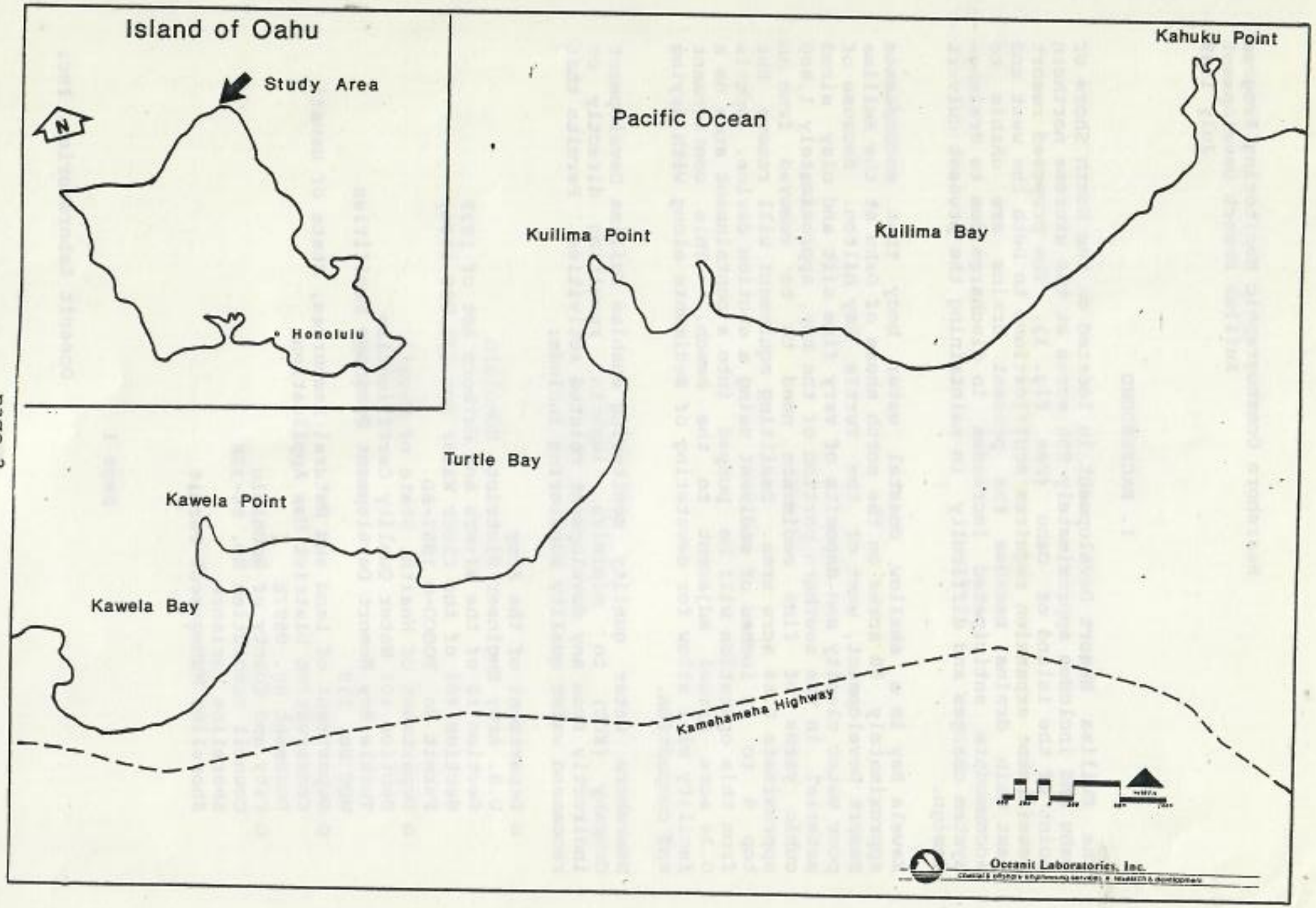

Fig. 1 Project Location

II. WATER QUALITY

Water quality parameters will follow guidelines outlined by the Hawaii State Department of Health, Public Health Regulations, Chapter 37-A, "Water Quality Standards," revised under Title 11, Department of Health, Chapter 54, "Water Quality Standards." Two water quality schedules will be used that specify parameters and stations for the entire project (Table 1) and only Kawela Bay (Table 2).

Insitu salinity, temperature and conductivity measurements will be made with a salinometer, such as the Beckman RS3-5 portable salinometer. Dissolved oxygen will be measured using an insitu oxygen meter, such as the Yellow Springs Model 57. Turbidity measurements will be made with a laboratory nephelometer, e.g., Turner Nephelometer. Nutrient values, including total nitrogen, nitrite plus nitrate, total phosphorus, and orthophosphate will be determined with an automated system such as the Technicon Autoanalyzer II.

Table 1

WATER QUALITY SCHEDULE NO. 1

Parameter	Units
Salinity	ppt
Temperature	o C
Dissolved Oxygen	mg/l
Total Kjedahl Nitrogen	ug/l
Ammonia Nitrogen	ug/l
Nitrate plus Nitrate	ug/l
Total Nitrogen	ug/l
Orthophosphate	ug/l
Total Phosphorus	ug/l
Turbidity	NTU

ppt = parts per thousand
o C = degree Centigrade
mg/l = milligram per liter
ug/l = micro gram per liter
NTU = nephelometric turbidity units

bacteria?

Water sample depths: 2 (surface, bottom)
Locations: Kawela Bay, east and west main drains
(see attached figure)

Table 2

WATER QUALITY SCHEDULE NO. 2

Parameter	Units
Salinity	ppt
Temperature	o C
Dissolved Oxygen	mg/l
Total Kjedahl Nitrogen	ug/l
Ammonia Nitrogen	ug/l
Nitrate plus Nitrate	ug/l
Total Nitrogen	ug/l
Orthophosphate	ug/l
Total Phosphorus	ug/l
Turbidity	NTU

ppt = parts per thousand
o C = degree Centigrade
mg/l = milligram per liter
ug/l = micro gram per liter
NTU = nephelometric turbidity units

Water sample depths: 2 (surface, bottom)
Locations: Kawela Bay
(see attached figure)

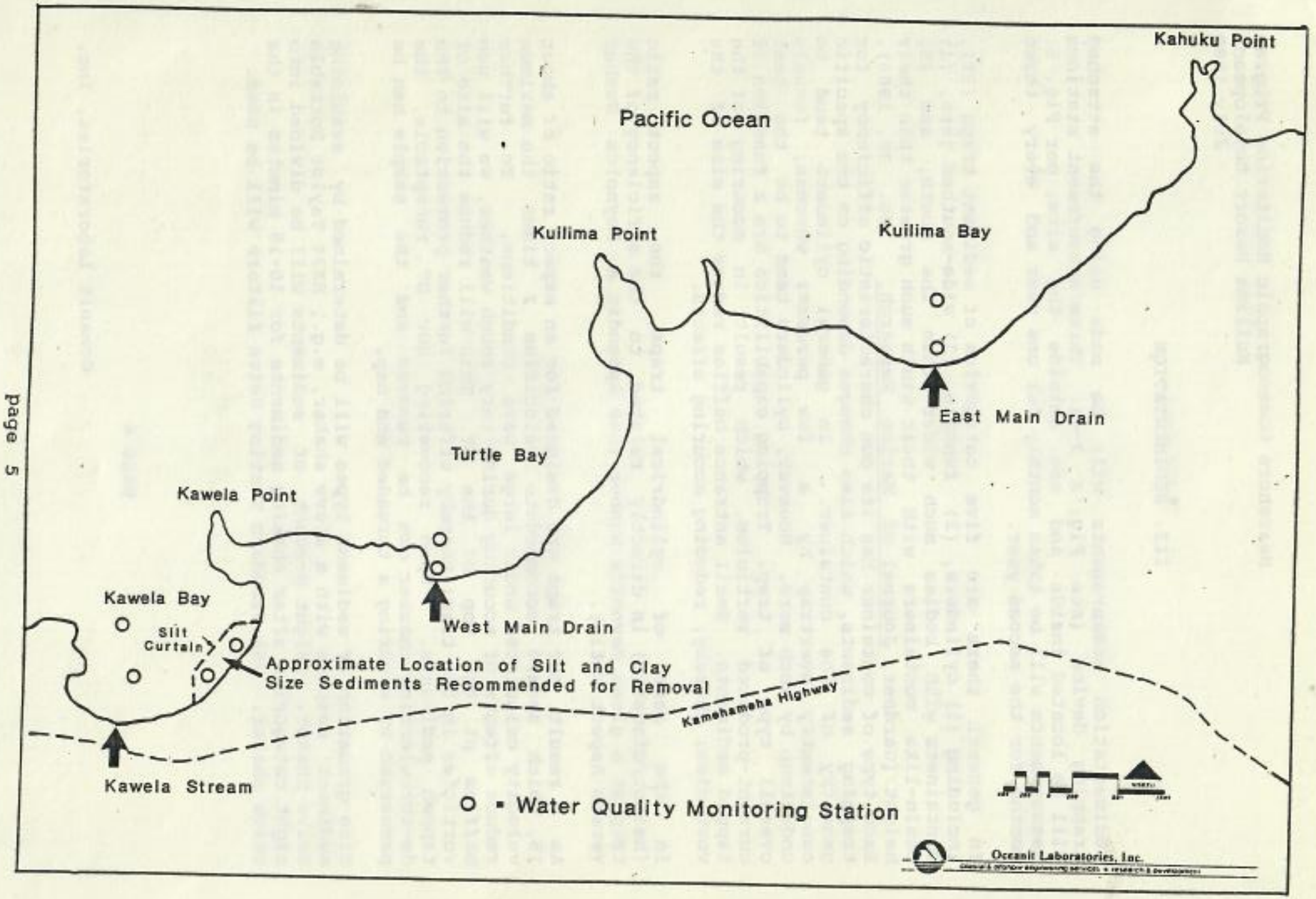

Fig. 2 Location of Water Quality Monitoring Stations

III. SEDIMENTATION

Sedimentation measurements will be made using the attached trapping device (see Fig.'s 3-4). Three measurement stations will be located inside and one outside the site, per Fig. 5. Measurements will be taken monthly for one year and every three months for the second year.

In general there are five categories of sediment traps (ST), including (1) cylinders, (2) funnels, (3) wide-mouthed jars, (4) containers with bodies much wider than the mouth, and (5) basin-like containers with their width much greater than their height (Gardner, Journal of Marine Research, No. 38, 1980). Each type of container has its own characteristic efficiency for trapping sediments, which also changes depending on the specific geometry of the container. In general cylinders tend to consistently overtrap by a few percent; whereas, funnels undertrap by much more. However, cylinders tend to be the best overall type of trap. Trapping capabilities are a function of current-produced vorticies, which result in scouring of the tapped sediments. Small entrance baffles reduce the size of the vorticies; thereby, reducing scouring effects.

In the case of cylindrical traps, the aspect ratio (height/diameter) is directly related to the efficiency of the trap at a given Reynolds Number (see Appendix A, Reynolds Number versus Aspect Ratio).

As a result, our traps are designed for an aspect ratio of about 15, which should accommodate velocities 2 times the maximum velocity calculated under large wave conditions. To further reduce effects of scouring during very rough weather, we will use baffles at the top of the ST. This will reduce the size of vorticies in the trap; thereby offering further protection to the tapped sediments. Upon recovering our ST receptacle, the de-turbulenting chamber can be removed and the sample can be preserved by securing a threaded end cap.

Size gradation of sediment types will be determined by examining sediment samples with a sieve shaker, e.g., RX24 Taylor Portable Seive Shaker. Weight percent of sediments will be divided into eight categories after shaking sediments for 10-15 minutes in the seive shaker. USA Standard Testing Seive filters will be used.

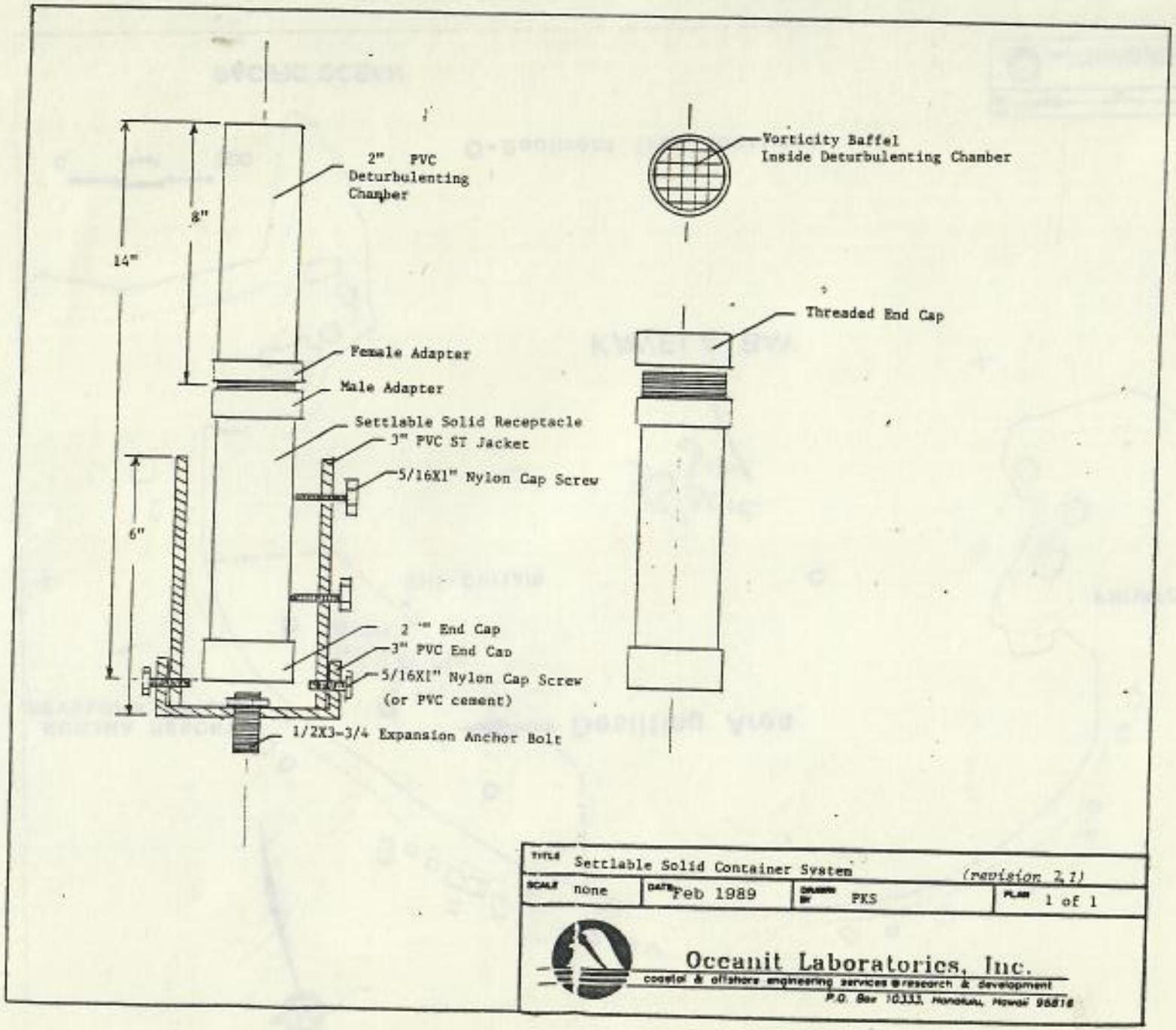

Fig. 3 Example: Sediment Trap Receptacle

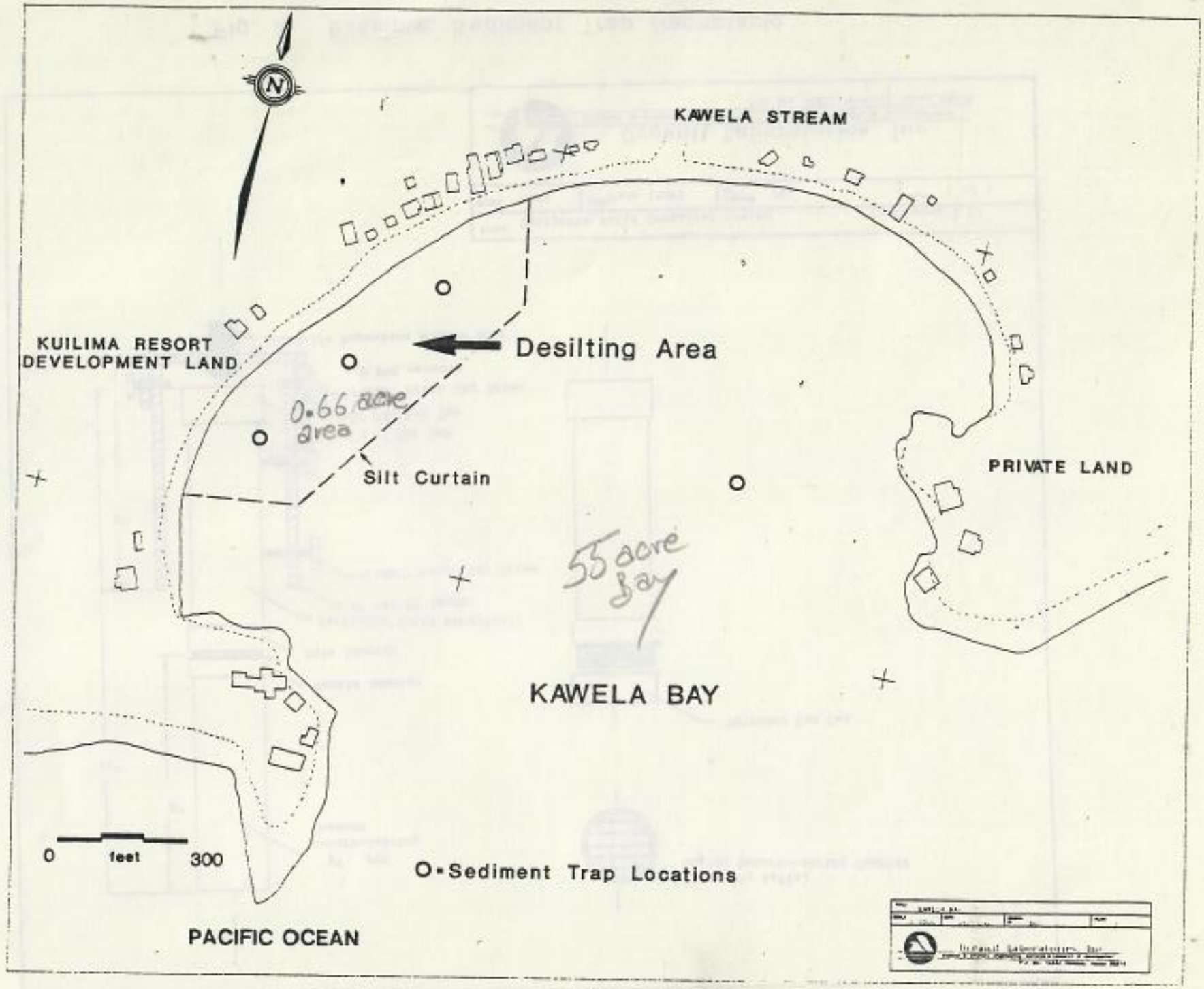

Fig. 5 Sediment Trap Locations in Kawela Bay

A. DESILTING

A suction dredge will be used to remove the fine silt and clay sized materials found in the southeastern portion of Kawela Bay. A silt curtain will be used to prevent the silty water, agitated by the desilting operation, from affecting water quality in other parts of the bay. Water returning to the ocean from the spoils pond will be of equal or better turbidity than the receiving waters. Return waters from the spoils pond will be checked every 4 hours by measuring turbidity (suspended solids). Measurements will be performed using a nephelometer and a calibrated Secchi Disk.

A Secchi disk is a white or black and white disk that is lowered through the water to assess light penetration. Typically it is constructed as a circular plate, 30 cm in diameter, and can be used to calculate light extinction coefficients. The distance below the water surface where the disk disappears from view can be correlated to the turbidity. However, this correlation is site and use specific.

Our turbidity monitoring Secchi disk will be attached to a 600 cm rod. The rod's depth scale will be graduated in centimeters. To measure turbidity, the rod with the disk will be inserted vertically through the water surface until the disk disappears from view. The rod scale will read at the water surface to determine the depth of the disk. The depth reading will be used with a chart (example, see Fig. 6) to determine the turbidity in nephelometric turbidity units (NTU's).

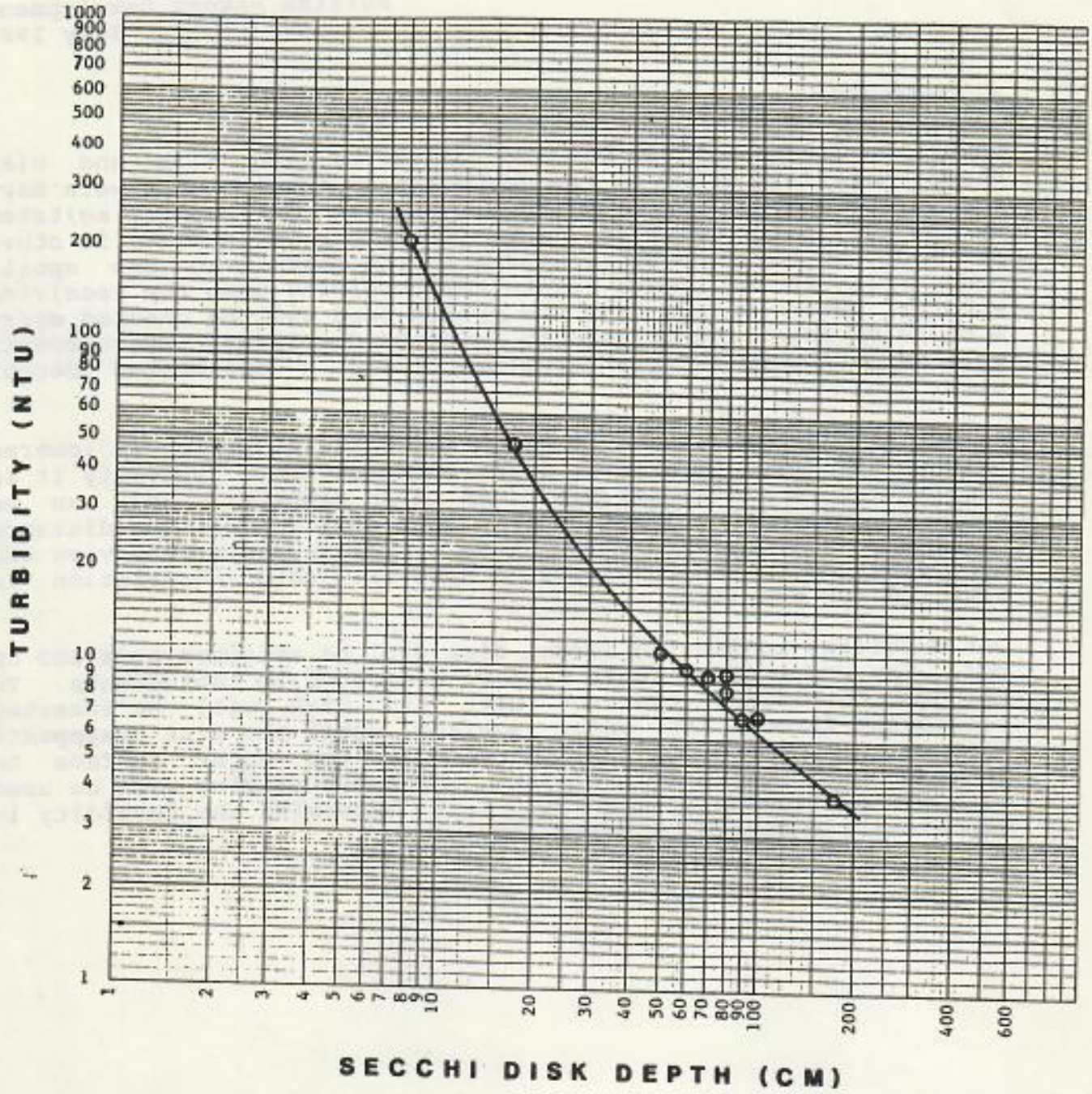

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Fig. 6 Example: Secchi Disk Calibration Curve

IV. MARINE LIFE SURVEYS

A. BENTHIC ALGAE/FISH

Marine life surveys will be conducted noting the various types encountered within the representative areas of interest. Criteria for defining the various habitats will include relative consolidation of the substrate (e.g., sand/silt versus hard limestone bottom), degree of relief or substrate complexity, depth and apparent wave energy experienced by an area, and dominant algae and corals.

Macrobiota and their distribution will be described by establishing stations where a diver will lay out a transect line. Fishes and large invertebrates will be counted within 6.6 feet (2 meters) on each side of the line. These data will provide species distribution estimates, as well as relative density and diversity. The percent cover of each species of sessile, epibenthic organisms (hard corals, soft corals and macrothallic algae) will be estimated within 10.7 feet squared (1 meter squared) quadrates along each transect line. The distribution and relative abundance (or percent cover) of algae, corals and bare substrate will also be estimated by noting each encounter that occurs at unit lengths along the line.

Surveys of algae, fish and macro-invertebrates will be conducted once every three months for a period of two years. Three sampling stations will be located in the dredge site and one control site will be located outside the dredge site. The control site will be located in Kawela Bay in a non-silt area and selected for its algae, fish and macro-invertebrate assemblage representative of Kawela Bay.

B. TURTLES

The threatened Hawaiian green sea turtle (Chelonia Mydas) is a long-range migrant breeder and herbivore that spends most of its life foraging and resting in the nearshore benthic habitat (Recovery Plan for Hawaiian Sea Turtles, The Hawaiian Sea Turtle Recovery Team, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Honolulu, Hawaii, March 1989). The major breeding site for the Hawaiian green turtle is French Frigate Shoals. Tagging studies have shown that turtles nesting at French Frigate Shoals come from numerous foraging areas where they reside throughout the Hawaiian Archipelago.

Although green turtles only spend a small portion of their lives on land, most research worldwide has been focused on the terrestrial phase of their life cycle. The National Marine Fisheries Service (NMFS) identified Kawela Bay as an important foraging habitat for the green turtle ("Preliminary Assessment of Habitat Utilization by Hawaiian Green Turtles in their Resident Foraging Pastures," Balazs, Forsyth and Kam, NOAA Technical Memorandum NMFS, Department of Commerce, NOAA -TM-NMFS-SWFC-71, 1987).

1) TURTLE OBSERVATIONS

Turtle surveys will have an observation period of 5 days. Observations will be conducted from the shoreline and include all of Kawela Bay at a frequency of once every three months for a period of two years after desilting, plus one year prior to desilting. Visual observations will include noting number, location in bay and activity when observed.

2) TURTLE CAPTURING AND TAGGING

Under the discretionary guidance of NMFS, turtles will be captured and tagged for the purpose of increasing NMFS's understanding of the green sea turtle and their use of Kawela Bay. A cooperative effort will be conducted with the University of Hawaii's Marine Option Program (MOP). However, capturing and tagging will not occur without the direct supervision (physical presence) and guidance of suitably qualified NMFS personnel, e.g., Mr. George Balazs.

Procedures for turtle capturing and tagging are taken from Balazs (Balazs, Forsyth and Kam, "Preliminary Assessment of Habitat Utilization by Hawaiian Green Turtles in their Resident Foraging Pastures;" NOAA Technical Morandum NMFS, Department of Commerce, NOAA -TM-NMFS -SWFC-71, 1987). Turtles will be sampled alive and unharmed by means of large-mesh tangle nets, scuba/skin divers or other methods that have been successfully employed to study and tag green turtles in coastal waters of the Hawaiian Islands.

Large-mesh tangle nets are typically constructed of 2 mm diameter nylon twine with a stretched diagonal mesh of 46 cm (23 cm2 mesh) and depths ranging from 1.5 to 3.5 m. The length of the nets will range from 20 to 60 m. Nets will be set at the surface extending vertically through the water column. In shallow areas they can be deployed close to shore using a large inner tube with a plywood bottom. Nets can be checked from land with binoculars and a spotlight (at night) every 20-30 minutes to see if turtles have been caught. Entangled turtles will be removed from the net as soon as possible and brought to shore in the inner tube.

Turtles will be tagged for long-term identification with numbered and addressed Inconel 1 alloy tags, size 681, custom made by the National Bank and Tag Company of Newport, Kentucky (these tags have shown superior corrosion resistance to tags made of Monel alloy). Tags will measure 25 x 9 x 8 mm, weigh 3.5 gm, and will be self-piercing and self-locking. The manufacturer's applicator was modified slightly to lessen damage to tissue around the tagging site. Depending on the turtle's size, from one to three tags will be applied to offset tag loss. Tagging sites include the trailing edges of the front flippers and, when appropriate, along the inside trailing edge of hind flipper well under the carapace.

Biometrics recorded on each turtle may include one or all of the following: straight-line and curved carapace length from the center of the precentral scute to the posterior tip of a postcentral scute; straight-line carapace length from the center of the precentral to the notch between the postcentrals; straight-line and curved carapace width at the widest point (the sixth marginal scute); straight-line plastron length along the midline; straight-line head width at the widest point; tail length from the posterior rigid edge of the plastron to the tip of the tail; and straight-line flipper width from the claw scale to the sixth scale on the trailing edge. Body weight was also recorded on a small number of turtles.

Food sources will be determined by sampling representative turtle's stomachs with a plastic tube inserted through the esophagus. Water will be introduced at low pressure with a garden hose or enema bag to gently flush out food particles. In addition, unswallowed particles of food will be removed from the mouth for identification. Field techniques for sampling dietary contents in turtles will be directly supervised by NMFS.

Food items will be preserved in dilute Formalin and identified to the lowest taxon possible. Frozen bulk samples collected from foraging habitat will be biochemically analyzed to determine major nutrients and mineral composition.

Epizoites found on the skin and hard surfaces of turtles will be sampled, preserved in dilute Formalin, and identified to the lowest taxon possible.

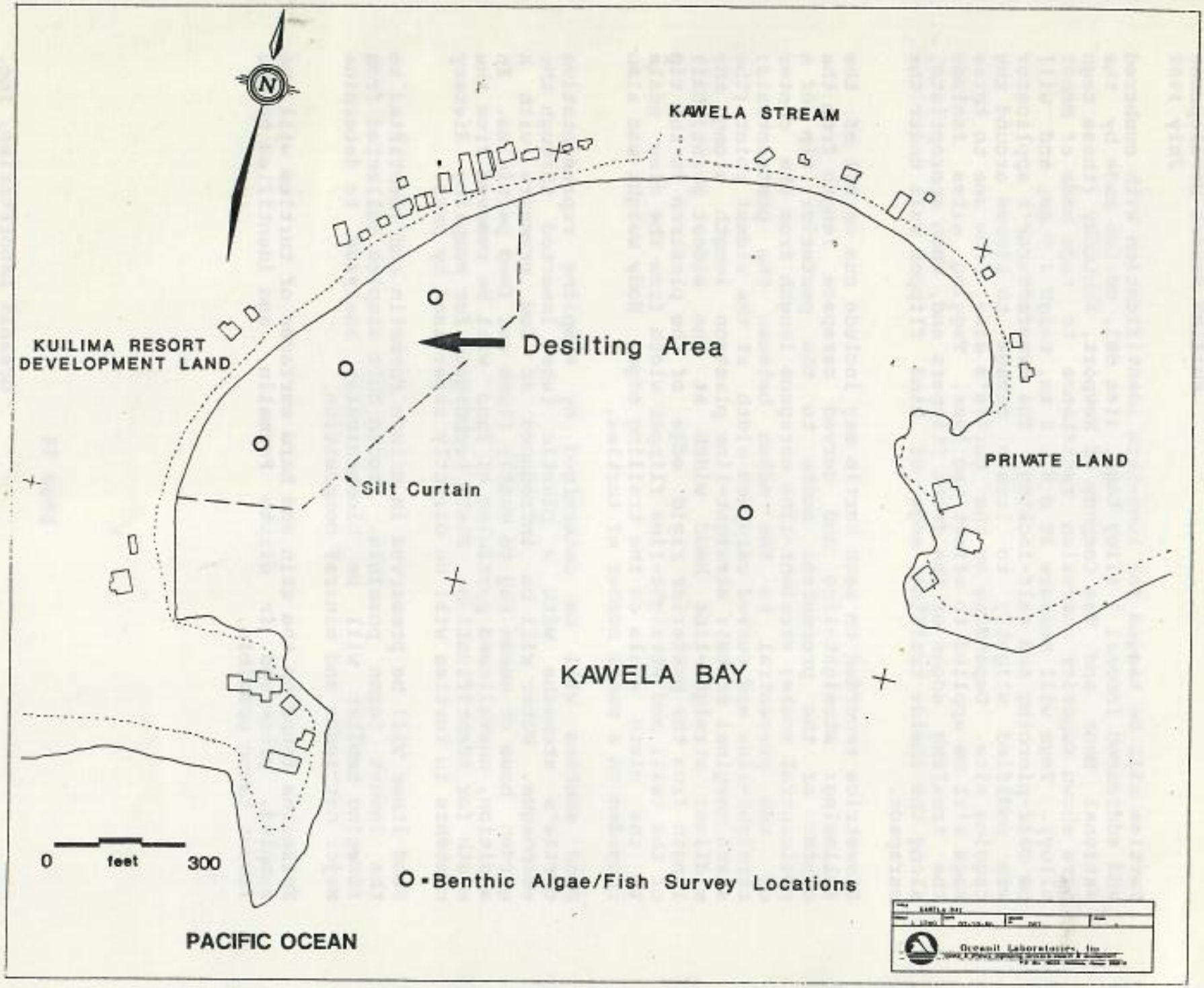


Fig. 7 Marine Life Survey Locations in Kawela Bay

V. REPORTS

The initial report will describe the methodology used and the rationale for selecting sampling sites. Each report will include interpretative analysis and discussion of data and its relevance to the project. If the methodology is changed as a result of improved survey techniques, a rationale for the change will be provided in subsequent reports and a discussion on how the old data is related to the new data will be provided so that continuity of data interpretation is not lost.

Reports will be issued to the U.S. Corps of Engineers, Department of Health, Department of Land Utilization, Department of Land and Natural Resources Division of Aquatic Resources, and other interested groups. Reports will be available after each 3-month monitoring period, one month after each survey period is complete.

At the end of each study year a report will assess that year's information to determine what effect the desilting and resort development had on the algae, fish, macro-invertebrates and threatened green sea turtle in Kawela Bay.

Prepared by?

VI. TIME SCHEDULE

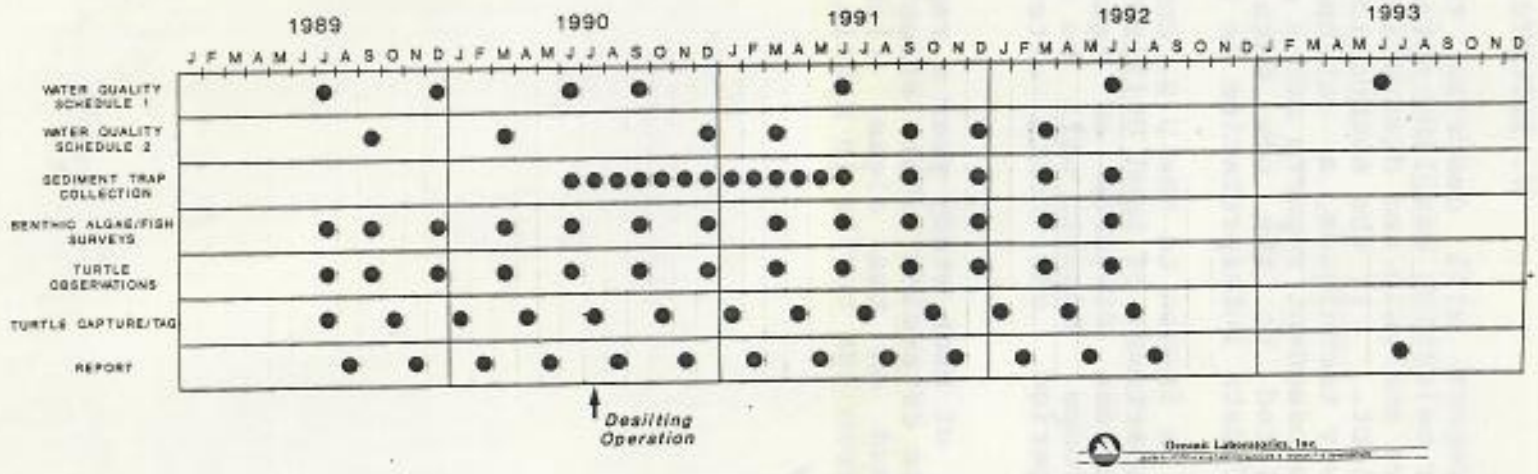
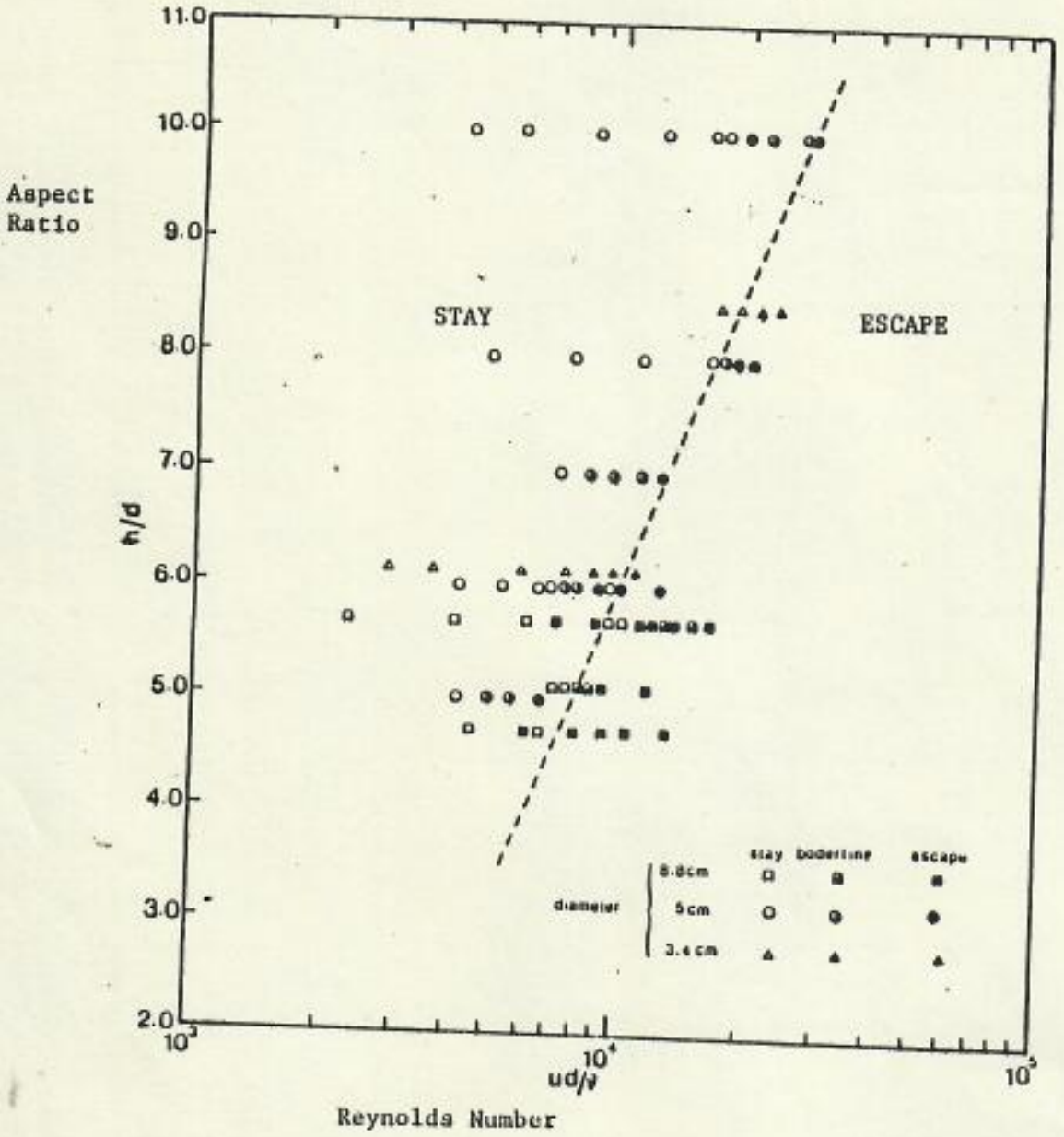


Fig. 8 Water Quality Monitoring Schedule

APPENDIX A

Fig. A-1 Efficiency of Cylindrical Sediment Traps



After Lau,
J. Fish Res Board Can, Vo. 36, 1979

OPPORTUNITY TO STUDY HAWAII'S MAGNIFICENT MARINE TURTLES

A unique opportunity may soon become available on Oahu for serious-minded MOP students to undertake a tagging and monitoring study of the threatened Hawaiian green sea turtle, Chelonia mydas. This project, if it materializes through sufficent student interest, will be conducted under the guidance of the National Marine Fisheries Service, the U.S. government agency with jurisdiction over this protected species. George Balazs, Leader of the sea turtle research effort for the agency in Hawaii will directly supervise the field work. This will include netting and hand-capture of turtles, and censuses taken from shore. The project will only be possible if there are a sufficient number of enthusiastic students willing to be involved in every level of work, from hands-on capture to data write-up, and even campsite house-keeping and cooking. Students that become a part of this project can expect to benefit substantially in terms of research experience as a broadening of their overall marine education. A previous experience working with sea turtles is not required. However, an eager willingness and enthusiasm to learn and contribute is absolutley essential. Snorkeling skills are desirable but not mandatory. Students from all disciplines are invited to apply. Stipends, as well as the necessary equipment, supplies and logistical support to do the field work will be provided. See for additional information and to arranage for an interview.

1990

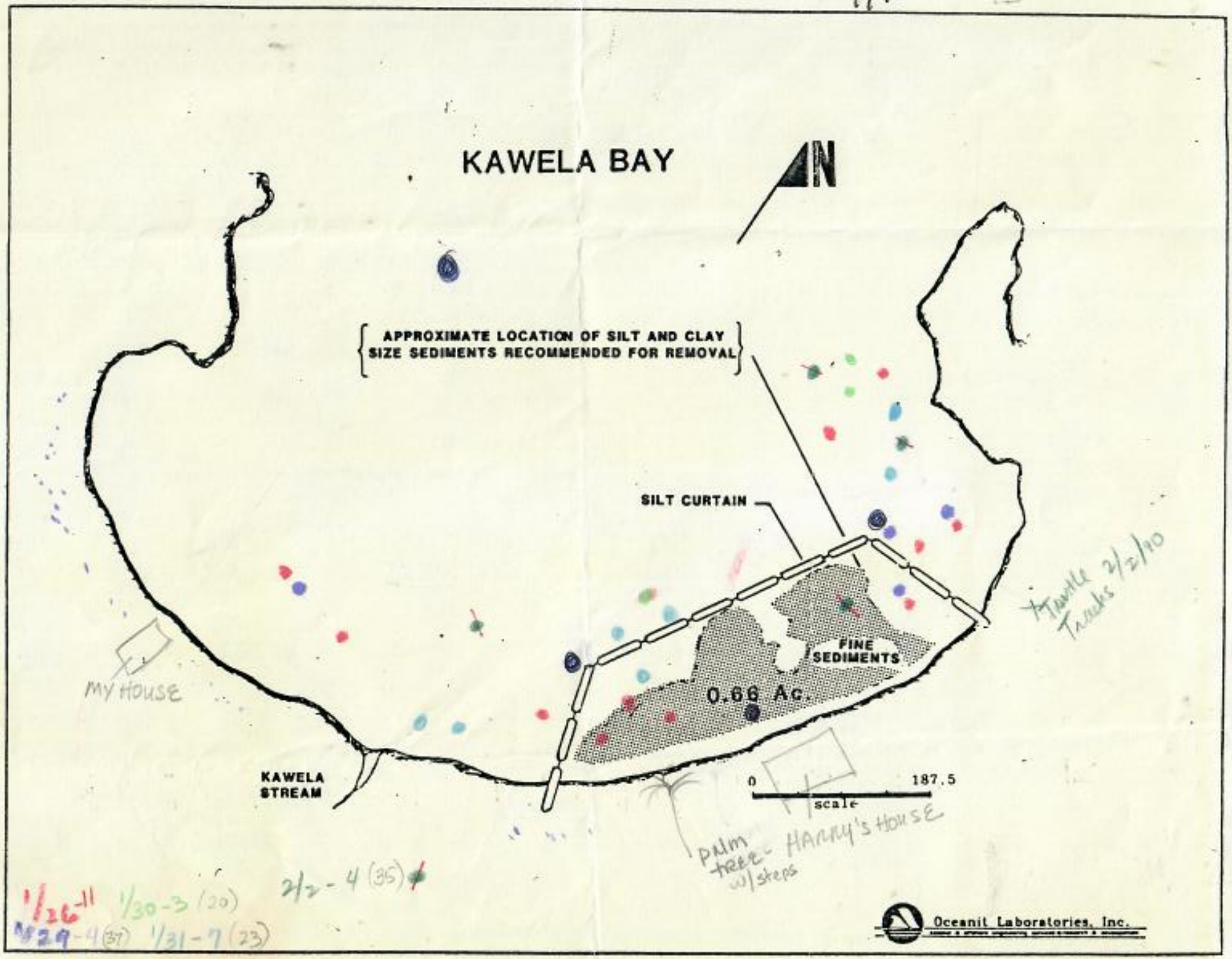


Figure 4

-Bulletin

Kawela Bay Development

There have been many newscasts and articles regarding Prudential's proposal to have Kawela Bay's zoning changed to resort. I do not favor development and believe everyone in Hawaii will bear a loss not only in tax dollars but also the aesthetic value of the Bay.

Kawela Bay is one of the most beautiful bays on Oahu. Its calm waters sheltered in a quiet, uncrowded, and relaxed atmosphere makes it a unique place and the reason why people visit the bay; however, this is not the sole reason I am in opposition to the development.

If Prudential's proposal is passed, the community of the North Shore and Hawaii's taxpayers will be burdened for the maintenance and support for its development — highway taxes will increase as the existing highway will have to be improved greatly to accommodate the additional traffic the resort will bring in; further installment of infrastructure such as water and sewage systems; lights; increases in law enforcement due to crime increase development usually harbors. In a time when budget cuts and deficits are high, the taxpayers of Hawaii cannot afford to adopt another tax increasing proposal.

Prudential profits in turn and offers us job opportunities but the offer does not guarantee any percentage of local hire being from the community.

The residents of the North Shore are well aware of the scarcity in job opportunities (on the North Shore and elsewhere) yet prefer to live away from the city willing to commute despite cost and early morning rise.

Homes Prudential offers will not be within the budget of the middle-class citizen as it is highly probable the homes will be sold under the country club and resort type image and title.

Prudential includes public accesses and a park in its proposal. This submission should be worded to give the county control of the property so revocation by Prudential cannot later be imposed by a twist of law. Turtle Bay Hilton already subtly keeps people from the beaches adjacent to the hotel now with their pay gate at the driveway entrance to the hotel. They claim to have posted it to keep out the undesirables. It denies access to the hotel and beaches unless one is a guest at the hotel, which makes it a privilege instead of a public right to the beaches.

There is still time to carefully review all issues before passage for development by the City Council and Mayor Frank F. Fasi becomes irreversible. The quiet rural atmosphere of what was once common in Hawaii should not become just a memory.

Roseanne Sakamoto

INFORMAL MEMO

21 June 1989

TO: John Naughton, Gene Nitta

FROM: George Balazs, HL

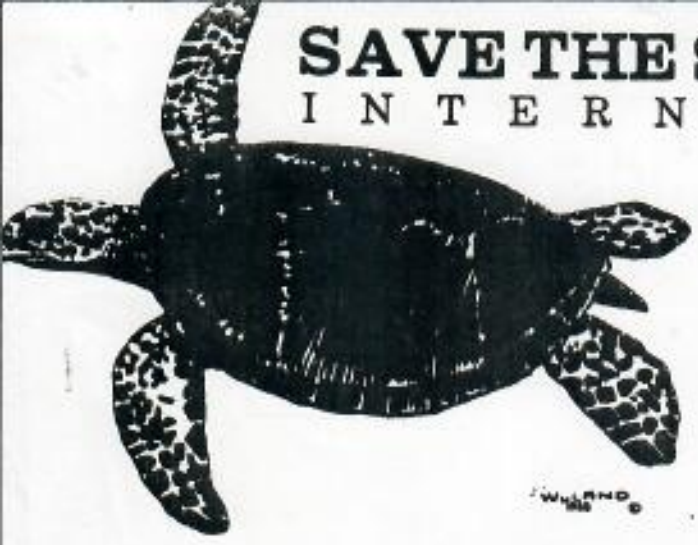
SUBJECT: Kawela Bay monitoring of sea turtles and their habitats.

Thank you for inviting me to the informational meeting in your office last week with Kawela Bay resort developer's sub-consultant. After having had several days to think about what was said, I am feeling very apprehensive and uncomfortable. Numerous statements made by the sub-consultant during the meeting, especially with regard to the Marine Option Program, make me feel that I should in no way become involved as an active direct advisor, cooperator, or any other sort of researcher with the consultant. I can easily forsee all sorts of headheaches and perceptions of vested-interest arising from such an arrangement. The perfect example of this is what was stated at the meeting. That is, the sub-consultant's superior telling a prominent resident on the North shore that everything was just fine with sea turtles at Kawela Bay and the planned development because "..his scientist was working closely on the project with George Balazs"!

Preliminary plans were mapped out nearly two years ago for monitoring sea turtles at Kawela Bay. You asked for my input at that time and I provided you with the best I had. At that time, the Marine Option Program was to be the recipient of money, independently commissioned, to monitor and study the Kawela aggregation. I stress the words "independently commissioned" because such is clearly not the case now, based on what the sub-consultant said at the meeting. If the original plan were reinstated, then I think it would be entirely appropriate and advantageous for me to work with the Marine Option Program to enhance NOAA Fisheries research and recovery objectives for sea turtles. But with the type of association envisioned by the sub-consultant, I want nothing to do with it. As he said himself, this development is "highly controversial".

If you want to hear my candid professional opinions in greater detail, please feel give me a call and we can have an informal in-house discussion, maybe over lunch.

Sherwood/MOP will be informed of my opinion
So they do not misinterpret what may be said
to them by the sub-consultant.



SAVE THE SEA TURTLES
I N T E R N A T I O N A L

June 27, 1989

Chairwoman of #27 Neighborhood Board
Mrs. Meryl Anderson

Dear Mrs. Anserson,

As brought to your attention last night at your meeting, Group 70 is applying for a new permit to desilt Kewela Bay. This permit has not been approved by my organigation nor NOA Mr. John Naughton. As a matter of fact Mr. Naughton has concerns about ocean fill in the bay that could be distributed to feeding grounds of the turtles in the area due to a storm or high waves. The movement of gravel to other areas could kill plant life and change the environment known to the turtles.

Enclosed is a copy of the EIS notice dated May 23,1989. I hope a letter will be written to Mr. Norman Quon in regards to this matter as it seemed to be tied to the Wedding Pavillion presention last night.

Thank you for your time in this matter.

Sincerely,

Marlu Oliphant, President

cc JN
GB
cc. of Sunset Beach

P.O. Box 628. Haleiwa Hawaii 96712

Project of
CONSERVATION COUNCIL
for HAWAII

Summary of green turtle netting at Kawela Bay[a], Oahu

by
George H. Balazs
National Marine Fisheries Service
2570 Dole Street
Honolulu, Hawaii 96822-2396

Study date	Net length (m)	Hours of netting	Netting efforts (meter-hrs)	No. turtles captured	Catch per unit effort
26-28 Mar 85	60	40	2,400	19	.008
15-16 Apr 85	36	15	540	6[b]	.011
27-28 Jun 85	36	12	432	5	.012
2-3 Jul 85	36	12	432	6[c]	.011
20-21 Feb 86	36	14	504	1	.002
28-29 Mar 90	42	8	336	1	.003
			Total	38	

Total no. of turtles--35

[a]All netting conducted off Don Ho's property at the northwestern side of the bay where conditions are acceptable.

[b]Includes one recapture.

[c]Includes 2 recaptures, 1 of which had already been recaptured on 15 April 1985.

GHB

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Fisheries Center Honolulu Laboratory
2570 Dole St. • Honolulu, Hawaii 96822-2396

April 4, 1990 F/SWC2:GHB

Mr. Murray Eisner
57-435 Hono Kawela Drive
Kahuku, HI 96731

Dear Mr. Eisner:

Many thanks for your recent letter regarding sea turtles (green turtle, Chelonia mydas), at Kawela Bay. I appreciate the interest and information that you and your wife have periodically conveyed to me over the past 5 months. Your concern for the turtles, and the habitat upon which they depend, is truly commendable. Since first visiting Kawela Bay in 1985, I have been pleased to find an exceedingly high level of interest and enthusiasm for sea turtle research and conservation among longtime Kawela Bay residents such as yourself.

Your question about the number of turtles using Kawela Bay can only be answered in terms of my "best professional estimate." Unfortunately, absolutely reliable methods for statistically censusing sea turtles in their marine habitats do not exist. During the course of our low-intensity studies at Kawela Bay, I have personally captured and tagged 37 turtles. Consequently, there are, of course, at least that many turtles using the Bay. During October and November of 1985, Robert Forsyth and I witnessed 15-20 turtles feeding together close to shore at the east end of the Bay. And more recently, on the morning of December 13, 1989, I picked up 197 fecal pellets freshly washed ashore that came from green turtles. The pellets contained (among other things) digested fragments of Codium, a benthic alga that grows on hard substrate in Kawela Bay. Based on the above findings, coupled with my experiences capturing and tagging turtles in a more intensive fashion elsewhere in Hawaii, I would estimate that somewhere between 50 and 150 turtles use Kawela Bay, mainly for foraging purposes (probably at night). My lower estimate of 50 is undoubtedly very conservative, considering that 37 turtles have been tagged, but only 2 have been recaptured.

Again, thank you for your interest. I hope that I have answered your difficult question with some degree of satisfaction.

Sincerely,

George H. Balazs
Zoologist

University of Hawaii
Sea Grant College
Program

"Toward the Sea"

MAKAI

Vol. 7, No. 8
August
1985

HIGH CONCENTRATIONS OF MARINE BACTERIA POSE HEALTH RISK

by Ann Murakami-Walker

People in Hawaii who swim in or eat seafoods taken from nutrient-polluted coastal waters are at risk to wound and intestinal infections caused by a group of marine bacteria (*Vibrio* spp.), according to Dr. Roger Fujioka, researcher at the University of Hawaii Water Resources Research Center, and Carol Kling, graduate student in geography at the university.

Fujioka and Kling conducted a study at Kaneohe Bay in windward Oahu to test whether available nutrients, such as from sewage discharge, were the limiting factor controlling concentrations of vibrio bacteria in Hawaii's coastal waters. This study was part of a 2-year grant funded by the University of Hawaii Sea Grant College Program to evaluate the significance of vibrio bacteria in marine and brackish water used for aquaculture, commerce, and recreation in Hawaii. As principal investigator, Fujioka explained that his interest was piqued by recent mainland studies that indicate vibrio bacteria play an important role in marine ecology, as well as in causing diseases in marine animals (oysters, crabs, shrimps, eels, fish) and in humans.

Two similar streams flowing into Kaneohe Bay, Ahuimanu and Waihole, were selected to test the researchers' hypothesis. Ahuimanu stream receives sewage from a treatment plant and has high concentrations of nutrients in the form of phosphates, which can be readily detected. Waihole stream does not receive sewage and its phosphate concentrations are relatively low. Sampling sites in both streams were selected based on salinity levels (0, 2, 5, 10, 20, and 35 parts per thousand, which is the salinity of open ocean water) to indicate the extent of mixing with ocean water as the streams flow into the bay.

Byodo-In Temple in windward Oahu is near Waihole stream, one of the streams studied by Fujioka and Kling.

At the mouth of Waihole stream the concentrations of both vibrio and nutrients were consistently low, whereas at the mouth of Ahuimanu stream, they were significantly higher. The highest vibrio concentrations were at the site with a salinity level of 5 parts per thousand, which Fujioka and Kling concluded is the optimum ratio of nutrients and salts to support the growth of vibrio.

The lowest vibrio concentrations were in water samples taken about 1 mile seaward from both stream mouths where phosphate levels were almost undetectable.

(Continued on page 2)

Marine Bacteria

(Continued from page 1)

Based on these results, Fujioka and Kling concluded that nutrients are the major factor controlling the concentrations of vibrio bacteria in Hawaii's coastal waters. Thus, the mouths of streams and rivers carrying water rich with nutrients, such as from sewage, can be expected to have high concentrations of vibrio present. The health risks involved with working and playing in or eating seafood taken from these locations are consequently higher than they are in unpolluted coastal waters.

The documentation that various species of vibrio can cause diseases in humans is a recent event, and many more species of vibrio are suspected of being capable of causing diseases in humans. Vibrio bacteria cause two general types of diseases in humans, nearly always after exposure to or ingestion of marine waters or foods. Superficial wounds, such as coral cuts and cuts from surfing accidents, may become infected with *V. alginolyticus*, *V. damsela*, or *V. vulnificus* after exposure to marine waters. Most wound infections are minor and treatable, but wounds infected with *V. vulnificus* often lead to fatal septicemia (blood infection).

As pointed out by Fujioka, the mystery of it all is the sporadic occurrences of most vibrio infections in humans although epidemics related to marine food-borne diseases caused by vibrio do occur. A partial explanation for this, said Fujioka, is the as yet general ignorance of the medical profession to suspect vibrio infections in many cases.

The coastal waters near the mouth of Ahuimanu stream have relatively high concentrations of phosphates and vibrio bacteria.

However, other factors, not fully understood, may play an even more important role in explaining vibrio infections in humans. For example, some people are more susceptible to vibrio infections than others. Most vibrio bacteria recovered from environmental waters, however, do not have the capacity to cause diseases in humans. Thus, there are virulent (disease producing) and avirulent (non-disease producing) strains of vibrio. What triggers a strain to become virulent is still not known, said Fujioka. Simple tests are needed to determine whether a vibrio strain is virulent, he added.

Primarily for these reasons, the federal Food and Drug Administration, said Fujioka, has yet to set any vibrio bacteria concentration limits on any seafoods, including oysters, which are usually eaten raw. Studies monitoring vibrio concentrations in oysters are currently being conducted in Maryland, Florida, and Louisiana.

At present, the best management approach, said Fujioka, is to determine which factors control the growth of vibrio bacteria to prevent their excessive growth, especially in conditions where infection of humans or valuable animals (for example, aquacultured species) is likely to occur.

Mainland studies have shown that vibrio in coastal waters flourish in summer and disappear in winter when water temperatures drop below 13 degrees C. In Hawaii, coastal water temperatures remain at about 24 degrees C throughout the year, and Fujioka's studies have shown that vibrio can be recovered from Hawaii's coastal waters all year long. However, vibrio concentrations vary widely from one marine site to another and are usually higher at nearshore sites and lowest in the open ocean. □

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Jack R. Davidson, Director
B. Justin Miller, Coordinator **Richard Klemm, Editor**

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Preventing "Su

by Carol A

While many people have some knowledge of the sun's potentially harmful effects on the skin, they may not realize that the sun can damage the eyes, too.

Being close to the equator at 21 degrees north latitude, people in Hawaii are more susceptible to sun-related health problems than are most other Americans. Overexposure to the sun can cause skin cancer and many types of eye damage. Skin cancer of the eyelids, for example, is common in people who work in the sun all the time, such as fishermen, sailors, and lifeguards.

Other sun-related eye problems that can occur, according to an article in *Prevention Magazine* (6/84), are

- pinquecula—a thickening of surface tissue of the eye in areas not covered by the eyelids on either side of the cornea.
- pterygium—a growth of tissue over the cornea. This is actually a progression of pinquecula. The growth appears as white spots on the cornea and can be removed by a simple surgical technique.
- keratitis—an irritation of the cornea similar to a chemical burn, which you can get from reflected light off water or snow. Keratitis is a scratchy, itchy feeling condition that usually goes away in a few days.
- cataracts—a cloudiness in the lens of the eye resulting from chronic exposure to the sun. Cataracts are a well-known eye problem, and they can be operated on easily with few or no complications.

These eye problems have many causes, and it is important to remember that the sun's rays is one of them. In the solar spectrum there are three wavelengths of light important to know about: ultraviolet light (UVL), or tanning rays of the sun; visible light; and infrared, or heat, rays. Of these, invisible UVL is the most harmful. Infrared light can cause some burning whereas visible light is usually not harmful.

In an interview, Dr. John Corboy of the Hawaiian Eye Center in Wahiawa, Oahu, stressed the need for good sunglasses and eye protection from the sun for people in Hawaii. He noted that recent research findings show that some eye problems originally attributed to other causes are the results of sun damage. For example, cataracts, which used to be equated with old age, are showing up in middle-aged people because of excessive exposure to the sun.

As it is with the skin, sun damage to the eyes can be cumulative, Corboy said, so the younger you are when starting sensible protection, the better for lifelong eye health. But, whatever your age, it is never too late to benefit from protecting your eyes from sun damage.

Sunglasses can play an important role in eye protection, especially in Hawaii where the sun is intense year-round. But, not just any sunglasses will do since not all provide proper eye protection from the sun.

To be effective against the sun, sunglasses must block out as much ultraviolet light as possible and should be dark enough to block out most of the visible light or at least cut down the glare. Corboy explained the different characteristics of sunglasses that are important for eye protection from the sun.

"Actually, you could just take a pair of glasses and put a yellow tint on them and they would block the UVL. Unfortunately, they would still transmit glare, so it is also necessary to darken the sunglasses. Usually, the darker the glasses are, the more effective they are in blocking UVL," he said. "Another point to keep in mind is that a glass lens blocks heat (infrared) rays, and so is cooler than a plastic lens. Infrared light is transmitted by plastic, so if you have to be in the sun all day you could keep your eyes as much as 10 degrees cooler by using glass lenses."

Features to look for, then, in sunglasses include lens color, darkness of the tint, and material—glass or plastic. Yellow lenses are the most effective in blocking out UVL and can be dyed with other colors—brown, green, orange, or gray. The colors rose, violet, and blue provide the least amount of protection from the sun, Corboy said. Besides having the advantage of blocking heat better than plastic lenses, glass ones are more scratch

Sunglasses with mirrored lenses may offer the

B

by Carol A. Beard

Because people feel that a tan makes them mo
many often equate a tanned body with a healt
result, they spend week after week baking in the su
oblivious to the damage the sun can do to the
though most people have some knowledge that to
harmful to their bodies, many continue to take lon
risks to achieve a golden tan.

Nevertheless, Dr. Allan Izumi, Chief of Derr
associate professor at the University of Hawaii's J
School of Medicine, maintains that "though we
people out of the sun, the least we can do is
them of the dangers of too much sun or when
the sun."

The sun's most potent weapon for causing sk
ultraviolet light (UVL). This light, invisible to the e
not only cancers but also long-term damage and
skin, such as wrinkles, freckles, benign keratoses
thickening on the face, neck, or hands usually in
and pre-cancers (abnormal skin conditions that te
cancerous). Hives and allergic reactions are other

nburned" Eyes

.. Beard

eyes little or no protection from the sun.

resistant and are optically better. The lenses should be dark enough to block glare and as much visible light as possible from your eyes.

Some of the more popular types of sunglasses, according to Corboy, have differing protective qualities. Polarized lenses let light through in only one direction, thereby reducing glare, but they may not block out UVL. Polarized clip-on lenses over UNL-tested glasses makes an effective combination for protection from both glare and UVL. Mirrored lenses block visible light rays, but normally do not block out UVL. Gradient lenses, dark on top and light on bottom, offer little or no protection and are used mostly for fashion purposes. Photochromic lenses are good all-purpose lenses that darken when out in the sun and offer enough protection for short periods. If you have to be out in the sun for long periods, you need regular dark lenses.

Be aware that price and style do not always provide a guide for selecting sunglasses that effectively protect your eyes from the sun, Corboy said. Buying the most expensive pair of sunglasses available does not ensure UVL protection. A pair of reasonably priced dark sunglasses may be better in blocking out UVL. For sunglasses that afford protection and offer styling, expect to pay around $20, he said. Avoid cheap glasses. They probably offer little or no protection from the sun; and because they are usually a little distorted or out of focus, they may cause headaches and nausea, he said.

Corboy demonstrated a meter that can measure exactly how much UVL and infrared light are being blocked out by a pair of sunglasses. "Many opticians have this meter and would be more than happy to test your glasses for you," he said.

At the federal level, there is a move to require all sunglasses to be labeled with the exact percentages of UVL and visible light they block out. Until such labeling becomes required, a visit to your optician is the best way of obtaining sunglasses that offer you the sun protection you need. □

EING SUN-SMART SAVES SKIN

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ılder people),
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When used properly, sunscreens containing PABA can help to prevent sunburn.

lems that can develop from overexposure to the sun.

Some medicines, even in combination with only moderate sun exposure, can set off allergic reactions or cause severe sunburns. Examples are hypoglycemics, thorazines, birth-control pills, and medicines for blood pressure.

Cosmetic ingredients in combination with sun exposure can also cause allergic reactions. Halogenated salicylanides, an active ingredient found in deodorant soaps; oil of bergamot, used in most perfumes; and essences of lemon and lime, contained in aftershave lotions and bath soaps, have been identified as chemicals that can work with the sun to cause skin damage.

Perhaps the most feared health risk from sun exposure is skin cancer. Who gets it?

All people are susceptible to skin cancer, but the lighter their skin, the greater their risk of developing skin cancer. This means that light-skinned Caucasians who sunburn easily are at greatest risk. Polynesians, Blacks, Orientals, and other non-Caucasians have more of the skin pigment melanin, which offers them "built-in sun protection," than most Caucasians have. Although it does occur, skin cancer among darker skinned people is not common, according to Izumi.

(Continued on page 5)

Being Sun Smart Saves Skin *(Continued from page 4)*

In a 20-year study conducted in Hawaii, says Izumi, cases of melanoma (darkly pigmented skin tumor) increased at 120 percent among Caucasians compared with a 1 to 2 percent increase among Orientals and Hawaiians. Mainland statistics for the same period show a much smaller growth rate overall, about one half of Hawaii's, in the number of melanoma cases. Researchers, adds Izumi, point to Hawaii's being closer to the equator than the U.S. mainland, and therefore has less atmospheric protection from UVL.

Some people may panic when they hear the word cancer, but 90 to 95 percent of skin cancers can be treated effectively, says Izumi. The most important step is to see a dermatologist whenever changes in the skin occur. Growths or bumps on the skin, changes or growths in moles, and open sores that do not heal within a month are warning signs to look for to determine the possible presence of skin cancer.

The good news is that skin cancer is the most curable form of cancer. Most are removed with little or no recurrence, says Izumi.

The key is to apply sunscreen at least 2 hours before going into the sun so the skin can absorb it — and to apply more sunscreen regularly, especially after swimming.

According to the American Cancer Society, basal-cell, squamous-cell, and malignant melanoma are the three main types of skin cancer. Basal-cell cancer is the most common form of skin cancer and the easiest to remove. This is the type of skin cancer recently removed from the nose of President Reagan. It has the lowest recurrence rate of the skin cancers. This cancer begins as a raised lump with a depression in the center and with an open sore. The skin is shiny and can scab or crust. Basal-cell cancer grows slowly and tends not to spread much.

Squamous-cell cancer grows more rapidly than basal-cell cancer and is more serious because it can spread into the body's lymph nodes. It appears as a raised lump that looks like a wart and is scaly, but is not shiny and does not have a depressed center. It occurs less frequently than basal-cell cancer and can usually be safely removed.

Malignant melanoma strikes least often but is more dangerous than the other two skin cancers. The danger lies in the fact that this cancer grows and spreads to the body faster than basal-cell and squamous-cell cancers. Malignant melanoma appears as an elevated brown or black spot that resembles other moles on the body. The "mole" can become darker or lighter and even develop red, white, or blue specks. Life expectancy depends on how deep into the skin the tumor has grown and on how long it has existed.

It is important to remember to regularly inspect your body for skin changes and to consult a doctor when one occurs. Most important, your skin should receive as much protection as possible when you are in the sun. A good sunscreen is an important protective aid.

Para-aminobenzoic acid, or PABA as most people know it, is the chief active chemical in most sunscreens. PABA blocks ultraviolet light and slows the tanning process. Sunscreens work best when used properly.

First, remember that wet clothing, water, and sand—even on a cloudy day—all reflect UVL; so keep your skin protected by a layer of sunscreen with a SPF (sun protection factor) right for you. The SPF number rating indirectly indicates the amount of PABA in a sunscreen.

Most sunscreen and suntan lotions have a number on them from 1 to 15. This SPF number indicates how long the lotion will protect you from burning. For example, SPF 15 means that the sunscreen will permit you to remain in the sun 15 times longer without burning than when you use no sunscreen at all.

Very light-skinned people, says Izumi, should start with a SPF 15 sunscreen and take small doses—15 minutes—of the sun daily for a week. But Izumi cautions, "Do not think because you put a number 15 (the highest SPF number without adding dyes) on just before you go into the sun that it will necessarily do the job. You could put a number 8 on your skin 2 hours before you go into the sun and do a better job."

The key is to apply sunscreen at least 2 hours before going into the sun so the skin can absorb it—and to apply more sunscreen regularly, especially after swimming.

Because there are too many variables, no one SPF number is best for a person in all situations. Skin pigmentation, the time of day in the sun, the amount of time the skin has had to absorb the sunscreen, sweating, the kind of activities engaged in, and other factors can affect a sunscreen's performance.

While SPF is an important factor in selecting a sunscreen, it is not the only factor to consider. Another important factor is with what base the PABA is mixed. Manufacturers use aloe, alcohol, or lanolin as bases. A sunscreen with PABA in alcohol offers the best sun protection because alcohol helps the skin to absorb the PABA better than do aloe and lanolin.

However, many people prefer sunscreens with the latter bases because those with PABA in alcohol can cause the skin to dry out. But Izumi offers a solution: "We could put a moisturizer on over the sunscreen (with an alcohol base) without weakening the SPF."

Some sunscreens are "water resistant," and a study by Consumer Report, according to Izumi, indicated that 6 of 7 products tested were, in fact, "water resistant and superior products." Nevertheless, Izumi encourages people to reapply sunscreens regularly while in the sun.

It is never too late to start receiving the benefits of good sun protection. Good sun protection comes from using sunscreens correctly:

- Select a sunscreen with a high enough SPF to block most UVL so that you can tan slowly.
- Apply a thick coat of sunscreen at least 2 hours before going into the sun so that your skin has time to absorb the lotion.
- Avoid, if possible, going out into the sun between 10 am and 3 pm. Cover up if you do have to go out during this period.
- Reapply sunscreen regularly and especially after swimming to maintain good sun protection.
- Consult a dermatologist if you see any noticeable changes in your skin, especially in areas exposed to the sun.

For more information about the sun and your skin call or visit an American Cancer Society office nearest you. □

MARINE MISCELLANY

HMC SPEAKER'S BUREAU

The Hawaii Maritime Center at the Aloha Tower can schedule — for schools and other groups — speakers who are knowledgeable in marine-related topics. Such topics include marine careers, water safety, history of Honolulu Harbor, longline fishing, whaling in the 19th century, sea turtles, and knot tying and rope work. In all, speakers on nearly three dozen topics are available.

Call **Chris Woolaway**, Hawaii Maritime Center, at 548-5433 for more details.

WAIKIKI-DIAMOND HEAD SFMA OPEN TO ALL LEGAL FISHING

Since July 1 of this year, the Waikiki-Diamond Head Shoreline Fisheries Management Area has been open to all legal fishing gear, including nets and spears. Up to that time, only pole-and-line and hand harvesting methods were allowed. The opening of this area to all legal fishing gear will continue until June 30, 1986. The area will then be closed to all fishing for 2 years.

The Waikiki-Diamond Head Shoreline Fisheries Management Area extends from the junction of Kalakaua and Kapahulu Avenues to the Diamond Head Lighthouse.

Copies of Administrative Rules Chapter 13-48 pertaining to the area are available at the Division of Aquatic Resources, Hawaii Department of Land and Natural Resources, 1151 Punchbowl St., Room 330, Honolulu, HI 96813. For more information, call **Mr. Paul Kawamoto** at 548-5920.

REPORT ON TSUNAMIS IN PERU-CHILE AVAILABLE

A new report, *Tsunamis in Peru-Chile*, examining and comparing historical tsunami and earthquake data for the Peru-Chile area of South America is now available at $8 per copy from the National Geophysical Data Center, NOAA, Code E/GCX2, 325 Broadway, Boulder, CO 80303. Checks and money orders should be made payable to COMMERCE/NOAA/NGDC. Orders may also be charged to American Express, MasterCard or Visa by letter or telephone, (303) 497-6541.

As part of a project to reduce destruction from tsunamis in developing countries, the center has compiled several data sets containing historical information about tsunamis in the Peru-Chile area, one of the most seismically active regions in the world. The project is called the Tsunami Hazard Reduction Using System Technology (THRUST).

Much of the data compiled for THRUST is present in the report. Data for each of the regions described include tabular information on tremors that generated tsunamis, damage and number of deaths caused by tsunamis, and cities that reported tsunamis from Pacific-wide sources. Maps show the extent of coastline affected by several large earthquakes and areas throughout the Pacific that have reported tsunamis generated near Peru and Chile.

Sea Grant Extension Agents and Specialists

Howard Takata
Hawaii Agent
875 Komohana St.,
Hilo, HI 96720
(808) 959-9155

Ed Bartholomew
Maui Agent
Maui Community College
Building 214
310 Kaahumanu Ave.
Kahului, HI 96732
(808) 244-4157

Barry Smith
Guam Agent
Marine Laboratory
University of Guam
UOG Station
Mangilao, Guam 96913
(671) 734-2421

Richard Brock
Fisheries Specialist

Ray Tabata
General Marine Agent

Mark Suiso
Oahu Agent

Peter Rappa
Information Specialist

Joan Choy
Administrative Assistant

Rick Klemm
Communications Specialist

Jan Auyong Titgen
Ocean Recreation and
Tourism Specialist

1000 Pope Road, Rm. 213
Honolulu, HI 96822
(808) 948-8191

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Sea Grant Extension
1000 Pope Road, Room 213
Honolulu, HI 96822

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Coconut Isle buyer linked to

Senate hears Hawaii land, crime ties

By James Dooley
Advertiser Staff Writer

Katsuhiro Kawaguchi, the deported Japanese businessman who bought more than $10 million in Hawaiii real estate in the 1980s, financed at least some of those purchases with loans brokered by an associate of Japanese organized crime, according to congressional testimony yesterday.

An unidentified Japanese businessman who testified from behind a screen to U.S. senators said that at least five and as many as 50 "major properties" in Hawaii were purchased in the '80s with money from the yakuza — Japanese gangsters.

A Senate staffer also said at the hearing that U.S. law enforcement personnel investigating yakuza activities in this country can't get criminal intelligence from the Japanese National Police, a difficulty first reported in 1988 by The Advertiser.

Federal and local law enforcement officials here acknowledged yesterday that there have been problems in the past obtaining information from their Japanese counterparts, but they noted that they have similar problems with other countries and said the flow of information is improving.

Katsuhiro Kawaguchi
Deported for visa fraud

Yesterday's hearing, before the subcommittee on investigations of the Senate Committee on Governmental Affairs, offered little new information on the subject of yakuza investment in the Isles.

The anonymous businessman, identified only by the pseudonym "Mr. Bully," told the panel, "I have personal knowledge of at least five major properties in Hawaii which were purchased with money illegally generated" by the yakuza. The businessman used the formal title for yakuza gangs, *boryokudan*, preferred by Japanese law enforcement.

> "I have personal knowledge of at least five major properties in Hawaii which were purchased with money illegally generated" by the yakuza. "My educated estimate is that there are probably closer to 50 (properties)."
>
> — **"Mr. Bully," Senate witness**

"My educated estimate is that there are probably closer to 50 (properties)," he said.

"All such properties are fronts for boryokudan money laundering," he said.

None of the properties were identified, although subcommittee staffer Scott Orchard repeated connections, first reported exclusively by The Advertiser in the 1980s, between yakuza groups and the owners of various U.S. golf and resort properties, including the Turtle Bay Hilton and the Olomana Golf Links on Oahu.

Orchard also discussed reported yakuza ties to Minoru Isutani, the Japanese businessman who bought the Pebble Beach resort in California last year and sold it this year, but noted that those alleged ties "are not clearly developed." Isutani also has development interests on the Big Island.

The hearing featured presentation of a chart alleging a "boryokudan link to Hawaii real estate purchases by Hachidai Sangyo," the company that bought Coconut Island in Kaneohe Bay in 1987 for $8.3 million.

Hachidai Sangyo President Katsuhiro Kawaguchi pleaded guilty to visa fraud charges in federal court here in 1988, was fined $100,000 and deported.

The chart alleged that Kawa-

yakuza loans

guchi's purchases here, which included the Eaton Square shopping mall in Waikiki and a $2.2 million Kahala home, were financed with loans brokered by an associate of the Tokyo-based Sumiyoshi-rengo kai yakuza group.

The loans were allegedly made by Itoman & Co., a giant Japanese real estate firm that also helped finance Isutani's $860 million purchase of Pebble Beach last year before suffering severe financial and legal problems of its own.

The Sumiyoshi-rengo associate who brokered the Itoman-Kawaguchi loans received a "finder's fee" of 5 to 10 percent of the value of the loans, according to the chart.

Personnel at the offices of Hachidai USA, Kawaguchi's Hawaii company, declined comment on the subject yesterday, saying they were unfamiliar with the allegations raised in the Senate hearing.

John Seibert, Assistant U.S. Attorney in Hawaii who has overseen several yakuza-related investigations here, said yesterday he could not comment on the specifics of the Senate hearing.

On the subject of the flow of information between Japanese and U.S. law enforcement, Seibert noted that obtaining official criminal justice records from Japan for use in American courts can sometimes be a time-consuming process, but it is generally successful.

He said in more than 100 visa fraud cases brought here against Japanese nationals over the last seven years, "we have never been unable to obtain that information, although it has at times been a slow process."

Various American law enforcement officers have said in the past that they regularly obtain "informal" information from their Japanese counterparts but getting "official" records useable in an American court is much more difficult.

Jean Motoyama, spokeswoman for the Honolulu Police Department, called the process "very time-consuming and difficult," adding that HPD would "like a little bit more cooperation."

On the subject of yakuza investment here, the police "suspect that there are more than five major properties purchased with yakuza money," but no hard evidence has yet been developed, Motoyama said.

Joseph Parra, head of the federal Drug Enforcement Administration office here, said he has similar suspicions.

"It's a subject that we are very interested in," Parra said, adding that "cultural barriers and language differences" tend to blunt American-based investigations of Asian organized crime.

States News Service reporter Alicia Brooks and the Associated Press contributed to this report.

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