APPENDIX D: COORDINATION LETTERS

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

REPLY TO ATTENTION OF

October 18, 2000

Civil and Public Works Branch

Mr. Paul Henson
Field Supervisor
U.S. Fish and Wildlife Service
300 Ala Moana Boulevard, Room 3-122
Box 50088
Honolulu, Hawaii 96850

Subject: Endangered Species Act, Section 7 Coordination for Kaumalapau Harbor Breakwater Repair, Island of Lanai, Hawaii

Dear Mr. Henson:

The environmental assessment (EA) for the repair of breakwater at Kaumalapau Harbor is currently being finalized. This work was authorized by the Energy and Water Development Appropriations Acts of 1993 and 1994.

Kaumalapau Harbor is a small barge harbor located in a natural embayment on the southwest coast of Lana'i. The harbor has no distinct entrance channel and has a 600-foot wide opening at the mouth of the bay. A breakwater extending to the south from the northwestern point of the embayment protects the harbor and wharf facilities. The breakwater was originally constructed to a length of 400 feet, but has been reduced by wave damage to a current length of approximately 200 to 250 feet. The remnants of the breakwater crest elevation are about 10 feet above mean lower low water. The badly deteriorated breakwater allows increased wave energy to enter the harbor, thereby hindering safe berthing and cargo handling operations.

The purpose of the proposed action is to repair the existing breakwater at Kaumalapau Harbor to reduce wave actions in the harbor and increase harbor safety and usability. Repair alternatives were evaluated using numerical and physical modeling techniques. Initial plans called for a dogleg extension of the existing breakwater: the first 350 feet of the

existing breakwater would be re-built along the current alignment and the next 50 feet would be angled 30 degrees toward the inside of the harbor. The ongoing design study has recommended eliminating the dogleg and shifting the proposed alignment of the breakwater shoreward to center it above the existing rubblemound structure, thereby minimizing impacts on the surrounding seafloor. In the present design, the new breakwater will extend approximately 50 feet further across the mouth of the harbor than the existing structure (total crest length of 320 feet), and will occupy an additional 15,000 square feet of native sandy seafloor.

Our consultant, Dr. Steven Dollar, has conducted the water quality and marine flora and fauna investigations for preparation of the Environmental Assessment (EA) for this project. Four species of marine animals that occur in Hawaiian waters have been declared threatened or endangered by Federal jurisdiction. The threatened green sea turtle (*Chelonia mydas*) occurs commonly throughout the island chain, and is known to feed on selected species of macroalgae. The endangered hawksbill turtle (*Eretmochelys imbricata*) also occurs, but is considered rare in comparison to the green turtle. While turtles are known to exist in the waters surrounding Kaumalapau Harbor, no turtle nesting habitat occurs within Kaumalapau Bay. The preferred types of resting habitat and food resources for these species were not observed during the site investigations (e.g. lack of filamentous algae). No turtles themselves were observed during the fieldwork conducted for preparation of the EA.

Populations of the endangered humpback whale (*Megaptera novaeangliae*) are known to winter in the Hawaiian Islands, however the nearshore location and shallow water of the project site effectively precludes whales frequenting the site. Hawaiian monk seals (*Monachus schauinslandi*) also occur occasionally in waters off the high islands. The predominantly sea cliff shoreline, and lack of sand beaches in the area, indicates that the project site would not be suitable for seals to beach themselves to rest. No whales or monk seals were observed during the field investigations.

In 1995, the Fish and Wildlife Service prepared the Draft Fish and Wildlife Coordination Act Report, Kaumalapau Harbor Navigation Improvements, Lanai, Hawaii. This report concluded that losses of sea turtle nesting habitat are not expected to occur as a result of the project, and further, supported the repair plan being considered. Since that time, as discussed above, the design has been slightly modified to further reduce impacts to the seafloor. The revised project was discussed at an EA scoping meeting in December 1998, attended by Mr. Michael Molina of your office. The U.S. Fish and Wildlife Service (Mr. Michael Molina) and the National Marine Fisheries Service (Mr. John Naughton) also conducted additional project site investigations in January 1999.

Based on these findings, we believe that the proposed project will not impact endangered species, and that formal consultation with your office, under Section 7 of the Endangered Species Act, is not required. We request your timely review and concurrence with our determination.

Should you have any questions regarding this matter, please contact Mr. James Hatashima of my staff at 438-2264. Thank you for your assistance with this project.

Sincerely,

Ray H. Jyo, P.E.
Deputy District Engineer for
Programs and Project Management

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

REPLY TO
ATTENTION OF

October 18, 2000

Civil and Public Works Branch

Mr. Robert P. Smith
Pacific Islands Manager
U.S. Fish and Wildlife Service
300 Ala Moana Boulevard, Room 3-122
Box 50088
Honolulu, Hawaii 96850

Subject: Fish and Wildlife Coordination Act Report for Kaumalapau Harbor Breakwater Repair, Island of Lanai, Hawaii

Dear Mr. Smith:

The environmental assessment (EA) for the repair of breakwater at Kaumalapau Harbor is currently being finalized. This work was authorized by the Energy and Water Development Appropriations Acts of 1993 and 1994.

Kaumalapau Harbor is a small barge harbor located in a natural embayment on the southwest coast of Lana'i. The harbor has no distinct entrance channel and has a 600-foot wide opening at the mouth of the bay. A breakwater extending to the south from the northwestern point of the embayment protects the harbor and wharf facilities. The breakwater was originally constructed to a length of 400 feet, but has been reduced by wave damage to a current length of approximately 200 to 250 feet. The remnants of the breakwater crest elevation are about 10 feet above mean lower low water. The badly deteriorated breakwater allows increased wave energy to enter the harbor, thereby hindering safe berthing and cargo handling operations.

The purpose of the proposed action is to repair the existing breakwater at Kaumalapau Harbor to reduce wave actions in the harbor and increase harbor safety and usability. Repair alternatives were evaluated using numerical and physical modeling techniques. Initial plans called for a dogleg

extension of the existing breakwater: the first 350 feet of the existing breakwater would be re-built along the current alignment and the next 50 feet would be angled 30 degrees toward the inside of the harbor. The ongoing design study has recommended eliminating the dogleg and shifting the proposed alignment of the breakwater shoreward to center it above the existing rubblemound structure, thereby minimizing impacts on the surrounding seafloor. In the present design, the new breakwater will extend approximately 50 feet further across the mouth of the harbor than the existing structure (total crest length of 320 feet), and will occupy an additional 15,000 square feet of native sandy seafloor.

In 1995, the Fish and Wildlife Service prepared the Draft Fish and Wildlife Coordination Act Report, Kaumalapau Harbor Navigation Improvements, Lanai, Hawaii. This report concluded that losses of sea turtle nesting habitat are not expected to occur as a result of the project, and further, supported the repair plan being considered. Since that time, as discussed above, the design has been slightly modified to further reduce impacts to the seafloor. The U.S. Fish and Wildlife Service (Mr. Michael Molina) and National Marine Fisheries Service (Mr. John Naughton) conducted an additional site survey in January 1999. We would like to request that the Fish and Wildlife Coordination Act Report for this project be finalized, with any revisions you deem necessary based on the slightly revised project plan and your recent site survey.

If you have any questions, please contact Mr. James Hatashima of my Civil and Public Works Branch staff at 438-2264. Your timely action on this request will be greatly appreciated.

Sincerely,

Ray H. Jyo, P.E.
Deputy District Engineer for
Programs and Project Management

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

REPLY TO ATTENTION OF

October 18, 2000

Civil and Public Works Branch

Dr. Charles Karnella
Administrator, Pacific Islands Area Office
National Marine Fisheries Service
1601 Kapiolani Boulevard, Suite 1110
Honolulu, Hawaii 96814-0047

Subject: Endangered Species Act Section 7 Coordination and Magnuson-Stevens Fishery Conservation and Management Act Consultation for Kaumalapau Harbor Breakwater Repair, Lanai, Hawaii

Dear Dr. Karnella:

The environmental assessment (EA) for the repair of breakwater at Kaumalapau Harbor is currently being finalized. This work was authorized by the Energy and Water Development Appropriations Acts of 1993 and 1994.

Kaumalapau Harbor is a small barge harbor located in a natural embayment on the southwest coast of Lana'i. The harbor has no distinct entrance channel and has a 600-foot wide opening at the mouth of the bay. A breakwater extending to the south from the northwestern point of the embayment protects the harbor and wharf facilities. The breakwater was originally constructed to a length of 400 feet, but has been reduced by wave damage to a current length of approximately 200 to 250 feet. The remnants of the breakwater crest elevation are about 10 feet above mean lower low water. The badly deteriorated breakwater allows increased wave energy to enter the harbor, thereby hindering safe berthing and cargo handling operations.

The purpose of the proposed action is to repair the existing breakwater at Kaumalapau Harbor to reduce wave actions in the harbor and increase harbor safety and usability. Repair alternatives were evaluated using numerical and physical modeling techniques. Initial plans called for a dogleg extension of the existing breakwater: the first 350 feet of the

existing breakwater would be re-built along the current alignment and the next 50 feet would be angled 30 degrees toward the inside of the harbor. The ongoing design study has recommended eliminating the dogleg and shifting the proposed alignment of the breakwater shoreward to center it above the existing rubblemound structure, thereby minimizing impacts on the surrounding seafloor. In the present design, the new breakwater will extend approximately 50 feet further across the mouth of the harbor than the existing structure (total crest length of 320 feet), and will occupy an additional 15,000 square feet of native sandy seafloor.

Our consultant, Dr. Steven Dollar, has conducted water quality and marine flora and fauna investigations for preparation of the Environmental Assessment (EA) for this project. Four species of marine animals that occur in Hawaiian waters have been declared threatened or endangered by Federal jurisdiction. The threatened green sea turtle (*Chelonia mydas*) occurs commonly throughout the island chain, and is known to feed on selected species of macroalgae. The endangered hawksbill turtle (*Eretmochelys imbricata*) also occurs, but is considered rare in comparison to the green turtle. While turtles are known to exist in the waters surrounding Kaumalapau Harbor, no turtle nesting habitat occurs within Kaumalapau Bay. The preferred types of resting habitat and food resources for these species were not observed during the site investigations (e.g. lack of filamentous algae). No turtles themselves were observed during the fieldwork conducted for preparation of the EA.

Populations of the endangered humpback whale (*Megaptera novaeangliae*) are known to winter in the Hawaiian Islands, however the nearshore location and shallow water of the project site effectively precludes whales frequenting the site. Hawaiian monk seals (*Monachus schauinslandi*) also occur occasionally in waters off the high islands. The predominantly sea cliff shoreline, and lack of sand beaches in the area, indicate that the project site is not suitable for seals to beach themselves to rest. No whales or monk seals were observed during the field investigations.

In 1995, the Fish and Wildlife Service prepared the Draft Fish and Wildlife Coordination Act Report, Kaumalapau Harbor Navigation Improvements, Lanai, Hawaii. This report concluded that losses of sea turtle nesting habitat are not expected to occur as a result of the project, and further, supported the repair plan being considered. Since that time, as discussed above, the design has been slightly modified to further reduce impacts to the seafloor. Mr. John Naughton of the National Marine Fisheries Service, along with Mr. Michael Molina of the U.S. Fish and Wildlife Service, conducted a project site investigation in January 1999.

Based on these findings, we believe that the proposed project will not impact endangered species, and that formal consultation with your office, under Section 7 of the Endangered Species Act, is not required. It is also our belief that the proposed project does not affect an identified Essential Fish Habitat, and therefore formal consultation under the Magnuson-Stevens Fishery Conservation and Management Act is also not required. We request your timely review and concurrence with our determination.

Should you have any questions regarding this matter, please contact Mr. James Hatashima of my staff at 438-2264. Thank you for your assistance with this project.

Sincerely,

Ray H. Jyo, P.E.
Deputy District Engineer for
Programs and Project Management

April 25, 2000

Civil Works and Support for Others Branch

Mr. Timothy Johns
State Historical Preservation Officer
Department of Land and Natural Resources
601 Kamokila Boulevard, Room 555
Kapolei, Hawaii 96707

Dear Mr. Johns:

The U.S. Army Corps of Engineers, Honolulu Engineer District, is assessing the potential CEPOH-PP-C impacts of proposed navigation improvements at the existing Kaumalapau Harbor on the island of Lanai. The proposed improvements consist of reshaping and rebuilding the existing breakwater from 250 to 300 feet in length (Enclosure). A draft Environmental Assessment (dEA) and draft Finding of No Significant Impact (dFONSI) are being prepared by the Corps O:ppe/HStupplebe consultant and will be submitted for your review under separate cover. The two existing surface kauhist106ltr.doc historic properties which are likely to be eligible for listing in the National Register of Historic Places have been identified. The Kalulu Shrine (Site No. 50-xx-xx-xxxx) and Kalamanui Complex (Site No. 50-xx-xx-xxxx) are located adjacent to and southwest of the proposed improvements and will not be impacted by the proposed project.

We request your comments and concurrence in determining that pursuant to 36 CFR Sections 800.4 and 800.5 of the regulations of the President's Advisory Council on Historic Preservation, this proposed undertaking for navigation improvements at Kaumalapau Harbor will have no effect on any identified or potential historic properties.

Thank you for your timely response on this matter. If you have any further questions or comments, please contact Mr. James Hatashima at 438-2264 or Ms. Helen Stupplebeen at 438-8526.

Sincerely,

Ray H. Jyo, P.E.
Deputy District Engineer for
Programs and Project Management

Enclosure

APR 27 2000

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Ecoregion
300 Ala Moana Boulevard, Room 3122
Box 50088
Honolulu, Hawaii 96850

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HED
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SEC?
PP
Acknowledged receipt of this. JH

APR 12 2001

In Reply Refer To: ER-01-111

Lt. Colonel Ronald N. Light
Honolulu District Engineer
U.S. Army Corps of Engineers
Building 230
Fort Shafter, HI 96858-5440

Re: Final Fish and Wildlife Coordination Act Report on Navigation Improvements at Kaumalapau Harbor, Lanai, Hawaii

Dear Lieutenant Colonel Light:

The U.S. Fish and Wildlife Service (Service) has prepared a Final Fish and Wildlife Coordination Act (FWCA) Report on Navigation Improvements at Kaumalapau Harbor, Lanai, Hawaii. This report is provided in accordance with the requirements of section 2(b) of the FWCA of 1934 [16 USC 661 *et seq*; 48 Stat. 401], as amended. The purpose of the report is to document the existing fish and wildlife resources at the proposed project site and to insure that fish and wildlife conservation receives equal consideration with other proposed project objectives as required under the FWCA. The report includes an assessment of the significant fish and wildlife resources at the proposed project site, an evaluation of potential impacts associated with the proposed project design alternatives, and recommendations for fish and wildlife mitigation measures.

The Service appreciates the opportunity to coordinate with the U.S. Army Corps of Engineers on the proposed project. If you have any questions regarding the report, please contact my Environmental Review Coordinator, Michael Molina, by telephone at (808) 541-3441.

Sincerely,

Paul Henson
Field Supervisor
Ecological Services

cc: NMFS-PIAO, Honolulu
USEPA-Region IX, Honolulu
DAR, Honolulu, Wailuku, Kualapuu
CZMP, Honolulu
CWB, Honolulu

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Ecoregion
300 Ala Moana Boulevard, Room 3-122
Box 50088
Honolulu, Hawaii 96850

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In reply refer to: KBF

DEC 1 2000

Lt. Colonel Ronald N. Light
Honolulu District Engineer
U.S. Army Corps of Engineers
Building 230
Fort Shafter, Hawaii 96858

Re: Informal Section 7 Concurrence Request for Kaumalapau Harbor Breakwater Repair, Island of Lanai, Hawaii

Dear Lieutenant Colonel Light:

The U.S. Fish and Wildlife Service (Service) has received your letter dated October 18, 2000 requesting informal consultation under section 7 of the U.S. Endangered Species Act (Act) with regards to the above referenced action. The proposed project involves repairing the existing breakwater to reduce wave energy in the harbor. Also, the project would extend the existing breakwater by about 50 feet, and displace about 15,000 square feet of benthic habitat, primarily sand.

We have reviewed the maps prepared by the Service's Wetland Inventory Program and other relevant material. Federally listed threatened and endangered species that occur at this location include two sea turtles, the green sea turtle (*Chelonia mydas*) and the hawksbill turtle (*Eretmochelys imbricata*). Although these sea turtles are known to occur in the marine environment, there is no evidence that they haul out or nest in the vicinity of the proposed project. We recommend that the NMFS be consulted regarding listed sea turtles, which is under their jurisdiction when they occur in the marine environment.

The Service concurs that the proposed action is not likely to adversely affect nesting or basking sea turtles. The requirements of section 7 have been satisfied. However, obligations under section 7 of the Act must be reconsidered, if (1) new information reveals impacts of this defined action that affect listed species or critical habitat in a manner that was not previously considered in this assessment; (2) this action is subsequently modified in a manner not previously considered in this assessment; or (3) a new species is listed or critical habitat determined that may be affected by this identified action.

The Service appreciates your concern for endangered and threatened species. If you have any questions regarding these comments, please contact Fish and Wildlife Biologist Kevin Foster by telephone at (808) 541-3441 or by facsimile transmission at (808) 541-3470.

Sincerely,

for Paul Henson
Field Supervisor

cc: NMFS-PAO, Honolulu
EPA-Region IX, Honolulu
DLNR, Hawaii
DAR, Hawaii
CZMP, Hawaii
CWB, Hawaii

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
Pacific Islands Area Office
1601 Kapiolani Boulevard, Suite 1110
Honolulu, Hawaii 96814-0047

James Hatashima
Department of the Army
US Army Engineer District, Honolulu
Ft. Shafter, HI 96856-5440

November 26, 2000

Re: Kaumalapau Harbor Breakwater Repair, Lanai, Hawaii

Please refer to Consultation No: I-PI-00-32:MMD

Dear Mr. Hatashima:

This responds to your request of October 18, 2000, for comment on the project to repair the Kaumalapau Harbor Breakwater on Lanai, Hawaii. We provide the following comments and information under our statutory authorities under the Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq*., and the Marine Mammal Protection Act of 1972, as amended 16 U.S.C. 1361 *et seq*. (MMPA). For your information and consideration we are also providing you with a list of protected species that may be found in the waters of Lanai.

Threatened green turtles (*Chelonia mydas*), and endangered hawksbill turtles (*Eretmochelys imbricata*) occur in the nearshore waters around Lanai. Endangered humpback whales (*Megaptera novaeangliae*) may be found offshore during the winter season. Endangered Hawaiian monk seals (*Monachus schauinslandi*) are also found in the nearshore waters and beaches of Lanai.

Marine mammals protected under the Marine Mammal Protection Act of 1972, as amended, 16 U.S.C. 1361 *et seq*.(MMPA) (not endangered or threatened under the Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 *et seq*.), that are found in the waters off Lanai include:

Bryde's whale (*Balaenoptera edeni*)
Cuvier's beaked whale (*Ziphius cavirostris*)
Pygmy sperm whale (*Kogia breviceps*)
Melon-headed whale (*Peponocephala electra*)
Pygmy killer whale (*Feresa attenuata*)
False killer whale (*Pseudorca crassidens*)
Killer whale (*Orcinus orca*)
Short finned pilot whale (*Globicephala macrorhynchus*)
Spinner dolphins (*Stenella longirostris*)
Striped dolphin (*Stenella coeruleoalba*)
Pantropical spotted dolphin (*Stenella attenuata*)
Common dolphin (*Delphinus delphis*)
Risso's dolphin (*Grampus griseus*)

Based on the studies referenced in the EA, performed by NMFS (John Naughton) and the draft Fish and Wildlife Coordination Act Report on the Kaumalapau Harbor navigation improvements, there is no sea turtle nesting or resting habitat in Kaumalapau Bay. Green turtles (threatened) and hawksbill turtles (endangered) are known to be present in Kaumalapau Harbor. Therefore, Best Management Practices are advised to minimize turbidity, avoid disturbance of the reefs, and to avoid the release of pollutants into the water. Silt curtains, booms, and a contaminant plan should be utilized when appropriate. If during construction activities, a listed or protected species enters the project area, construction should cease until the animal leaves the area. Therefore, the NMFS concurs with the determination that the breakwater repair is unlikely to adversely affect endangered or protected species.

Should the project plans change or additional information become available, this determination may be reconsidered.

Should you have further questions regarding our comments for the proposed project and/or the section 7 process, please contact Margaret Dupree at (808) 973-2937 or fax (808) 973-2941

Sincerely,

Rebecca Lent, Ph.D.
Regional Administrator

cc: Leona Stevenson

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
Pacific Islands Area Office
1601 Kapiolani Boulevard, Suite 1110
Honolulu, Hawaii 96814-0047

December 8, 2000

Mr. Ray H. Jyo, P.E.
U.S. Army Corps of Engineers, Honolulu
Building 230
Fort Shafter, Hawaii 96858-5440

Dear Mr. Jyo:

The National Marine Fisheries Service (NMFS) has reviewed the draft Environmental Assessment for the *Kaumalapau Harbor Breakwater Repair* project on the Island of Lanai, Hawaii. The work is part of a U.S. Army Corps of Engineers (Corps) Civil Works project. The purpose of the project is to repair the existing breakwater to reduce wave actions in the harbor and increase harbor safety and usability. Initial plans were redesigned to avoid impacts to the surrounding seafloor and coral resources. The present design will extend the breakwater approximately 50 feet further across the mouth of the harbor than the existing structure (total crest length of 320 feet), and will occupy an additional 15,000 square feet of sandy seafloor. This letter is provided in accordance with the Fish and Wildlife Coordination Act (FWCA), and the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). We offer the following comments on this project.

Results of a survey conducted in January 1999 in which NMFS participated indicated that coral coverage is high throughout the margin of the harbor, particularly on the outer shelf. The project was redesigned by shifting the proposed alignment of the breakwater shoreward (Alternative 5, preferred alternative) to reduce adverse impacts to the coral habitat on the outer shelf. To further reduce potential effects, we recommend that appropriate and effective silt containment devices be used to prevent turbidity and potential contaminants from impacting coral and other marine resources located both within the harbor and outside the harbor entrance. If silt containment devices are determined to be ineffective for a particular situation, then the plan should state what alternative best management practices (BMPs) are being considered. We also request a copy of the final BMP/monitoring plan when it becomes available. If resuspension is minimized, then it appears unlikely that the reconstruction of the breakwater will adversely impact NMFS trust resources.

The EA states that coral growing on the existing breakwater will be lost due to coverage with new rock and concrete. This loss should be offset by the additional surface area for future coral colonization provided by the new breakwater. However, the destruction of adjacent areas of live coral should be avoided during construction. If additional coral resources will be significantly impacted, a coral mitigation plan may be required.

Should you have any questions regarding these comments, please contact John Naughton at 973-2935, extension 211, or Alan Everson at 973-2935, extension 212.

Sincerely,

C. Lent

Rebecca Lent, Ph.D.
Regional Administrator

Copies Furnished:
Mr. James Slawson, Southwest Region, NMFS, 501 West Ocean Blvd., Suite 4200, Long Beach, CA 90802-4213
Western Pacific Fishery Management Council, 1164 Bishop Street, Suite 1400, Honolulu, HI 96813
U.S. Environmental Protection Agency, P.O. Box 5003, Honolulu, Hawaii 96850
U.S. Fish and Wildlife Service, Environmental Services, P.O. Box 50088, Honolulu, HI 96850
Clean Water Branch, Environmental Management Division, Hawaii State Department of Health, P.O. Box 3378, Honolulu, HI 96801-3386
Hawaii State Department of Business, Economic Development and Tourism, Office of Planning, Coastal Zone Management Program, P.O. Box 2359, Honolulu, HI 96804
State of Hawaii, Department of Land and Natural Resources, Division of Aquatic Resources, P.O. Box 621, Honolulu, HI 96809

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

April 2, 2001

Mr. James Hatashima, P.E.
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawaii 96858-5440

LOG NO: 27195
DOC NO: 0103CD43

Dear Mr. Hatashima,

SUBJECT: **National Historic Preservation Act Section 106 Revised Review Pertaining to the Proposed Navigation Improvements at the Existing Kaumalapau Harbor Kalulu Ahupua`a, Lahaina District, Island of Lana`i TMK: 4-9-02**

These are our revised comments pertaining to the proposed Navigation Improvements at the existing Kaumalapau Harbor. Our review is based on reports, maps, and aerial photographs maintained at the State Historic Preservation Division. On February 9, 2001, Dr. Melissa Kirkendall, SHPD Maui/Lana`i Island Archaeologist, and SHPD student intern Catherine Cur conducted a field inspection of areas to be impacted by the proposed project. (These areas were indicated by crosshatching on an aerial photograph provided by Mr. James Hatashima, Army Corps of Engineers).

On March 28, 2001, a meeting was held at the State Historic Preservation Office to discuss the proposed undertaking. In attendance were Kanalei Shun, Archaeologist Army Corps of Engineering; James Hatashima, Army Corps of Engineers; Scott Sullivan, Sea Engineering; Carol Ogata, SHPD Historic Architect; and Cathleen Dagher, SHPD staff archaeologist.

As a result of the field inspection, it was determined that the mauka area, marked Lana`i Rock Quarry, was not in the immediate vicinity of the proposed undertaking and would not be impacted by the proposed undertaking. However, if construction activities or ground-altering activities are planned for this area in the future, we request the opportunity to review the plans, as portions of this area appear to be unaltered and may contain historic sites. The more makai area, labeled storage, has been thoroughly graded and previously utilized for storage (Janna Kahaleanu, local resident, personal communication to Dr. Kirkendall). However, this area is bordered by a gulch on the north side, which may contain historic sites, although debris has been pushed into the gulch during previous land-altering episodes.

Given the above information, we recommend that construction fencing be temporarily placed along the edge of the gulch, as a mitigation measure. As per the March 28, 2001 meeting, the Army Corps of Engineers will be responsible for the placement of the temporary fencing and will verify in writing to this office that the fencing is in place prior to the commencement of t he proposed undertaking.

The Kaumalapau Harbor was built in 1926 and breakwater originally 425 feet long. The current breakwater is approximately 200 feet long. We believe that prior to the proposed reconstruction that the existing breakwater be photographically documented to Historic American Building Survey standards (4x5 Negatives and 8x10 prints archivally processed).

With the implementation the recommended mitigation measures, we believe there will be "no historic properties affected" by the proposed undertaking.

Thank you for the opportunity to comment. Should you have any questions please call Cathleen Dagher (archaeologist) at 692-8023 or Carol Ogata (architect) at 692-8032.

Aloha,

Gilbert Coloma-Agaran
State Historic Preservation Officer

CD:jen

APPENDIX E: SECTION 404 (B)(1) EVALUATION

Kaumālapaʻu Harbor Breakwater Repair
Island of Lanaʻi, Hawaiʻi

Evaluation of the Effects of the
Discharge of Dredged or Fill Material into
Waters of the U.S.
Using the U.S. Environmental Protection Agency (EPA)
Section 404(b)(1) Guidelines

1. PROJECT DESCRIPTION

a. Location. The project site is located in a natural embayment on the southwest coast of the island of Lanaʻi, Hawaiʻi. The project location is shown on Figure 1 in the Draft Environmental Assessment (DEA).

b. General Description. Kaumālapaʻu Harbor is a small barge harbor, with a wharf protected by a breakwater extending partially across the mouth of the embayment. The breakwater was reportedly about 400 feet long, but has been reduced by repeated wave damage to a current length of approximately 200 to 250 feet. The remnants of the breakwater crest extend about 10 feet above mean lower low water (mllw). The badly deteriorated breakwater allows increased wave energy to enter the harbor, thereby hindering safe berthing and cargo handling.

The proposed project will repair the existing Kaumālapaʻu Harbor breakwater. The project plan consists of rebuilding the breakwater on top of the old structure, with an underlayer of 2.5 to 4.5 ton stone and an armor layer of 35-ton concrete Core-Loc armor units. The new breakwater will have a total crest length of 320 feet, and will extend approximately 50 feet further across the mouth of the embayment and cover an additional 15,000 square feet of native sand seafloor than the existing structure. The new breakwater will have a crest elevation and width of +14.5 feet mllw and 20 feet, respectively, and side slopes of 1V:1.5H. The project plan and typical sections are shown on Figures 2 and 3 in the DEA.

c. Authority and Purpose. The authority for engineering design and environmental assessment for the project is provided in the Energy and Water Development Appropriations Acts of 1993 and 1994. The purpose of the proposed action is to repair the existing breakwater to reduce wave action in the harbor and increase harbor safety and usability.

This evaluation is prepared under the authority of Section 404 and Section 401 of the Clean Water Act (33 U.S.C. 1341; 33 U.S.C. 1344); Sections 324D-4 and 342D-53, Hawaiʻi Revised Statutes (HRS).

d. General Description of Fill Material.

(1) General Material Characteristics:

Basalt stone ranging in size from 50 to 500 pounds (bedding stone) to 2.5 to 4.5 ton (core and underlayer stone), and 35-ton concrete Core-Loc armor units.

(2) Quantity of Material:

	Total Volume	Above MHHW	Below MHHW
Shaping of Existing Breakwater	34,810 cy	4,180 cy	30,630 cy
Concrete Armor Units (35-ton)	13,590 cy	4,480 cy	9,110 cy
2.5 to 4.5-ton Stone	25,440 cy	3,050 cy	22,390 cy
500 to 5,000-lb. Stone	930 cy	0	930 cy
50 to 500-lb. Stone	3,040 cy	0	3,040 cy
Concrete Crest Cap	2,060 cy	2,060 cy	0
Tremie Concrete	100 cy	0	100 cy
Geotextile Filter Fabric	3,780 sy	0	3,780 sy

(3) Source of Material

Stone would come from existing quarries or stockpiles on O‘ahu, Maui or Lāna‘i. Concrete armor units would be fabricated on O‘ahu, Maui or Lāna‘i.

e. Description of the Proposed Discharge Site

(1) Location: Southwest coast of the island of Lāna‘i, see Figure 1 in the DEA.

(2) Size: 3.5 acres

(3) Type of Site: Unconfined coastal water

(4) Type of Habitat: Rocks, boulders, and concrete rubble comprising the existing rubblemound structure, and native sand bottom at the toe of the structure.

(5) Timing and Duration of Discharge: In-water work 18 months

f. Description of Discharge Method

Material will be moved and placed by floating crane barge and a breakwater mounted crane. Bedding stone will be placed by clamshell bucket, larger underlayer stone and the concrete armor units will be individually placed. There will be no random dumping of material.

2. FACTUAL DETERMINATION

a. Physical Substrate Determination

(1) Substrate Elevation and Slope: The existing rubblemound breakwater extends from the water surface to the native bottom at an elevation of –40 feet to –70 feet. The existing slope is highly irregular, but averages about 1V on 2H.

(2) Sediment Type: The existing rubblemound breakwater is composed of rock, boulders, concrete rubble, and other materials (e.g. concrete filled vehicles). The native bottom is coral sand and gravel.

(3) Dredged/Fill Material Movement: The existing breakwater material will be moved and shaped to form the core of the new structure. All existing material will remain in the water in the immediate vicinity of the breakwater.

(4) Physical Effects on Benthos: The existing rubblemound breakwater has significant coral coverage (up to 50% of the surface area in some locations), primarily of the genera *Porites, Pocillopora and Montipora*. The native sand bottom at the toe of the structure exhibits burrows of worms and/or shrimp. The proposed project will involve coverage of the existing structure with new rock and concrete, resulting in the loss of much of the existing coral cover. However, the new breakwater will be constructed of materials similar to the existing structure, and corals are expected to rapidly colonize the new structure in a manner similar to the existing conditions. The new breakwater will extend about 50 feet further than the existing structure, and will occupy approximately 15,000 square feet of sandy seafloor, with the commensurate loss of habitat for bottom dwelling organisms. The loss of sandy seafloor habitat will be mitigated by the creation of additional hard substrate for coral colonization.

(5) Other Effects: None

(6) Actions Taken to Minimize Impacts: Best Management Practices (BMPs) for construction operations will include methods that minimize the addition of suspended sediment to the water column, and avoid disturbance of the natural reefs adjacent to the project site. Silt curtains and containment booms will be utilized where appropriate. No fine material will be placed into the water.

b. Water Circulation, Fluctuation and Salinity Determination

(1) Effects on Water:

(a) Salinity	No Effect
(b) Chemistry	No Effect
(c) Clarity	Temporary turbidity during construction, no long term impact
(d) Color	No Effect

(e) Odor No Effect
(f) Taste No Effect
(g) Dissolved Gas Levels No Effect
(h) Nutrients No Effect

(2) Current Patterns and Circulation:

(a) Current Patterns and Flow: The proposed project will not significantly alter the existing circulation and flushing of the harbor and embayment.
(b) Velocity No effect
(c) Stratification No Effect
(d) Hydrologic Regime No Effect

(3) Normal Water Level Fluctuations No Effect

(4) Salinity Gradients No Effect

(5) Action That Will Be Taken to Minimize Impacts: Water quality will be monitored during construction.

c. Suspended Particulate/Turbidity Determinations

(1) Expected Changes in Suspended Particulate and Turbidity Levels in the Vicinity of the Fill Site:

Temporary and localized increases in turbidity will likely occur during construction. The good water circulation, currents and flushing characteristic of the project site will be maintained during construction, and will rapidly mix and disperse turbid water.

(2) Effects on Chemical and Physical Properties of the Water Column:

(a) Light Penetration – Temporary localized reduction due to increased turbidity during construction.
(b) Dissolved Oxygen No Effect
(c) Toxic Metals and Organics No Effect
(d) Pathogens No Effect
(e) Aesthetics – Temporary degradation during construction.

(3) Effects on Biota

(a) Primary Production/Photosynthesis No Effect
(b) Suspension/Filter Feeders No Effect
(c) Sight Feeders No Effect

(4) Actions Taken to Minimize Impacts

So far as practicable, breakwater material will be free of fine sediments that would result in turbidity. BMPs and a containment plan will be in place to prevent the introduction and dispersion of suspended sediment into the water. Silt curtains and containment booms/dikes shall be used where appropriate.

d. Contaminant Determination

Contaminants are not expected to occur as a result of the proposed filling activities. The stone used for construction would come from the site itself or operating quarries, and the stone and concrete armor units would be clean and free of contaminants.

e. Aquatic Ecosystem and Organism Determinations

(1) Effect on Plankton No Effect

(2) Effect on Benthos

Coral growth on the existing man-made rubblemound structure is comparable to natural surfaces in the project area. Construction of the new breakwater will cover essentially all of the existing coral within the footprint of the new structure, however the new breakwater is expected to be colonized by new coral within a relatively short time. The increased surface area afforded by the new structure should result in an increase in coral colonies over time. An unavoidable adverse environmental effect of the project will be the loss of a small area of sand seafloor at the toe of the structure which serves as habitat for bottom dwelling (burrowing) organisms. This area averages 50 feet wide and 300 feet long, curving around the head of the breakwater. However, sand bottom is extensive in the project vicinity, and the loss of this habitat will be mitigated by the creation of new hard substrate for coral colonization.

(3) Effects on Nekton No Effect

(4) Effects on Aquatic Food Web

Fish egg development and hatching within the construction area would be impacted, however juvenile forms of fish are not expected to be permanently of lethally affected. In general, free swimming fish will be expected to vacate the site during construction, returning shortly after the disturbance ceases. There will be a small loss of sand bottom available for bottom feeders, generalized feeders would not be significantly affected.

(5) Effects on Special Aquatic Sites

(a) Sanctuaries and Refuges: The offshore waters are within the boundaries of the Hawaiian Islands Humpback Whale National Marine Sanctuary. However the project, located immediately adjacent to the shoreline in shallow water, is not

expected to affect the whales. In addition, harbor improvements will not significantly increase the numbers of vessels trafficking the area.

(b) Coral Reefs: Destruction of coral will occur where the seaward breakwater face ties into the existing hard rock bottom substrate at the shoreline. BMPs for the breakwater construction will include methods that minimize the disturbance of coral encrusted hard bottom substrate outside of the immediate area of construction.

(c) Wetlands, Mud Flats, Vegetated Shallows: No Effect

(6) Threatened and Endangered Species

Four species of marine animals that occur in Hawaiian waters have been declared threatened or endangered by Federal jurisdiction. The threatened green sea turtle occurs commonly throughout the island chain, and is known to feed on selected species of macroalgae. The endangered hawksbill turtle also is present, but is considered rare in comparison to the green turtle. While turtles are known to exist in the waters surrounding Kaumālapa‘u Harbor, no turtle nesting habitat occurs within Kaumālapa‘u Bay. Typical types of resting habitat and food resources for turtles were not observed during the site investigations for this project. The draft Fish and Wildlife Coordination Act Report for this project concluded that loss of sea turtle nesting habitat are not expected to occur as a result of the project. Populations of the endangered humpback whale are known to winter in the Hawaiian Islands, however the nearshore location and shallow water of the project site effectively precludes whales frequenting the site. Hawaiian monk seals also occur occasionally in waters off the high islands. The predominantly sea cliff shoreline and lack of sand beaches in the area indicate that the project site is not suitable for seals to beach themselves to rest.

(7) Other Wildlife No Effect

f. Proposed Discharge Site Determination

(1) Mixing Zone Determination N/A

(2) Determination of Compliance with Water Quality Standards: Section 401 Water Quality Certification will be obtained from the State of Hawai‘i, Department of Health.

(3) Potential Effects on Human Use Characteristics

(a) Municipal and Private Water Supply No Effect

(b) Recreational and Commercial Fisheries: Recreational fishing from shore in the project area will be reduced during construction. No long-term impact to recreational fishing will occur. No impact to commercial fishing.

(c) Water-Related Recreation: The harbor and wharf is used by small recreational fishing and dive boats. Temporary disruption of small boat traffic in the project area will occur during construction. The completed project will improve small boat operational safety at the wharf.

(d) Aesthetics: The project will replace the existing deteriorated rock and concrete rubble structure with a new, larger breakwater. The man-made appearance of the breakwater will remain unchanged.

(e) Parks, Historical Sites, Preserves: No effect

g. Determination of Cumulative Effects on the Aquatic Ecosystem

Coral growth on the man-made structure that comprises the present breakwater is comparable to natural surfaces in the project area. Construction of the new breakwater will cover much, or all, of the existing coral, however the new breakwater should be colonized in a similar manner within a relatively short time span. As the new breakwater will result in an increase in settlement surfaces compared to the present, the long-term effect of the project would be an increase in coral community abundance. There are no anticipated cumulative impacts to threatened or endangered species as a result of the project.

h. Determination of Secondary Effects on the Aquatic Ecosystem

There are no anticipated secondary effects on the aquatic ecosystem.

FINDING OF COMPLIANCE
FOR
KAUMĀLAPAʻU HARBOR BREAKWATER REPAIR
ISLAND OF LĀNAʻI, HAWAIʻI

a. No significant adaptations of the Section 404(b)(1) guidelines were made relative to this evaluation.

b. The placement of rock and concrete armor units in the water is necessary to construct the breakwater repairs. The discharge is project specific; there are no practicable alternatives to the proposed discharge that would achieve the desired project purpose. Other improvement alternatives considered are discussed in Section 4 of the Draft Environmental Assessment (DEA), however they are all located at the same site and involve basically the same type of in-water work and impacts. The proposed project discharge will not result in significant adverse impact to the marine ecosystem.

c. The discharge of rock and concrete armor units at the project site will not violate State of Hawaiʻi water quality rules and regulations. A Section 401 Water Quality Certification will be obtained from the State Department of Health for the project.

d. The proposed project will not violate the Toxic Effluent Standard or Prohibition under Section 307 of the Clean Water Act.

e. The proposed project will not impact threatened or endangered species or their critical habitat, or specifically designated marine sanctuaries.

f. The proposed discharge will not result in significant adverse effect on (1) human health and welfare, including water supplies, recreational and commercial fisheries, marine life or other wildlife, special aquatic sites; (2) aquatic ecosystem diversity, productivity and stability; and (3) recreational, aesthetic and economic values.

g. Best Management Practices for construction operations will be used minimize potential adverse impacts to the marine ecosystem.

h. On the basis of the guidelines, the proposed discharge site for fill material is specified as complying with the requirements of these guidelines.

May 17, 2002
Date

Ronald N. Light
Lieutenant Colonel, US Army
District Engineer

APPENDIX F: COASTAL ZONE MANAGEMENT (CZM) CONSISTENCY CERTIFICATION

Kaumalapau Harbor Breakwater Repair
Island of Lanai, Hawaii

Coastal Zone Management (CZM) Consistency Certification

Prepared For
Hawaii CZM Program, Office of Planning
Department of Business, Economic Development & Tourism
State of Hawaii

PROJECT DESCRIPTION

The project site is located in a natural embayment on the southwest coast of the island of Lanai, Hawaii (see Figure 1). Kaumalapau Harbor is a small barge harbor, with a wharf protected by a breakwater extending partially across the mouth of the embayment. The harbor provides the island's only access for inter-island transport of goods and fuel by tug and barge. The breakwater was reportedly about 400 feet long, but has been reduced by repeated storm wave damage to a current length of approximately 200 to 250 feet. The remnants of the breakwater crest extend about 10 feet above the water surface.The badly deteriorated breakwater allows increased wave energy to enter the harbor, thereby hindering safe berthing and cargo handling.

The proposed project will repair the existing harbor breakwater. The project plan consists of rebuilding the breakwater on top of the old structure, with an underlayer of 3 to 4 ton stone and an armor layer of 35-ton concrete core-loc armor units. The new breakwater will have a total crest length of 320 feet, and will extend approximately 50 feet further across the mouth of the embayment and cove an additional 15,000 square feet of native sand seafloor than the existing structure. The new breakwater will have a crest elevation of +14.5 feet above mean lower low water, a crest width of 20 feet, and side slopes of 1V:1.5H. The project plan and typical sections are shown on Figures 2 and 3.

The purpose of the proposed project is to repair the existing breakwater in order to reduce wave action at the wharf, and increase harbor safety and usability.

HAWAII CZM PROGRAM
ASSESSMENT FORM

RECREATIONAL RESOURCES

Objective: Provide coastal recreational opportunities accessible to the public.

Policies

1) Improve coordination and funding of coastal recreation planning and management.

2) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

   a) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;

   b) Requiring replacement of coastal resources having significant recreational value, including but not limited to surfing sites and sandy beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;

   c) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;

   d) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;

   e) Encouraging expanded public recreational use of County, State, and Federally owned or controlled shoreline lands and waters having recreational value;

   f) Adopting water quality standards and regulating point and non-point sources of pollution to protect and where feasible, restore the recreational value of coastal waters;

   g) Developing new shoreline recreational opportunities, where appropriate, such as artificial reefs for surfing and fishing; and

   h) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, County planning commissions; and crediting such dedication against the requirements of section 46-6.

Check either "Yes" or "No" for each of the following questions.

	Yes	No
1. Will the proposed action involve or be near a dedicated public right-of-way?	___	X
2. Does the project site abut the shoreline?	X	___
3. Is the project site near a State or County park?	___	X
4. Is the project site near a perennial stream?	___	X
5. Will the proposed action occur in or affect a surf site?	___	X
6. Will the proposed action occur in or affect a popular fishing area?	X	___
7. Will the proposed action occur in or affect a recreational or boating area?	X	___
8. Is the project site near a sandy beach?	___	X
9. Are there swimming or other recreational uses in the area?	X	___

Discussion

The project site is located in a natural embayment on the southwest coast of the island of Lanai, Hawaii (see Figure 1). Kaumalapau Harbor is a small barge harbor, with a wharf protected by a breakwater extending partially across the mouth of the embayment. The harbor provides the island's only access for inter-island transport of goods and fuel by tug and barge. The breakwater was reportedly about 400 feet long, but has been reduced by repeated storm wave damage to a current length of approximately 200 to 250 feet. The remnants of the breakwater crest extend about 10 feet above the water surface.The badly deteriorated breakwater allows increased wave energy to enter the harbor, thereby hindering safe berthing and cargo handling.

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The purpose of the proposed project is to repair the existing breakwater in order to reduce wave action at the wharf, and increase harbor safety and usability.

HISTORIC RESOURCES

Objective: Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Policies

1) Identify and analyze significant archaeological resources;

2) Maximize information retention through preservation of remains and artifacts or salvage operations; and

3) Support State goals for protection, restoration, interpretation, and display of historic resources.

Check either "Yes" or "No" for each of the following questions.

	Yes	No
1. Is the project site within a historic/cultural district?	___	X
2. Is the project site listed on or nominated to the Hawaii or National register of historic places?	___	X
3. Does the project site include undeveloped land which has not been surveyed by an archaeologist?	___	X
4. Has a site survey revealed any information on historic or archaeological resources?	___	X
5. Is the project site within or near a Hawaiian fishpond or historic settlement area?	___	X

Discussion

The project site has been extensively modified by modern usage for handling waterborne cargo. No historic resources have been identified in or near the project site.

SCENIC AND OPEN SPACE RESOURCES

Objective: Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Policies

1) Identify valued scenic resources in the coastal zone management area;

2) Insure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;

3) Preserve, maintain and, where desirable, improve and restore shoreline open space and scenic resources; and

4) Encourage those developments which are not coastal dependent to locate in inland areas.

Check either "Yes" or "No" for each of the following questions.

	Yes	No
1. Does the project site abut a scenic landmark?	___	X
2. Does the proposed action involve the construction of a multi-story structure or structures?	___	X
3. Is the project site adjacent to undeveloped parcels?	X	___
4. Does the proposed action involve the construction of structures visible between the nearest coastal roadway and the shoreline?	___	X
5. Will the proposed action involve construction in or on waters seaward of the shoreline? On or near a beach?	X	___

Discussion

The coastline in the project vicinity is rugged, sea cliff shoreline, and virtually inaccessible except for the immediate harbor area. There are no beaches in the area, and no development in the area except for the harbor facilities.

The proposed project will be built entirely in the water immediately adjacent to the shoreline. The repaired breakwater will consist of large, manmade concrete armor units, and thus will have a manmade appearance. However, the project is completely coastal dependant, and will not be visible except from the shoreline except in the immediate area of the harbor, which already has numerous elements of manmade appearance. There will be no significant impact to existing valued scenic resources.

COASTAL ECOSYSTEMS

Objective: Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

Policies

1) Improve the technical basis for natural resource management;

2) Preserve valuable coastal ecosystems of significant biological or economic importance;

3) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land water uses, recognizing competing water needs; and

4) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate State water quality standards.

Check either "Yes" or "No" for each of the following questions.

	Yes	No
1. Does the proposed action involve dredge or fill activities?	X	
2. Is the project site within the Shoreline Setback Area (20 to 40 feet inland of the shoreline)?	X	
3. Will the proposed action require some form of effluent discharge into a body of water?		X
4. Will the proposed action require earthwork beyond clearing and grubbing?		X
5. Will the proposed action include the construction of special waste treatment facilities, such as injection wells, discharge pipes, or cesspools?		X
6. Is an intermittent or perennial stream located on or near the project site?		X
7. Does the project site provide habitat for endangered species of plants, birds, or mammals?		X
8. Is any such habitat located nearby?		X
9. Is there a wetland on the project site?		X
10. Is the project site situated in or abutting a Natural Area Reserve?		X

11. **Is the project site situated in or abutting a Marine Life Conservation District?** ___ X

12. **Is the project site situated in or abutting an estuary?** ___ X

Discussion

The project will involve reshaping the existing breakwater, and placing stone and concrete armor units into the water to repair the breakwater. The following types and volumes of material will be utilized in the construction.

	Total Volume	Above MHW	Below MHW
Shaping of Existing Breakwater	31,800cy	3,800cy	28,000cy
Core Stone (3-4 ton)	1,200cy	0	1,200cy
Bedding Stone (400 –800 lb)	90cy	0	90cy
Underlayer Stone (3-4 ton)	15,000cy	2,250cy	12,750cy
Concrete Armor Units (35 ton)	6,885cy	1,585cy	5,300cy
Concrete Rib Cap	900cy	900cy	0
Geotextile Filter Fabric	9,300sf	0	9,300sf

Material will be moved and placed by floating crane barge and breakwater mounted crane. Bedding stone will be placed by clamshell bucket, larger undrlayer stone and the concrete armor units will be individually placed. There will be no random dumping of material.

The project will abut, but not actually intrude into, the Shoreline Setback Area. Construction activities will occur within the Shoreline Setback Area.

There will be no impact to threatened or endangered species. While the threatened green sea turtle is known to exist in the waters surrounding Kaumalapau Harbor, no turtle nesting habitat occurs within Kaumalapau Bay. Typical types of resting habitat and food resources for turtles was not observed during the site investigations for the project. Populations of the endangered humpback whale are known to winter in the Hawaiian Islands, however the nearshore location and shallow water of the project site effectively precludes whales frequenting the site. The project site also provides no suitable habitat for the endangered Hawaiian monk seal.

The existing rubblemound breakwater has significant coral coverage, and the native sand bottom at the toe of the structure exhibits burrows of worms and/or shrimp. The proposed project will involve coverage of the existing structure with rock and concrete, resulting in the loss of much of the existing coral cover. However, the new breakwater will be constructed of materials similar to the existing structure, and corals are expected to rapidly colonize the new structure in a manner similar to the existing conditions.

The discharge of rock and concrete armor units at the project site will not violate State of Hawaii water quality rules and regulations. A Section 401 Water Quality Certification will be obtained from the State Department of Health for the project. There will be some temporary water turbidity increase during construction, however Best Management Practices for construction operations will include methods that minimize the addition of suspended sediment to the water column.

ECONOMIC USES

Objective: Provide public or private facilities and improvements important to the State's economy in suitable locations.

Policies

1) Concentrate in appropriate areas the location of coastal dependent development necessary to the State's economy;

2) Insure that coastal dependent development such as harbors and ports, visitor industry facilities, and energy generating facilities are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and

3) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such development and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

   a) Utilization of presently designated locations is not feasible;

   b) Adverse environmental effects are minimized; and

   c) Important to the State's economy.

Check either "Yes" or "No" for each of the following questions.

	Yes	No
1. Does the project involve a harbor or port?	X	
2. Is the project site within a designated tourist destination area?		X
3. Does the project site include agricultural lands or lands designated for such use?		X
4. Does the proposed activity relate to commercial fishing or seafood production?		X
5. Does the proposed activity relate to energy production?		X
6. Does the proposed activity relate to seabed mining?		X

Discussion

Kaumalapau Harbor is an existing State operated port, and provides the only port facility for the island of Lanai. All waterborne cargo and fuel for the island must land here, and the continued operation of the port is vital to the island's economy. The deteriorated existing breakwater limits the use of the harbor wharf. The proposed project to repair the harbor's protective breakwater will improve the safety and usability of the harbor.

COASTAL HAZARDS

Objective: Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, and subsidence.

Policies

1) Develop and communicate adequate information on storm wave, tsunami, flood erosion, and subsidence hazard;

2) Control development in areas subject to storm wave, tsunami, flood, erosion, and subsidence hazard;

3) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

4) Prevent coastal flooding from inland projects.

Check either "Yes" or "No" for each of the following questions.

	Yes	No
1. Is the project site on or abutting a sandy beach?	___	X
2. Is the project site within a potential tsunami inundation area as depicted on the National Flood Insurance Program flood hazard map?	___	X
3. Is the project site within a potential flood inundation area according to a flood hazard map?	___	X
4. Is the project site within a potential subsidence hazard area according to a subsidence hazard map?	___	X
5. Has the project site or nearby shoreline areas experienced shoreline erosion?	___	X

Discussion

The project site is in no known coastal hazard area, with the exception of storm wave hazards. Hurricanes Iwa (1982) and Iniki (1992), as well as other storms prior to them, generated waves which significantly damaged the existing breakwater. The proposed repair project has been designed for severe storm wave conditions.

Marine Resources

Objective: Implement the State's ocean resources management plan.

Policies:

1) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

2) Assure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

3) Coordinate the management of marine and coastal resources and activities management to improve effectiveness and efficiency;

4) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

5) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

6) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Discussion: *Please provide information about the proposal relevant to the Objective and Policies above.*

Repair of the Kaumalapau Harbor breakwater is a joint federal/state project being undertaken by the U.S. Army Corps of Engineers and the State Department of Transportation, Harbors Division.

A detailed marine biological assessment of the project site has been conducted during preparation of the Environmental Assessment for the project. In addition, the U.S. Fish & Wildlife Service has conducted site investigations and prepared a Fish and Wildlife Coordination Act Report for the project. The proposed project has been coordinated with the U.S. fish & Wildlife Service and the National Marine Fisheries Service in accord with Section 7 of the Endangered Species Act, and both agencies concur that the project will not impact endangered species.

Best Management Practices (BMP'S) for construction operations will include methods that minimize the addition of suspended sediment to the water column, and avoid disturbance of marine life and reef resources outside of the immediate construction area.

BEACH PROTECTION

Objective: Protect beaches for public use and recreation.

Policies:

1) Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;

2) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities; and

3) Minimize the construction of public erosion-protection structures seaward of the shoreline.

Discussion: *Please provide information about the proposal relevant to the Objective and Policies above.*

The project will have no impact on sandy shorelines or public beaches.

PUBLIC PARTICIPATION

Objective: Stimulate public awareness, education, and participation in coastal management.

Policies:

1) Maintain a public advisory body to identify coastal management problems and to provide policy advice and assistance to the coastal zone management program;

2) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal-related issues, developments, and government activities; and

3) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Discussion: *Please provide information about the proposal relevant to the Objective and Policies No. 2 and No. 3 above.*

A Draft environmental Assessment will be circulated for public review and comment. A public meeting will be held on Lanai to present the project to the public and solicit public input.

PUBLIC PARTICIPATION

Objective: Stimulate public awareness, education, and participation in coastal management.

Policies:

1) Maintain a public advisory body to identify coastal management problems and to provide policy advice and assistance to the coastal zone management program;

2) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal-related issues, developments, and government activities; and

3) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.

Discussion: *Please provide information about the proposal relevant to the Objective and Policies No. 2 and No. 3 above.*

A Draft environmental Assessment will be circulated for public review and comment. A public meeting will be held on Lanai to present the project to the public and solicit public input.

MANAGING DEVELOPMENT

Objective: Improve the development review process, communication, and public participation in the management of coastal resources and hazards.

Policies

1) Effectively utilize and implement existing law to the maximum extent possible in managing present and future coastal zone development;

2) Facilitate timely processing of application for development permits and resolve overlapping or conflicting permit requirements; and

3) Communicate the potential short- and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the general public to facilitate public participation in the planning and review process.

Check either "Yes" or "No" for each of the following questions.

	Yes	No
1. Will the proposed activity require more than two (2) permits or approvals?	X	
2. Does the proposed activity conform with the State and County land use designations for the site?	X	
3. Has or will the public be notified of the proposed activity?	X	
4. Has a draft or final environmental impact statement or an environmental assessment been prepared?	X	

Discussion

The project will undergo both Federal and local regulatory agency review and approval processes, and all necessary permits and approvals will be obtained prior to project implementation. A Draft Environmental Assessment has been prepared and coordinated for agency and public review and comment. A public meeting will be held on Lanai to present the project to the public.

FEDERAL CONSISTENCY
SUPPLEMENTAL INFORMATION FORM

Project/Activity Title or Description: Kaumalapau Harbor Breakwater Repair

Island Lāna'i **Tax Map Key No.** N/A **Est. Start Date:** _____

APPLICANT OR AGENT

Name & Title Ronald N. Light, Lt. Col., U.S. Army, District Engineer

Agency/Organization U.S. Army Corps of Engineers Honolulu Engineer District **Telephone** _____

Address Fort Shafter, HI **Zip** 96858

TYPE OF APPLICATION (check one only)

[X] **I. Federal Activity (statement "a")**

"The proposed activity is consistent with and will be conducted in a manner consistent to the maximum extent practicable with the Hawaii Coastal Zone Management Program."

Signature Ronald N. Light **Date** 29 April 2001

[ ] **II. Permit or License (statement "b")**

"The proposed activity complies with Hawaii's Coastal Zone Management Program and will be conducted in a manner consistent with such a program."

Signature _____ **Date** _____

[ ] **III. OCS Plan/Permit**

[ ] **IV. Grants & Assistance**

BENJAMIN J. CAYETANO
GOVERNOR
SEIJI F. NAYA, Ph.D.
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18 JUL 2001
HED 7/18
DHED
SEC
PP

Ref. No. P-9145

July 13, 2001

Lt. Colonel Ronald N. Light
Honolulu District Engineer
U.S. Army Corps of Engineers
Building 230
Fort Shafter, Hawaii 96858-5440

Dear Lt. Colonel Light:

Subject: Hawaii Coastal Zone Management (CZM) Program Federal Consistency Review for the Proposed Kaumalapau Harbor Breakwater Repair, Lanai

We have reviewed the proposal for the Kaumalapau Harbor breakwater repair and improvements to the existing damaged and deteriorated breakwater in Kaumalapau Harbor. We concur with your CZM consistency determination based on the following:

1) Where necessary, silt containment devices shall be installed prior to construction and properly maintained throughout the duration of construction. Removal of these devices shall not cause turbidity which violates State water quality standards.

2) Water quality from construction and maintenance activities shall be appropriately mitigated and comply with applicable State of Hawaii water quality standards as specified in the HAR, Chapter 11-54 and water pollution control requirements as specified in Chapter 11-55. These administrative rules are administered by the Department of Health (DOH) and are federally approved enforceable policies of the Hawaii CZM Program.

3) The project shall be in compliance with regulations for the Shoreline Setback Area and Special Management Area, if applicable, which are administered by the County of Maui Planning Department.

4) Installation of a temporary construction fence along the edge of the gulch bordering the contractor work and storage area, and photographically documenting the existing breakwater using Historic American Building Survey standards as described in the draft environmental assessment (p. 29). If artifacts or human remains are uncovered during any activity, work in the area would stop and the State Historic

Preservation Division is immediately notified and all applicable requirements of the Department of Land and Natural Resources are followed.

5) Changes to the project are subject to CZM federal consistency. Should there be changes to the project, we require that you submit the amendments for our review.

CZM consistency concurrence is not an endorsement of the project nor does it convey approval with any other regulations administered by any State or County agency. Thank you for your compliance with Hawaii's CZM Program. Should you have any questions, please call Debra Tom of our CZM Program at 587-2840.

Sincerely,

David W. Blane, AICP
Director
Office of Planning

c: U.S. Army Corps of Engineers, Regulatory Branch
U.S. Environmental Protection Agency
U.S. Fish and Wild life Service, Pacific Islands Ecoregion
U.S. National Marine Fisheries Service, Pacific Area Office
Department of Health, Clean Water Branch
Department of Land & Natural Resources,
Planning & Technical Services Branch
State Historic Preservation Division
Department of Transportation
County of Maui, Planning Department

APPENDIX G: ORAL HISTORIC STUDIES FOR THE DETERMINATION OF TRADITIONAL CULTURAL PLACES AT KAUMĀLAPAʻU HARBOR, LĀNAʻI ISLAND, HAWAIʻI

Draft Report

ORAL HISTORIC STUDIES FOR THE DETERMINATION OF TRADITIONAL CULTURAL PLACES AT KAUMÄLAPA'U HARBOR, LÄNA'I SLAND, HAWAI'I

Contract No. DACW83-01-P-0008

Prepared for
United States Army Engineering District, Honolulu
Directorate of Engineering
Environmental Branch
Fort Shafter, Hawaii 96858-5440

Prepared by

Social Research Pacific, Inc.
328B Keaniani Street
Kailua, HI 96734

September 20, 2001

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1.0 Introduction

At the request of the U.S. Army Corps of Engineers, Honolulu Engineer District, under Contract No. DACW83-01-P-0008, Social Research Pacific, Inc., conducted Oral Historic Studies for the Determination of Traditional Cultural Places at Kaumälapa'u Harbor Project, Läna'i Island, Hawaii. The work was completed by SRP, Inc. (SRP) and its subcontractors, Kumu Pono Associates and Franzen Photography, between July 22 and July 30, 2001.

The project has completed the following tasks: 1) preparation of a Work Plan (WP); 2) completion of background and archival research; 3) completion of oral histories; 4) identification/determination of Traditional Cultural Places at Kaumälapa'u Harbor; and 5) preparation of this draft report. Along with a report of general findings, this report includes photographic documentation of remnants of the breakwater fronting Kaumälapa'u Harbor. Photographic documentation was conducted in accordance with Historic American Building Survey/Historic American Engineering Record (HABS/HAER) standards.

1.1 Background and Goal

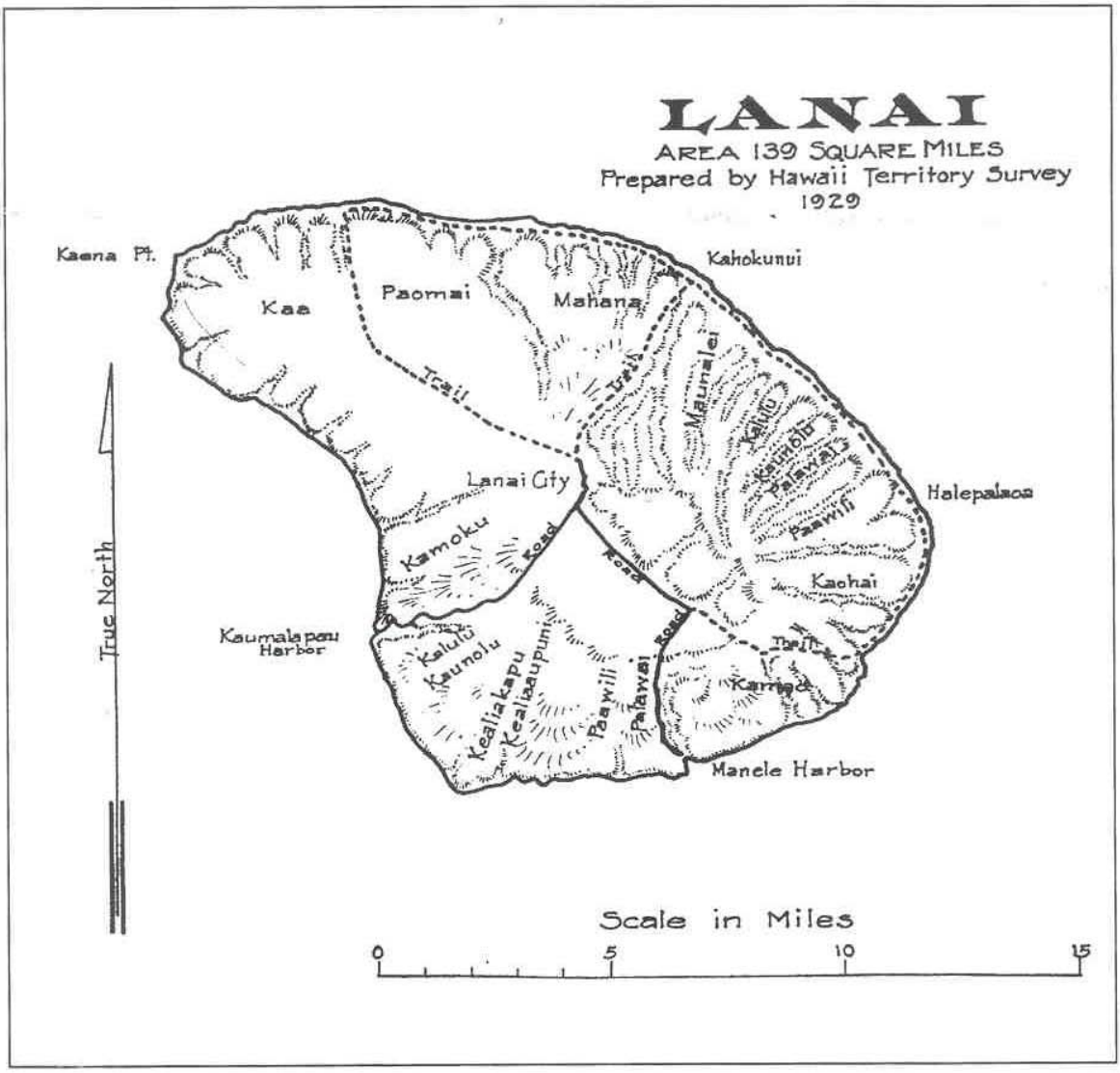
The primary goal of this project was to conduct archival and record searches, and oral historic studies to locate potential Traditional Cultural Places (TCPs) at Kaumälapa'u Harbor, Läna'i. While previous archaeological work and oral histories have been completed on traditional and historic sites and features on Läna'i Island, it was not known whether TCPs exist within the vicinity of Kaumälapa'u Harbor.

The purpose of this study was to identify these potential TCPs through oral interviews. A series of oral interviews were completed with knowledgeable native Hawaiians and other long-term residents of Läna'i; these included interviews with individuals who had once been residents of Kaumälapa'u Camp. Information from the interviews identified the traditional uses (land and sea) of the area, while adding to existing information on the cultural history of Kaumälapa'u Harbor. Along with oral interviews and historical research, HABS/HAER photographing was completed of the remnants of the breakwater at the harbor. The purpose of these photographs is to preserve an accurate pictographic record of the breakwater as a historic property.

1.2 Project Area

Kaumälapa'u Harbor is located in the southwestern portion of Läna'i Island (Figure 1). Kaumälapa'u Bay is one of the few 'boat accessible' harbors on the island. The harbor was constructed in 1925 by the Hawaiian Pineapple Company (Wentworth 1925:5). Prior to this time, Manele Bay was the main port of entry for Läna'i; its primary purpose was to ship pineapple off the island. Remnants of Halepalaoa Landing, primarily used to ship cattle, remain on the eastern shores of Läna'i. Its also reported that in the late 1800s, a steamer landing was located on the western shore of Läna'i Island and served as a docking grounds (*The Friend* 1892:96).

Figure 1. Map of the General Location of the Project Area



1.2.1 A Brief Introduction to the Prehistory and History of Traditional Hawaiian Historic era Land Use in the Project Area

The island of Läna'i is divided into thirteen traditional land districts or *ahupua'a*. Kaumälapa'u Bay and Kaumälapa'u Harbor are located in the southernmost portion of Kamoku *ahupua'a*. The southern edge of Kaumälapa'u Bay forms the ocean boundary between the *ahupua'a* of Kamoku and Kaluḷu (Fig. 2). According to the *Gazetteer of Läna'i* (in Emory1969):

> "Kaumala-pa'u Bay. The Kekoewa family say this name should be Kamuela-pa'u; but Mrs. Awili Shaw says that her parents and grandparents called the place Kau-molo-pa'u. None of these names can be translated with any meaning" (Emory 1969:32).

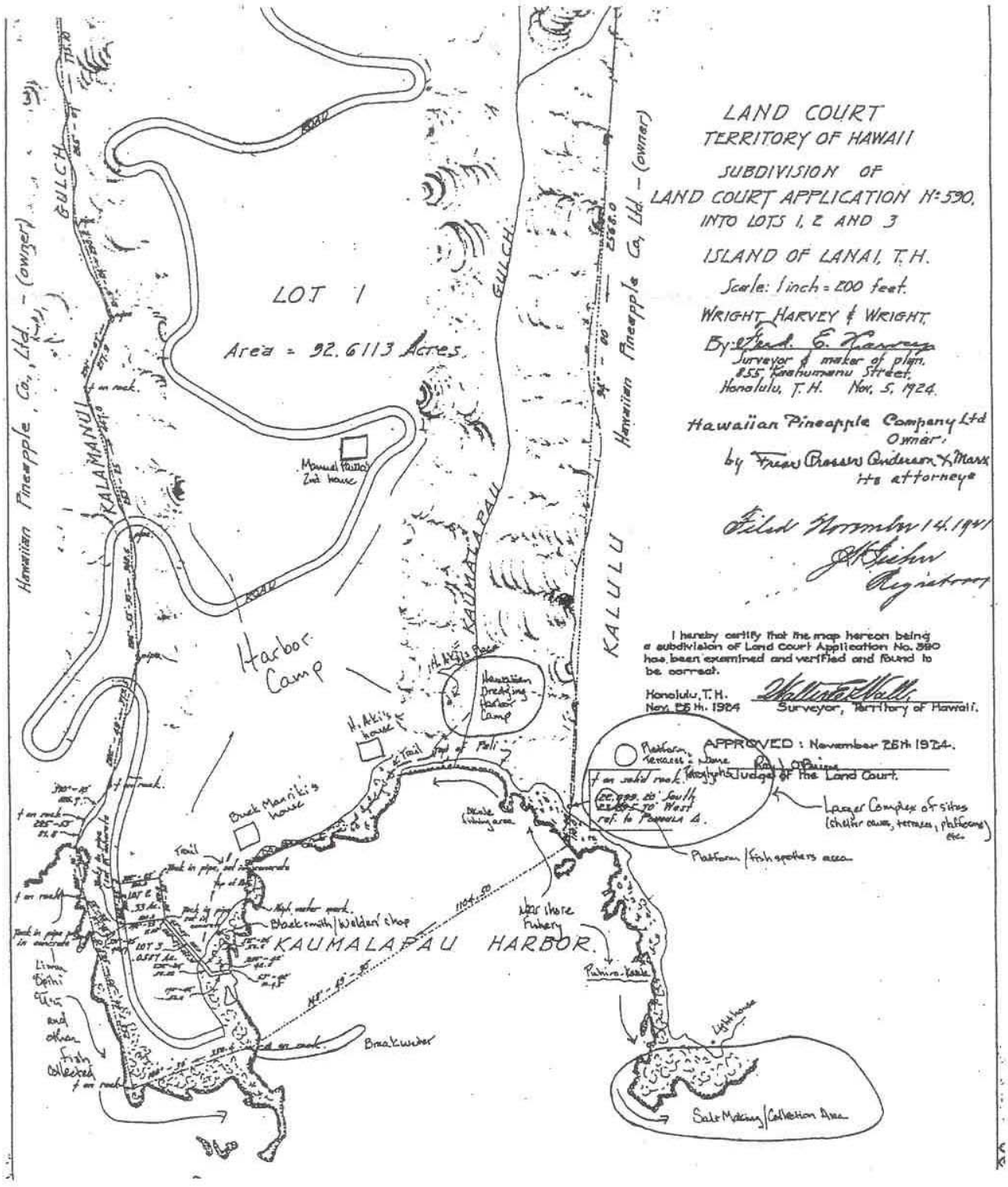
Emory did ethnographic and archaeological investigations on Läna'i between July 1921 and January 1922. He describes finding three types of native habitation sites on Läna'i:1) terraces in natural caves or under overhanging bluffs; 2) stone shelters; and 3) house sites marked by either cleared ground, leveled ground, an enclosure, terrace or platform (Emory 1969:38). At the edge of a sea cliff south of Kaumälapa'u, he found "a house site consisting of a cleared, naturally level space and including a fireplace (Emory 1969:39). He goes on to describe that the "deep gulches of Kaumälapa'u, Kalamanui, and Honopu, on the central west coast, have the finest house terraces. The front walls are 2 to 8 feet high...the length of the terrace from 10 to 35 feet, the width from 10 to 15 feet. Some large terraces support smaller terraces a few inches high, and most of them against the back...the neatest work observed was that in the facing of a house terrace at Kaumälapa'u" (Emory 1969:40).

In a survey to identify archaeological sites in the Hulopoe and Manele Bays in south Läna'i, Kaschko and Athens (1987), found thirty-three archaeological sites. Most of these sites are classified as being traditional Hawaiian, presumably prehistoric in origin (1987:18). The majority of these sites are walled structures, rectangular terraces, C-shaped structures and cairns. It is interesting to note that over half of these sites were located along the coast.

Along with known archaeological features around Kaumälapa'u Bay, there is a brackish water well that was used in the earlier part of the 20th century. According to the "old native Keliihananui...about one hundred horses which grazed on the plateau lands nearer to the wells of Kaunolu and Kaumälapa'u than to the mountain springs, watered at those wells" (in Emory 1969:47). The same well was known to be used by the people of Kaunolu (east of Kaumälapa'u) in the middle part of the 19th century.

In addition to the traditional history told by archaeological features, written stories and events also tell of an earlier time. Traditional history as told through documents and previously recorded myths and legends, are discussed in sections 3.3. and 3.3.1.

Figure 2. Map showing the *ahupua'a* of Kamoku and Kalulu



1.2.2 Land Tenure and Land Use in the *Ahupua'a* of Kamoku

Emory estimated that Läna'i probably had a population of 3,000 at the time of Captain Cook's arrival (in *Honolulu Star Bulletin* April 6, 1970, p.D-20); this would have been a fairly large number considering that the island population is currently around 2,000. By 1921, approximately one hundred and two Hawaiians remained on the island (ibid). According to Emory, an individual by the name of Ohua, was the only resident of Kaonolu Village at the turn of this century; he died around 1900 (*Honolulu Star Bulletin* April 6, 1970, p.D-20). The village of Kaonolu has perhaps the most extensive archaeological sites and features on the island of Läna'i (c.f. Emory 1922).

Records of land claims indicate that the project area had either a small Hawaiian community/settlement or few claimants to the land. Previous research on land tenure and land use by Maly (Appendix A), shows very little transactions in land claims in the project area following the *Mähele*; the remainder of this section summarizes Maly's findings:

> In the *Mahele 'Äina* (Land Division) of 1848, the *ahupua'a* of Kamoku and Kalulu were retained by the King (Kamehameha II), though the *'ili* of Kaumälapa'u 1 & 2 were given by the King to the Government (*Buke Mahele*, 1848:105, 209; and Boundary Commission Certificate No.'s 36 & 37). As *Konohiki* (Overseer) of the land of Kamoku on behalf of the King, Noa Pali reported that the *i'a kapu* (restricted fish) of Kamoku was the *uhu* (parrot fish), and the *lä'au kapu* (restricted wood) of Kamoku was the *koko* (*Euphorbia* spp.) (Interior Department Land Files – August 26, 1852). *Uhu* are still noted as an important fish of the Kaumälapa'u fishery to the present day (pers. comm., Henry Aki and Sam Kaopuiki). Four claims and awards were identified which include land in:
>
> 1. Kaauwaeaina (LCA 8556) – in the *ahupuaa* of Kamoku and Kalulu. Situated near Keahialoa and Puu Nanaihawaii; and along the *mauka-makai* trail from upland Kamoku to Kaumälapa'u (two parcels on north of present-day airport parcel).
> 2. Pali (LCA 10630) – in the *ahupuaa* of Kamoku. Situated in the Kihamaniania-Nininiwai vicinity, in the uplands of Kamoku (behind present-day Läna'i City, south of Koele).
> 3. Kaaiai (LCA 6833) – in the *ahupuaa* of Kalulu and Kamoku. Situated in the uplands, between Keaaku and Lalakoa (three parcels situated on Palawai side of Läna'i City).
> 4. Kalaihoa (LCA 3719 B) – in the *ahupuaa* of Kalulu and Kamoku. Situated in the uplands, between Pulehuloa and Kapano Gulch (situated on Palawai side of Läna'i City).
>
> Apparently no native tenants applied for *pä hale* or other properties in the *'ili* of Kaumälapa'u during the Mahele. In 1866, a Royal Patent Grant (No. 3029) was issued to Nahuina and Keliihue for two parcels of land, one entirely in Kamoku, and the other crossed by the boundary between Kalulu and Kamoku. These parcels are

generally on the north and south sides of Pu'u Nänäihawai'i (above the present-day airport parcel). Parcel No. 1 of the Grant is crossed by the *mauka-makai* trail that runs to Kaumälapa'u (the same trail that crosses Kaauwaeaina's *kuleana* parcel). In 1876, Keliihue (*wahine*), recipient of the Grant, was one of the informants before the Boundary Commission.

In 1862, a Commission of Boundaries (the Boundary Commission) was established to legally set the boundaries of all the *ahupua'a* that had been awarded as a part of the *Mähele*. Subsequently, in 1874, the Commissioners of Boundaries were authorized to certify the boundaries for lands brought before them (W.D. Alexander in Thrum 1891:117-118). W.D. Alexander, Surveyor General of the Kingdom of Hawai'i worked on Läna'i, and recorded the testimonies for the *ahupua'a* of Kamoku. Among the important features described was the *heiau*, Ili o Lono (situated above Kaumälapa'u Gulch, on the Boundary between Kamoku and Kalulu), and the old trail rising from Kaumälapa'u to the uplands.

2.0 Traditional Cultural Places/Properties

The definition of a TCP is found in the *Guidelines for Evaluating and Documenting Traditional Cultural Properties* (National Register Bulletin No.38), which offers the following:

> "...[a traditional cultural property is generally] one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community" (Parker and King 1995:2).

While the primary goal of this project was to identify TCPs at Kaumälapa'u Harbor that met the criteria established in the National Register, oral histories indicate that the context within which historical events and practices are remembered may not correspond with a specific site or area. Rather it is the broader "cultural landscape" in which events or situations are recalled. The significance of the landscape as the context for identifying traditional properties, is discussed below.

2.1 Cultural Landscapes: Areas as Sites of Significance

The concept of cultural landscape has been part of American human geography since the 1920s when Carl Sauer, sometimes referred to as the father of American geography, promoted it as a method to undercut environmental determinism (Rowntree 1978:146). As such, cultural geographers place emphasis on the social perception and response to environments, the cognition, feelings, and behavior associated with places. Earle et al. define cultural landscape as "that segment of earth space which lies between the viewer's eye and his or her horizon" (1978:71).

> "As normally experienced, sense of place quite simple *is*, as natural and straightforward as our fondness for certain colors and culinary tastes, and the thought that it might be complicated, or even very interesting, seldom crosses our minds. Until, as sometimes

happens, we are deprived of these attachments and find ourselves adrift, literally *dislocated*, in unfamiliar surroundings we do not comprehend and care for even less" (Basso 1996: xiii).

Within the context of the landscape, the value attached to the locality's identification is also highly representative of the people who use it. Kaumälapa'u Harbor and Kaumälapa'u Valley hold special meanings to those who experienced the area through the generations. As will be suggested in the conclusions of this text, based on its meaningfulness as a cultural landscape, it may be appropriate to address the project area in its entirety as a TCP.

3.0 The Study Approach

Data gathered from the oral histories, unless otherwise permitted by the informants, is treated confidentially, respecting the rights and sensitivities of the Native Hawaiian community. The information in this report, including direct citations, is rarely presented with the name of the interviewee; where names are cited, it has been done so with the consent of the informant. Appendix B provides a list of the individuals who were interviewed for this survey. It also includes some of the names of individuals who provided informal interviews.

3.1 Process of Obtaining Oral Histories

Each interview involved several steps, from initiation to its completion. The following six steps were taken:

1. identification of a preliminary list of potential sources to interview;
   - the list was presented to the ACM (Mr. Kanalei Shun);
2. scheduling the interview;
3. audio, visual and written recordation of interview (if consented to);
4. identification of important features/sites in the project area (this was often done with the help of visual aides such as maps and photographs);
5. translation and transcriptions of the interview; and
6. presentation of the results of the interview.

3.1.1 Formal Interviews: Written, Audio/Visual Recordation

All of the oral interviews were completed using audiotapes and cassettes, and/or in written format. Some interviewees requested that only written notes by taken; their wish to not be recorded was granted. Audiotaping was done using a minidisk CD player. Written notes were taken during all of the interviews. Where applicable, a formal written questionnaire was completed by the interviewer (Appendix C). A request to remove all recordation of an interview, after the fact, was also granted. Interviews were also completed via telephone (from Honolulu to Läna'i City).

3.1.2. Consent/Release Form

Prior to the interview process, each interviewee was asked of their willingness and consent to the interview. A consent/release form (Appendix D) was used whenever possible. In several instances, the interviewee felt uncomfortable with signing the document even though they were very willing to participate in the interview. Out of respect for the interviewee, the consent form was waived, and as appropriate, is noted in this report. In several instances, a consent form was not signed but the agreement to do the interview was recorded on tape. The interviewees were also given the option of receiving a copy of their contribution prior to finalization of this report. In all interviews completed for this survey, the judgment of the oral historian, being in the position of doing the interview and most sensitive to the given situation, determined what constituted the best course of action.

3.1.3 Informal Interviews

Informal discussions, particularly those arising from attempting to locate interviewees and/or sites and areas mentioned, also led to gathering of information pertinent to this survey. These took place on a frequent basis during visits to the harbor area and the nearby residences. These are noted and incorporated into the project, with appropriate acknowledgements given to the discussant.

3.2 Identifying Traditional Cultural Properties

The process by which Traditional Cultural Properties were identified was done in accordance to the National Register guidelines. This entailed the following:

1. a comprehensive effort to identify properties already known in the area; and
2. consulting with and conducting oral histories with individuals who practiced and/or had traditional Hawaiian knowledge and information; and
3. description of the TCP identified and/or located.

While the goal of this project was to identify Traditional Cultural Places at Kaumälapa'u Harbor that met the criteria established in the National Register, the oral histories identified historic properties and historic land uses of the area that hold local cultural significance but do not qualify under the established guidelines.

3.2.1 Evaluation and Interpretation of the TCP guidelines

It is important to briefly discuss the criteria for defining a TCP. The reader should bear in mind that the definition is used in conjunction with nominating properties to the National Register...a TCP is not a "stand alone" identification in this sense. A broad interpretation of this definition would identify nearly all-archaeological properties as TCPs. First, archaeological features and sites that are of ceremonial significance to a living community are a TCP. Second, the identification of a community with its historic roots via a feature or site, would also qualify as a TCP. Third, although continuation of a

practice or belief is an important aspect of the criteria defining a TCP, communities can claim the lack of physical access as a deterrent against being able to continue such practices.

Previously identified sites of cultural significance, in nearly every instance, meet the criteria of a TCP, by their "....association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community." All religious and ceremonial structures, and some housing and agricultural features and sites, qualify under the definitions established for a TCP. Features and sites that do not qualify are those that hold no cultural value, traditionally or currently. These "non TCP" types of properties are by definition, out of the realm of historic cultural properties identified through previous archaeological and oral history work.

3.3 Documentary Research

Documentary research, primarily entailing the search of background literature, photographs of the project area and oral histories of the area was done throughout the duration of the survey. A review was made of all known archaeological documents prepared for the Kaumälapa'u area at the Corps of Engineers Office, Hawaii State Library and Archives, the Hawaii Historical Society, the Bishop Museum, and the Public Library on Läna'i Island. Information was also gathered from Dole Food Company and Hawaiian Dredging Construction Company.

One of the earliest documents is a letter from Walter Murray Gibson with the heading, "Island of Läna'i, Hawaiian Islands, July 16th 1862, letter to The Honourable Secretary of the House of Nobles, Honolulu, from Walter Murray Gibson." As president of the Church of Latter Day-Saints, Gibson requested about 15000 acres in "a valley or extinct crater, for permanent settlement. No running water there. No road, just dangerous 'bridle path'. We would make a good wagon-road" (p.3). In describing the inhabitants of Läna'i, Gibson claimed that "previous to my organization of their labour, these people obtained a precarious subsistence by fishing, or by tending a few goats" (p.3).

Prior to and during the construction of Kaumälapa'u Harbor in 1924, newspaper articles appeared quite frequently in the *Honolulu Star Bulletin* and the *Honolulu Advertiser*. Some of the earliest photographs of the harbor can be seen in articles such as "Scenes on the Coast of the Island of Läna'i Where Hawaii's Biggest New Development Work Is in Progress" (*Honolulu Star Bulletin* Monday, January 28, 1924) (Figure 3). Figures 3 through 7 show the general sequence in the development and changing face of the harbor and breakwater, between the years 1924 and 2001:

Table 1. A Pictorial History of Kaumälapa'u Harbor

Figure	Year of Photograph	Description
3	1924	Initial work on the Dole Harbor.
4a	1946	View from the breakwater, looking north
4b	1946	Wall enclosing the harbor
5	1960	Semi-circular view of the breakwater, harbor and Kaumälapa'u Gulch.
6a	1983	Aerial view of Kaumälapa'u Harbor and Kaumälapa'u Gulch/Valley
6b	1983	Aerial view of Kaumälapa'u Harbor, looking north
7a	2001	View of the breakwater from atop Kaumälapa'u Ridge
7b	2001	Entrance to Kaumälapa'u Gulch/Valley
7c	2001	Shoreline of the previous rail track leading to Kaumälapa'u Gulch
8a	1924	Dredging of Kaumälapa'u Harbor
8b	1931	Wagon carts, Model T Fords and Pineapple being transported to the harbor

As described in Fig. 3, during its initial construction, the harbor was known as "Dole Harbor". Figures 4a and 4b show the harbor as it was in 1946; Fig 4a shows perhaps what was the longest extension of the breakwater. Figure 5 shows a semicircular view of the entire harbor area, and sweeps around to Kaumälapa'u Gulch/Valley. Figures 6a and 6b are aerial photographs that show a much shorter extension of the breakwater. Figure 6a is a view of the harbor looking north, and Fig. 6b is a view of the harbor looking south and shows a portion of Kaumälapa'u Gulch. Figures 7a through 7c were taken during this study, showing the current views around the harbor area. 7a shows a view of the breakwater and harbor from atop Kaumälapa'u Ridge; Fig. 7b shows the entrance to Kaumälapa'u Gulch/Valley; and Fig. 7c shows the rocky shoreline atop which ran the rail tracks from the harbor to the gulch.

As told repeatedly by informants, the breakwater had at least four facelifts during its existence. The majority of these followed post-hurricane and tidal damage to the breakwater. At present, at least four separate layers of cement and gravel are evident in the initial portion of the breakwater. Albert Reinicke (see Interview) recalls Hurricane Dot in 1960, doing severe damage to the breakwater. He also recalls that the repairs to the breakwater required square boulders. These boulders were brought in on the tugs "Ahi" and "Ono", from Kawai'hae Harbor on Hawaii.

Years on Läna'i, a publication of the Dole Plantation Company, served as the island newspaper for many years. *Years on Läna'i* was a bimonthly publication, prepared by the Läna'i Plantation Division out of Läna'i City. Its articles covered the general events of living on Läna'i, and as well was/is a good source of early photographs of Kaumälapa'u Harbor. Among these photographs is one that shows wagon carts on a track running past Kaumälapa'u Camp on top, and Model T Fords carrying the pineapple on the road below (Fig. 8a). Figure 8b shows the dredging of Kaumälapa'u Bay, after the harbor and

10 PAGES. HONOLULU, TERRITORY OF HAWAII, MONDAY MORNING, JANUARY 28, 1924.

Scenes on the Coast of the Island of Lanai Where Hawaii's Biggest New Development Work Is in Progress

Upper left—The high bluff encircling about one-third of Dole Harbor. It is along the base of this bluff that a railroad track will be built on which to haul rock from quarry to breakwater. Upper right—The method employed in unloading lumber, railroad ties, etc., when the work first started at Kaumalapau (now Dole Harbor), Lanai. On the right is seen the trestle upon which all lumber and materials were hoisted to the top of the bluff where the camp now stands. Lower left—Young Brothers' tug "Mikiki" bringing the scow "Gaylord" into Dole Harbor. This picture shows the harbor in the foreground. The breakwater will begin on the reef shown behind the "Mikiki" and will extend southward (to left of picture) a distance of 300 feet. The wharf as to be built along the rocky ledge shown at the bow of the tug and extending toward the right of the picture. Lower middle—The present method of unloading all freight arriving for the Hawaiian Dredging Company at Dole Harbor. The "Gaylord" unloading a 25-ton piece of the traveling crane, received two weeks ago. Lower right—Making the roadbed for the 4000 feet of railroad track that will connect quarry and breakwater.

Figure 3. Initial work on Dole Harbor (source: Honolulu Star Bulletin, January 28, 1924).

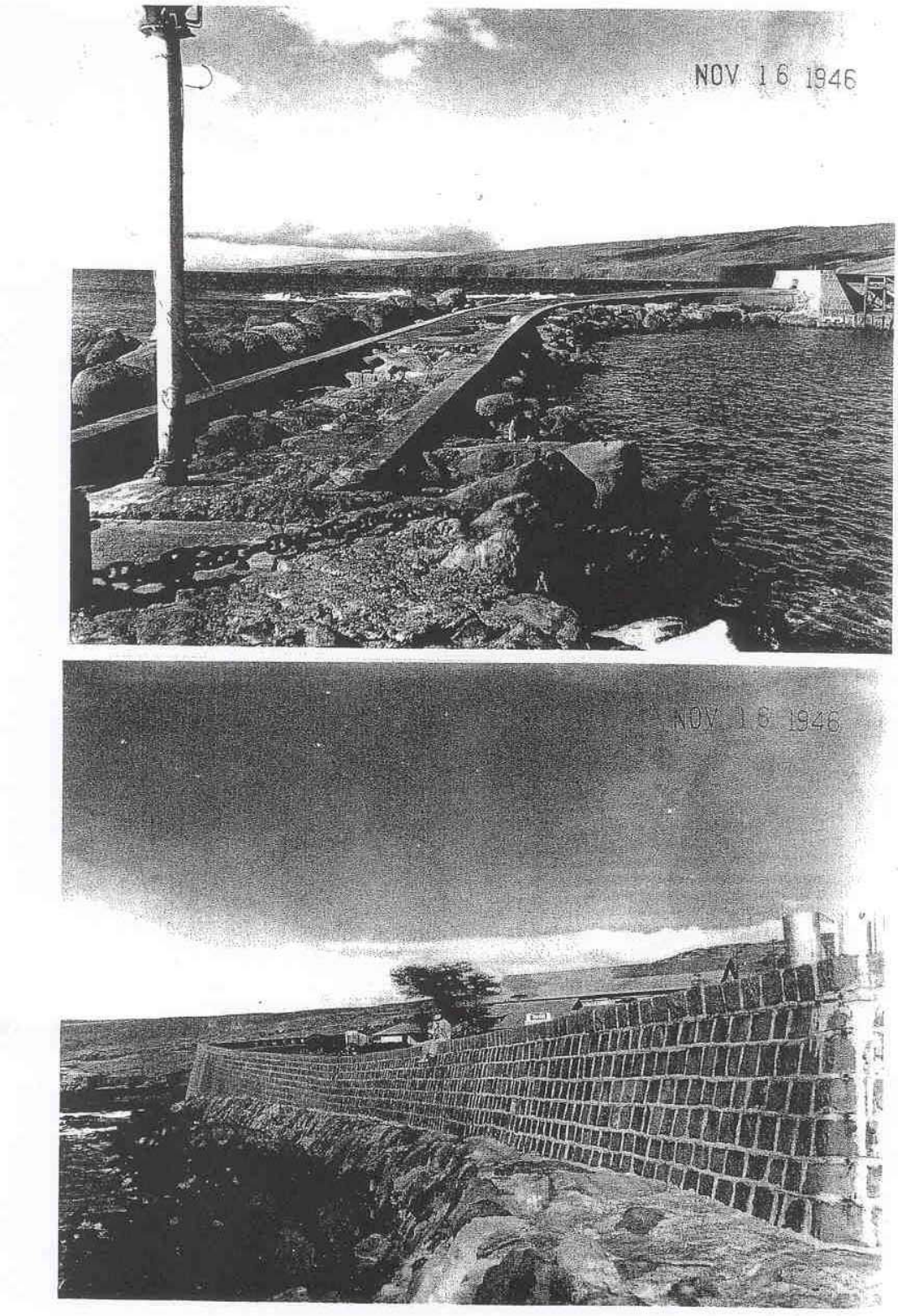


Figure 4. (a-b) Breakwater and Stone Wall surrounding Kaumälapa'u Harbor
(Source: Hawaii State Archives. Photos by Hawaii State Department of Transportation)

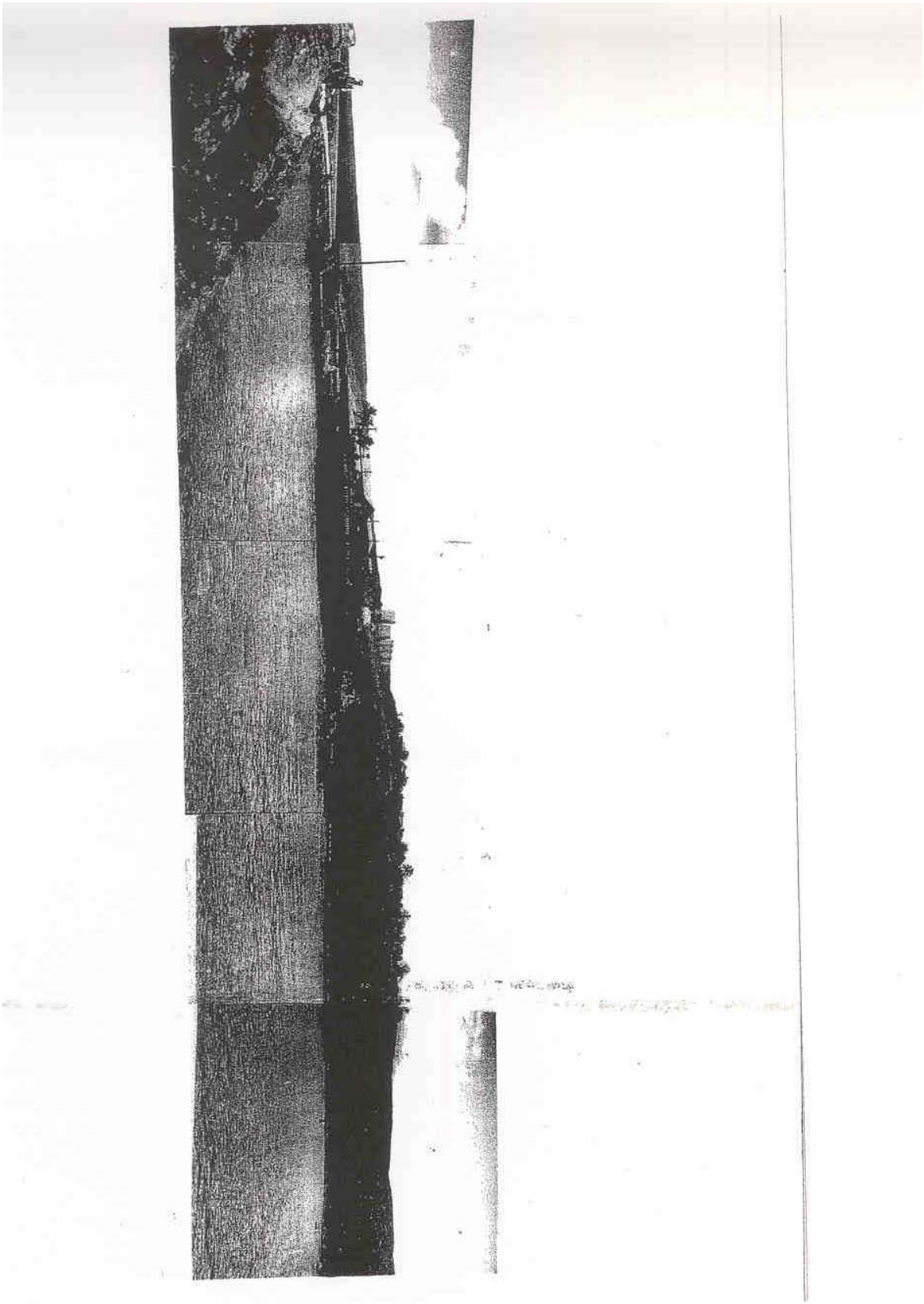


Figure 5. View from the breakwater, circling around to Kaumälapa'u Gulch/Valley.
(Source: Hawaii State Archives. Photos by Department of Transportation)

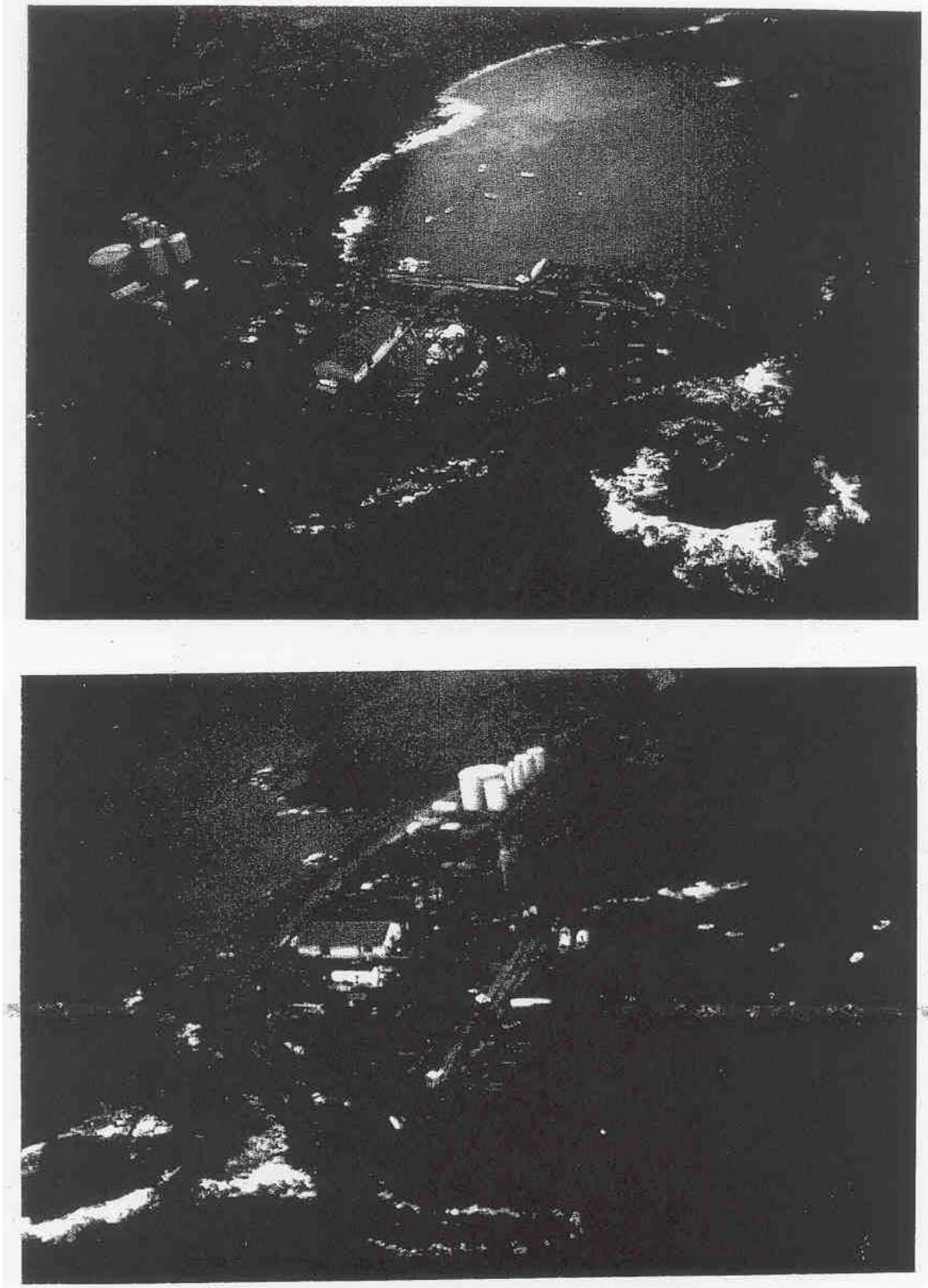


Figure 6. (a - b)Aerial views of Kaumälapa'u Harbor and Kaumälapa'u Gulch/Valley. (Source: Hawaii State Archives. Photos by Department of Transportation)

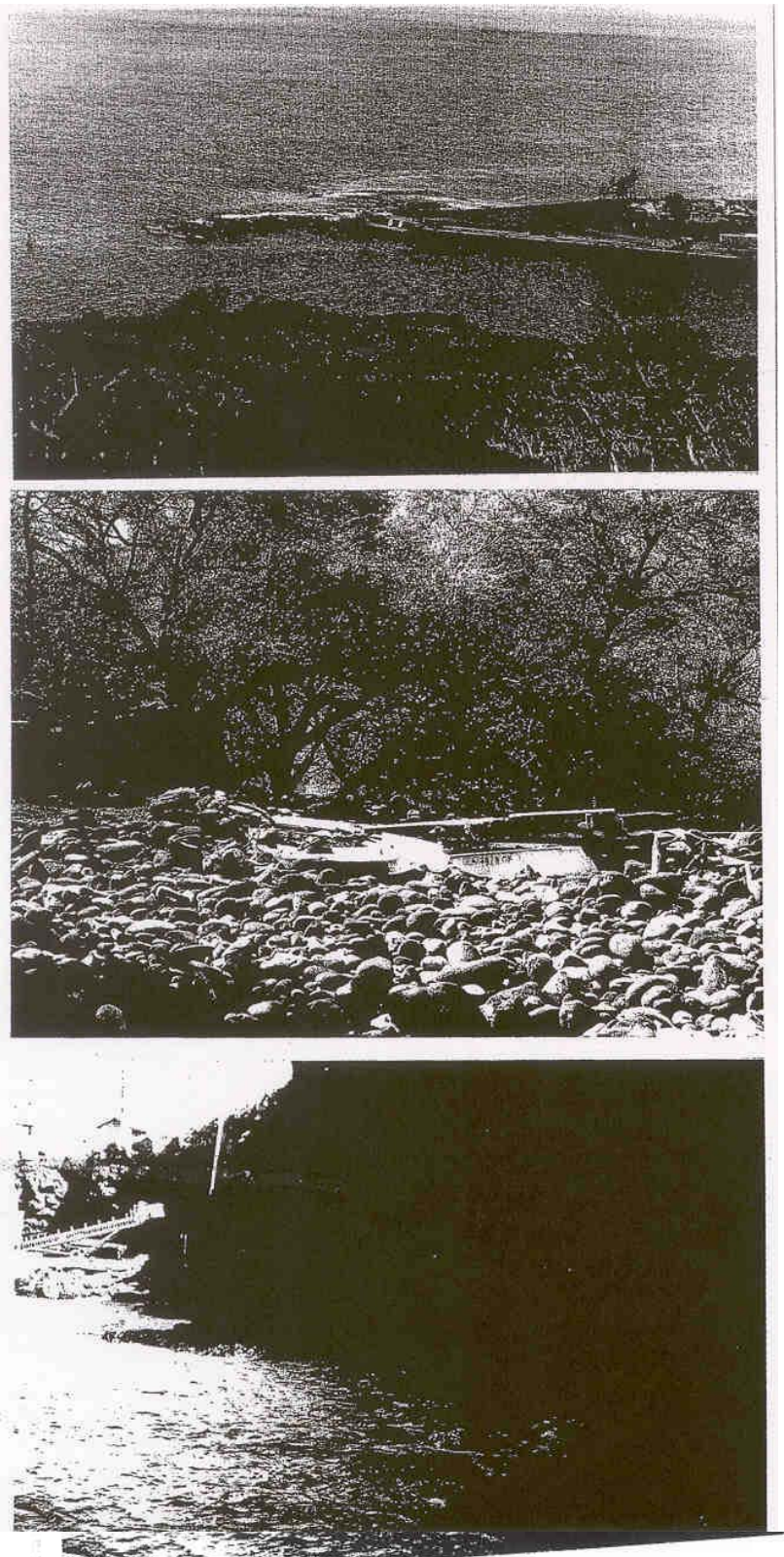
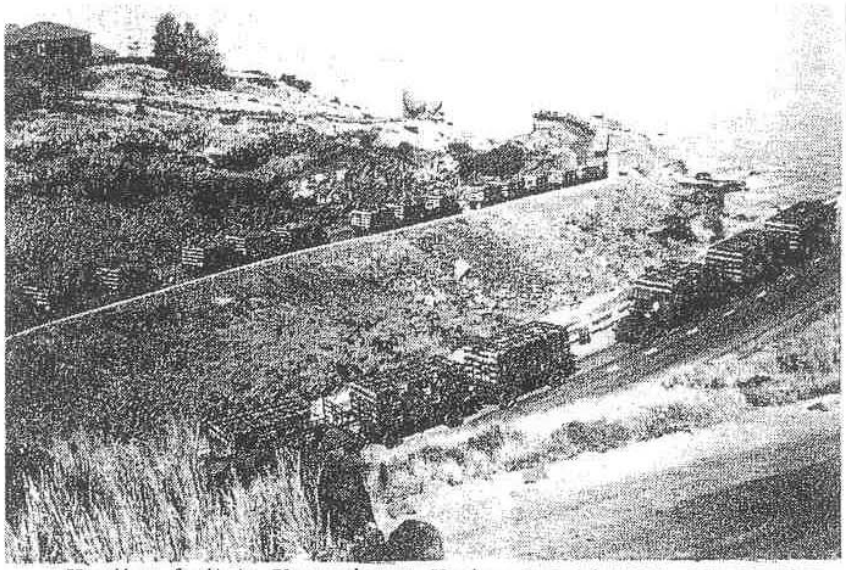
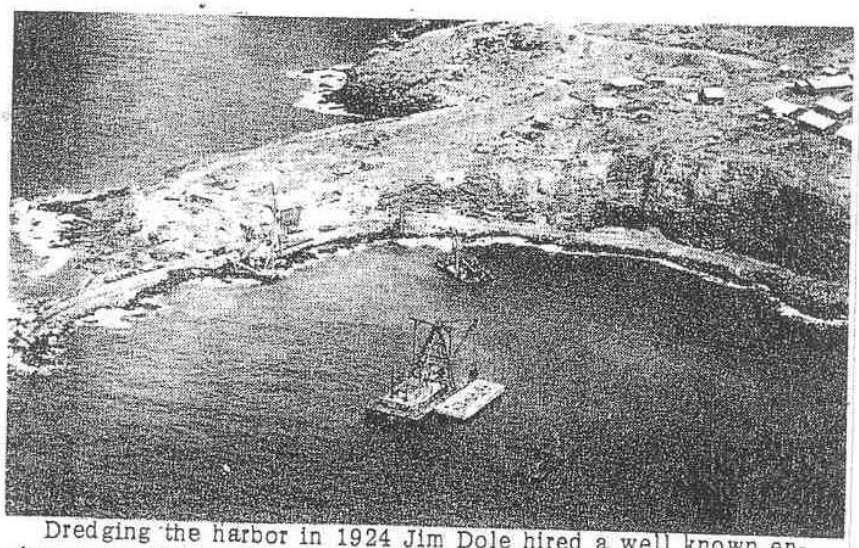


Figure 7. (a) H[illegible] Kaumälapa'u Ridge, (b) Entrance to Kaumälapa'u Gulch/Valley, (c) Shoreline of old rail track leading into the gulch/valley.



Hauling fruit to Kaumalapau Harbor around 1931. Pineapples were packed in small lug boxes which had to be dumped by hand at the cannery.



Dredging the harbor in 1924 Jim Dole hired a well known engineer named "Drydock" Smith to design the port facility. More than 116,000 tons of rock were hauled in to make the breakwater.

Figure 8. (a) Wagon Carts and Model T Ford heading to the harbor, (b) dredging of the harbor with Kaumälapa'u /Harbor Camp houses on the ridge. (Source: The Pine Islander, June 30, 1967).

breakwater had been built, and Kaumälapa'u or Harbor Camp on the slopes above the harbor. According to the article in the *Pine Islander* (Vol. 9:6, June 30, 1967) Jim Dole hired an Engineer named "Drydock" Smith to design the port facility. Mr. Reinicke also recalls the mule wagon used on the tracks to go into Kaumälapa'u Gulch/Valley; he used to ride the wagon as a kid.

3.3.1 Previously Recorded Myths and Legends

Perhaps because of Läna'i's "social distance" from Oahu, Maui and Hawaii, some of the myths and legends associated with the "hard to reach" island create a sense of mystery or fear about the land and its people. The following exemplifies some of the written accounts. In the retelling of *The Bad Boy of Lahaina, the Goblin Killer of Läna'i,* Emerson states that the "goblins [*akuas*] of Läna'i were a dangerous lot" (Annual Report of the Hawaiian Historical Society 1920:16-19). Emerson was told this story by an old native while crossing on a whaleboat from Lahaina to Läna'i in 1920. An earlier incident echoes similar sentiments. "The Läna'i Horror" (*The Friend* 1892, Vol.50(7):49) documents an earlier incident involving a *kahuna anaana*, or sorceress, named Pulolo. Pulolo killed several family members on February 11, 1892, in Awalua, Läna'i; she was sentenced in Lahaina, Maui according to U.S. laws (ibid). According to Emory (in *Honolulu Star Bulletin* April 6, 1970, p.D-20), Läna'i was once known as the "evil island...because it was first thought to be inhabited by evil spirits...[that] were killed off by Kaululaau, son of the Maui chief, Kakaalaneo, who lived about 1400 A.D.

The importance of these accounts, specifically with reference to identifying TCPs, is that they reflect aspects of a native Hawaiian community on Läna'i at the turn of this century. All of these stories, regardless of the their main subject, indicate that traditional roles still existed. For instance, its rare that a *kahuna anaana* is mentioned in written documents; the fact that this role existed and was acknowledged as such by the people of Läna'i (and the courts) indicates that traditional roles were still observed.

3.4. HABS/HAER Documentation of Historic Properties

Historic structures such as breakwater at Kaumälapa'u Harbor, are properties that meet the criteria established by the National Register. The *Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation* (1983) outlines the documentation standards and guidelines for architecture. Standard 1 of these guidelines, reads as follows:

> Standard 1: Documentation shall adequately explicate and illustrate what is significant or valuable about the historic building, site, structure or object being documented. The historic significance of the building, site, structure or object identified in the evaluation process should be conveyed by the drawings, photographs and other materials that comprise documentation. The historical, architectural, engineering or cultural purpose of the documentation activity determine the level and methods of documentation. Documentation prepared for submission to the Library of

Congress must meet the Historic American Building Survey/Historic American Engineering Record (HABS/HAER) Guidelines.

4.0 Results of Oral Historic Studies of Kaumälapa'u Harbor

Information obtained through oral accounts about a historic property can significantly add to its value. It can also tell of a category of significance that is not embodied in the physical remains of a structure or site. Indeed, oral histories can create value when there seemingly does not appear to be any. Whether it be a story recalled or an experience shared, the information found through oral histories allows the listener to become a "participant" by creating an image or visual picture of what used to be. Appendix B is a list of individuals and groups contacted for the formal interviews; Appendix E (to be inserted later) is the written transcription of the oral interviews completed for this study. The information relating to TCPs has been gleaned from the interviews and presented throughout the remainder of this report.

Studies done by archaeologists who have looked at the historic sites at and in the vicinity of Kaumälapa'u Harbor (c.f. Emory, Kaschko and Athens, et al.) indicate the traditional and historical significance of this part of Läna'i Island. Oral histories show that the broader area upon which Kaumälapa'u Harbor borders also holds historical significance. These recollections do not necessarily point to site-specific events or locations, but rather tell of the general character of the physical environment within which historic events and activities occurred.

Recollections are stories and memories being recalled through first-hand experiences. These are from individuals who have either been residents or visitors of Kaumälapa'u Harbor and surrounding areas. Many of these do not indicate places or features that can be directly associated with traditional practices. Rather they tell of life or visitations to the ocean's shore. For instance, several individuals went to Kaumälapa'u to fish and/or swim. Others spent time visiting the area when the tugboats and containers arrived; these too were done for social-recreational purposes. A few former residents of Kaumälapa'u Camp recall spending their childhood years growing up at the seashore.

There are also traditions or re-telling of observances/practices, and perhaps stories, that are both first-hand experiences, as well as those that have been passed on from another generation or individual. These however, are uncommon since continued use of Kaumälapa'u, and indirectly the history associated with this continued use, does not exist. It is known however, that residential settlement at Kaumälapa'u coincides with the establishment of Camp Kaumälapa'u. The generations of elders or *kupuna*, who often are the bearers of historical lore, do not seem to have had a shared physical presence with the camp's residents. For instance, the archaeological features up on the ridge that borders the eastern boundary of Kaumälapa'u Valley, are not familiar to most former residents of Camp Kaumälapa'u. Although some of these features are clearly visible to the naked eye and people are aware of their existence, there isn't a known history of the use and meaning of these sites for the Hawaiians who built them.

Based on the information gathered from the interviews, it is clear that TCPs, as defined by the *Guidelines for Evaluating and Documenting Traditional Cultural Properties* (National Register Bulletin No.38) exist around Kaumälapa'u Harbor. It is equally clear that a second category that includes historic properties that hold local cultural significance but do not qualify under the established guidelines, also exists. These fall within the broader, cultural landscape of the area. The applicability of the term cultural landscape is not unique to Kaumälapa'u (c.f, Prasad 2001); it may more appropriately describe the traditional values associated with a place by Hawaiians and long-term residents of a place. After briefly discussing the applicability of TCP guidelines, the remainder of this section looks at existing and newly identified TCPs, and as well, at the applicability of cultural landscape

4.1. Application of TCP Guidelines to Kaumälapa'u Harbor

What constitutes a TCP at Kaumälapa'u needs to be established here. For the purposes of this report, it is important to note that there are no traditional/historic structural features or remnants of features within or adjacent to the harbor and the breakwater. Also, there are two very significant issues to consider with regards to the project area. First, the harbor and the breakwater are "not" traditional cultural properties. Both were constructed during the historic period. Second, use of the area...by the residents and community of Läna'i, has been continuous. Whether this use qualifies as "traditional" or "historic," is perhaps a matter of interpretation. While its historical existence and use will be briefly discussed below, it should be noted that interpretation of the guidelines define Kaumälapa'u Harbor as a "historic property" but not one that is "associated with cultural practices or beliefs of a living community that are rooted in that community's history, and are important in maintaining the continuing cultural identity of the community" (Parker and King 1995).

Kaumälapa'u Harbor is a historic property. The HABS/HAER photographs (Appendix F) that accompany this report are to accompany documents nominating the site to the National Register of Historic Places. The harbor was built in 1924 and is seventy-seven years old. The breakwater was built one year later. Changes to the original structure, primarily as a result of wind and ocean damage, have occurred several times over its lifespan. Use of the harbor and surrounding area by residents, both Hawaiians and non-Hawaiians, continues for fishing/recreational purposes. In that regards, traditional use for traditional purposes of the area has continued.

The area's continued use by residents of the community for purposes such as fishing, presumably from traditional times to the present, attests to its historic significance. Whether or not there is "continuation" of a practice or belief that is traditional is perhaps a matter of interpretation. It is proposed here that a separate category, which consists of properties bearing traditional cultural significance that fall "outside" the guidelines, be created.

In its discussion of TCPs and tangible cultural resources or historic properties, Bulletin 38 reads, "attributes that give such properties significance, such as their association with

historical events, often are intangible in nature...properties and their intangible attributes of significance must be considered together" (National Register Bulletin 38:3). This consideration cannot be overlooked when referencing TCPs associated with Kaumalapau Harbor.

Following a brief discussion of the types of TCPs (newly [re]labeled and newly identified), the importance of the cultural landscape is discussed. As will be seen, known traditional and historic use of the area lend to the entire project area being classified as a TCP.

4.2 Previously Identified Properties of Cultural Significance

Previous archaeological work around Kaumälapa'u Harbor, and its surrounding vicinities has identified several traditional Hawaiian sites such as *heiau* and house sites (c.f. Emory 1969) in the general vicinity of the project area. Emory also located house terraces in Kaumälapa'u Gulch, and believes there were several smaller terraces in the area. Based on Emory's earlier work, it was assumed that archaeological and historic sites may be encountered in the project area. Also, based on the geographical make-up of the harbor area, it was assumed that Kaumälapa'u Bay is still a good fishing grounds as it was in historic times.

4.3 Identification and Delineation of New TCPs

No new Traditional Cultural Places that met the *Guidelines for Evaluating and Documenting Traditional Cultural Properties* (Parker and King 1995), were identified. Identification of new TCPs was a specific objective of this study. Oral histories, along with a review of historical documents, did not identify features or sites that qualify under this criteria within the immediate vicinity of the project area.

It should be noted that attempts to visit and identify potential TCPs was done with the help of several interviewees. Various historical maps of the project area and its vicinities were used to help identify historic features and sites.

A review and critical analyses of the interviews and integration of data from previous studies and other written sources were done. No TCPs were located within the immediate vicinity of the project area. However, based on interview results, several possible features/sites were investigated. In addition, one extensive archaeological complex above Kaumälapa'u Valley was identified, visited and reported to the CRM.

4.3.1 Historic Sites Associated with Fishing

Since the harbor was constructed in 1924, and a few residents of Kaumälapa'u Camp were available for the interviews, information about traditional uses of the area, including fishing, was gathered for this study. Fishing was and is a major activity at Kaumälapa'u Bay. The resources, their availability and accessibility have changed but the area's value

as a special fishing grounds for Läna'i residents, has not changed. Maly's research (Appendix A) on land claims found:

> In the *Mähele 'Äina* (Land Division) of 1848, the *ahupua'a* of Kamoku and Kalulu were retained by the King (Kamehameha II), though the *'ili* of Kaumälapa'u 1 & 2 were given by the King to the Government (*Buke Mahele*, 1848:105, 209; and Boundary Commission Certificate No.'s 36 & 37). As *Konohiki* (Overseer) of the land of Kamoku on behalf of the King, Noa Pali reported that the *i'a kapu* (restricted fish) of Kamoku was the *uhu* (parrot fish), and the *lä'au kapu* (restricted wood) of Kamoku was the *koko* (*Euphorbia* spp.) (Interior Department Land Files – August 26, 1852). *Uhu* are still noted as an important fish of the Kaumälapa'u fishery to the present day (pers. comm., Henry Aki and Sam Kaopuiki).

Conversations with Hazel Maioho Tanegawa (see complete interview in Appendix E), a former resident of Kaumälapa'u Camp, describes fishing at her former home as:

> "almost all of us kids fished. Mr. Aikala, Martin, every so often he would gather the kids, he would go diving with the bigger boys, and we'd just tag along. With his wife Grace…we'd catch crabs and *opihi*. It was beautiful growing up down there…we all looked out after one another. I still go fishing at the harbor but only at nighttime. Now we catch *enenue*, *mempache*, *papio*… But there's a Big change – not like how we used to catch. Back in our days, we only caught enough to eat. We had three bags we'd take down there. One bag was for *aama* crab, one bag for *ahukihuki*, the round purple things with hats [urchin], and one bag for *opihi*. When I was young, we used to fish during the day. It was faster to fish…now you stay overnight, you might walk away with two [fish]. Still have crab [referring to *aama*] but not as galore. *Aama* crab was hundred of them [back then].

Fish such as *uhu* were still important during Hazel's earlier time at Kaumälapa'u Camp. She refers to change not just in the numbers and availability of fish but also the ocean environment. She went to add that "it is more rough, bigger waves nowadays".

Access to fishing whether by boat or off the shoreline, is easily attained at Kaumälapa'u. One of the sites immediately *mauka* of the harbor is called "Fisherman's Trail". In the 1862 letter requesting settlement and use of Läna'i, even Gibson indicates the importance of fishing as the primary source of subsistence for the island's inhabitants. The village of Kaunolu, just to the south of Kaumälapa'u was known as a "fishing village". Given its proximity to Kaumälapa'u, it is highly likely that neighboring Kaumälapa'u also offered good fishing grounds to Hawaiians. The Kaumälapa'u Trail (Fig. 2), extending close to Läna'i City, also adds to the significance of the use of the area. The trail ends at the former Kaumälapa'u Camp, just above the above current harbor.

Mr. Henry Aki, a former Harbor Supervisor, was one of the last occupants/users of Kaumälapa'u Valley. He told Maly (Appendix E) that one building, the 'Scout House,' from the old Hawaiian Dredging camp in Kaumälapa'u Valley was still extant in the 1940s, and he secured a lease of the valley from the company which he retained until the

late 1980s. The old Scout House had deteriorated, so Mr. Aki took it down, and used the foundation to build another small house. His primary interest in Kaumälapa'u Valley was as a base camp for fishing. A trail down the side of the *pali*, from the Harbor Camp, was his main route of access.

While Mr. Aki, had seen, and traveled past the platforms and other features on the Kalulu Bluff of Kaumälapa'u, he did not recall anyone ever speaking of the sites, or giving them names. Though in his time, elder Hawaiian residents did still go to certain areas on the bluff to *kilo i'a* (spot fish) and direct the fishermen to the schools. Daniel Kaopuiki Sr. had told Mr. Aki that Hawaiians once lived at Kaumälapa'u and that it was an important fishing area. He was also told that water for the old residents was found a little ways up the valley, in a well. In the old days, *akule* were caught near the shore fronting Kaumälapa'u Valley. The schools would still come in occasionally throughout the years that Mr. Aki worked at the harbor.

Mr. Aki's mother, Ella Kekai Haia-Aki, and other old Hawaiian residents of Kaumälapa'u regularly gathered *limu* (seaweed) such as the *kohu* and *lipoa* from along the shoreline. They also gathered various near shore fish and crabs, and the elder Mrs. Aki, regularly gathered *pa'akai* (salt) from *käheka* (natural salt basins) at the front of the cliff near the Kalulu-Kamoku boundary (in area of the lighthouse). The *pa'akai* was used for all home needs and salting fish caught in the surrounding fishery. Among the fish regularly caught around Kaumälapa'u were the — *uhu, kole, akule, 'ü'ü, nenue, päpa'i*, and *'öpihi*. Families also regularly fished from the breakwater, and around the point towards Kalamanui Valley. Sharks were known to come into the bay, but Mr. Aki's mother instructed him not to bother them; they were considered family, and would not bother him.

Samuel Kaopuiki, who was born in 1925 at Keömoku, Läna'i, has been a fisherman all of his life, and regularly fished at Kaumälapa'u. His elder brother Daniel Kaopuiki Sr. lived and worked at Kaumälapa'u as well, and his own job with the plantation had him regularly at the harbor. Kaumälapa'u is an important fishery. There were all kinds of fish that he would catch at Kaumälapa'u. Among them were the — *'äholehole, uouoa, moi, uhu, akule*, and many others. The *akule* used to school in Kaumälapa'u. But now, because people take everything, and don't think about tomorrow, there are very few fish (it's not like it was before). Mr. Kaopuiki's primary methods of fishing included *kamäkoi* (pole fishing) and *ku'u 'upena* (net fishing). He noted that before days, in his father's and kupuna's time, the families used to travel across the island on trails, fishing seasonally at Keömoku and vicinity, and at other times, fishing at Kaumälapa'u. He did not know of any *ko'a* (fishing station markers or triangulation points) at Kaumälapa'u. He is certain that in earlier times, various points, hills, and perhaps in later times, even the lights at the harbor were used to mark various fishing spots.

4.3.2 Kaumälapa'u Camp (also called Camp Kaumälapa'u or Harbor Camp)

According to Henry Aki, among the residents of Harbor Camp (see Fig. 8b) were: Buck Manriki (his house was the first house on the bluff, overlooking the area of the fuel

storage tanks); Alfred Kimokea; Manuel Pavao (two houses – his last residence being the brick house which has been remodeled and is now the first house seen when driving into the camp); Junior AhLeong Aki; Shigeru Yagi; Nakama; Hashiba; Captain Kealahao; Lono Pokipala; John Kaiaokamalie; Daniel Kaopuiki Jr.; John Kauwenaole; Asing Ahyo; Alex Maioho; Joe Kaehuaea; Martin Kaaikala; Sonny Fernandez; Minoru Oda; Matsuda; and Henry Aki (his house was the last one on the bluff overlooking Kaumälapa'u Valley; near the trail head that went into the valley). There were also at least two long garages; a pool hall; a rooming house (in which six single men lived); a bath house (prior to inside plumbing being installed in the houses); a duplex house; and baseball field.

One of the former residents of Kaumälapa'u Camp is Hazel M. Tanegawa. Born in 1940, she lived at the camp until December of 1958, when she left for college. The camp had about nineteen homes, all which were built plantation style. Of these, only three remain today. She recalls there being a park (the site of the current homes), "they had three swings. We used to play on them all the time. The foundation for these swings is still there.. There was a duplex for the captain of the tugboat, and a complex, like an apartment for all single men. Tom Knott was the tugboat captain at that time."

Hazel recalls that during the war (1942), "we had to move up to the city…so no lights on the roadway. Couldn't travel on road with light so dad had to move us up. We had to move back [to Kaumälapa'u Camp] in two years". When growing up in Kaumälapa'u Camp, there was a shack in Kaumälapa'u Gulch. There weren't any houses in there. "A Filipino man, [she forgot his name] used to raise pigs in the gulch. He also had chickens and dogs. He used to bring slop in nearly every day to feed the pigs. We used to wonder how he got all the slop into the gulch…it was a tough walk along the beach side. There were trails that went into the gulch but these were too steep to walk, and too steep to carry the heavy slop. After the Filipino man left, Mr. Aki went down in there."

Hazel also remembers the breakwater. This was a special place for her and her family. The breakwater "used to be so long…every week was clean-up, come Friday, they'd run the water and wash down the docks. They run the water, had one big hose. We had three tanks, four way above the highway. Two in the camp, one down the harbor side. The tank [at the harbor] was used only to wash down the harbor area. The washing was done by the guys who worked at the harbor. They used to keep is so clean. Every year we had luau, for Christmas, down there. Manual Pavao, the company foreman, used to have the harbor all washed down for the luau."

Albert Reinicke, whose father was John Kaonaole, grew up around Kaumälapa'u. He recalls Harbor Camp, and the kids that used to play there. Mr. Reinicke currently works at the Läna'i landfill/dump; he drives one of the trucks bringing in waste to the dumpsite. The dumpsite is approximately half a mile from Kaumälapa'u Harbor.

4.3.3 Archaeological complex on Kaumälapa'u Ridge

Standing on the breakwater and looking east, a wall structure is clearly visible. Several other possible structures or their remnants are also visible. A visit to the structure,

approached using goat trails up the southern slope of Kaumälapa'u Gulch, shows a very large prehistoric complex with a series of structure covering the entire hill slope. These features are of various sizes and dimensions, e.g. C-shaped structures, terraces, a rectangular walled enclosure with an upright slab, etc. In Emory's earlier work (1967), he found "a house site" at the edge of a sea cliff south of Kaumälapa'u. It is very likely however, that Emory did not visit the site located during the current study since he would have seen and noted the large number of features. The extensive complex is also not featured on his survey map of the area.

Information gathered from the interviews indicate that there are one and possibly two *heiau* on the slope. According to Lee Tavares, her husband Ernest who purchases heavy equipment for the Läna'i Company, has visited the sites and knows of their 20th century use as a fishing shrine (*koa*). Ernest also knows of older fisherman who still visited the *heiau* until approximately twenty years ago.

Mr. Solomon Kaopuiki, born at Keömoku in 1919, is a descendant of several generations of Läna'i families (Appendix E). Mr. Kaopuiki is well known for his knowledge of Läna'i's cultural and natural landscapes. While he did not hear specific name references for the features on the Kalulu Bluff over looking Kaumälapa'u Bay, it is Mr. Kaopuiki's understanding (from elders) that in the old days, people lived at Kaumälapa'u and vicinity. The land was different, and families could grow sweet potatoes and similar crops there. There was also some water available in the valley. Kaumälapa'u was an important canoe landing and fishery in the old days.

Strewn throughout the complex are empty bullet casings, in what appear to be hunting activities (Axis deer were observed in the area during the field study). However, according to Hazel Tanegawa, a former resident of Kaumälapa'u Camp, the ridge across from their houses was used as a target practice range by the men of the camp. She remembers watching, "from across the camp, they would shoot...guys from the camp would use for target range...that's why there's shell casings up there". Whether hunting took place alongside with target practice is not known; the area however, has had some historic disturbance.

4.2 The Cultural Landscape: Sites without Physical Markers

> "...geographical landscapes is more than a valuable resource for exploring local conceptions of the surrounding material universe. It may, in addition, be useful for interpreting forms of social action that regularly occur within that universe. For landscapes are always available to their seasoned inhabitants in more than material terms. Landscapes are available in symbolic terms as well, and so, chiefly through the manifold agencies of speech, they can be 'detached' from their fixed spatial moorings and transformed into instruments of thought and vehicles of purposive behavior" (Basso 1996:75).

Oral traditions and oral histories have been a significant component of Hawaiian culture since before written records of these were available. Chants, myths and legends make up the bulk of what is known about the Hawaii of yesteryear. Rarely is an archaeological report completed without reference to writers such as Fornander, John Ii, S. Kamakau,

Handy and Pukui, et al., who have written these histories in various forms. These oral traditions and histories are significant cultural properties of Hawaiians, and serve as an example of property that has no physical markers.

First, it is important to discuss how names of places signify meaning to a group or people. The translation of Kaumälapa'u or why the area was given this name, was not directly found in historical sources (c.f. Emory 1969) or known to those interviewed. (It was also not found in *Place Names of Maui*.) According to Keone Nunes (pers. comm.), at least two possible interpretations can be made of Kaumälapa'u. These are as follows:

Kau = yours
Mala = ache or pain
Pau = finish

Using the above, Kaumälapa'u could mean "cessation of pain". As Keone explains, it could indicate a safe harbor if currents lead directly into the bay. This would be appropriate given that the bay opens up directly to the ocean but also provides shelter. Keone suggested that it is also possible that *umala* is the name of the wind in the area. In some interviews, recollections were made of the heavy winds (as well as the calm periods) that came into the bay.

The naming of Kaumälapa'u, as with place names throughout the islands, show the meaning Hawaiians associated with physical spaces. The original intent of the meaning may no longer be known, however, the fact that landscapes can be are symbolic lends to the possibility of defining the landscape as a traditional cultural property. The value arises not from the "spatial moorings" as Basso so adequately describes, but rather from the symbolic value the landscape represents.

One of the written legends that tells of the cultural and traditional significance of the Kaumälapa'u area, and is widely supported by oral history, is presented here by Maly (Appendix A).

Kaumälapa'u (Kamoku Ahupua'a) in Native Traditions

A significant native tradition of Läna'i, which is in part centered at Kaumälapa'u, is associated with a waterspout and cave known as Puhi-o-Ka'ala (literally: Waterspout of Ka'ala). Puhi-o-Ka'ala is situated on the shore, along the southern (Kamoku-Kalulu) boundary of Kaumälapa'u Bay (*Figure 3*). Emory (1924) reported that the tradition "*Puhi o Kaala*" was first publicly told in 1868, at the request of Lot Kamehameha (Emory 1924:23). Walter Murray Gibson (one time resident and owner of large tracts of land on Läna'i), reportedly learned the account from M. Kekuanaoa (who accompanied Kamehameha I on Läna'i), and from Pi'ianai'a who had also resided on the island. Gibson first published the account in the Hawaiian Newspaper "*Nu Hou*" in 1873; King Kaläkaua, retold the story in his book "*Legends and Myths of Hawaii*" (1888).

The waterspout and a cave associated with it (which according to tradition, also contains the remains of Ka'ala and Ka'aiali'i), is one of the famous storied places (*wahi pana*) on the island of Läna'i. As a youth growing up on Läna'i, Maly learned the *mo'olelo* (tradition) from elders of the Kaopuiki family, and the account was spoken of by individuals who participated in the limited oral history-consultation program conducted as a part of the present study.

Emory (1924) provided readers with the following summary of the account:

> *After Kamehameha had conquered all the islands he visited the village of Kaunolu to fish and sport. His residence was on the bluff which forms the east side of the bay, overlooking the village, the temple and the bay. Natives came from all over the island to view the sports which would be held for Kamehameha's entertainment.*
>
> *One of the events was a wrestling match between Kaaialii, warrior of Kamehameha, and Mailu, for the beautiful girl Kaala. Kaaialii was victorious, but the father of Kaala, Opunui, was not willing that he should have the girl, because Kaaialii had driven a friend of his over the cliff at Hookio in the battle of Kamokuhi.*
>
> *Opunui succeeded in getting Kaala away by telling her that her mother was dying at Mahana. But instead of taking her to Mahana, he led her away to Kaumalapa'u and hid her in the sea cave with an under-water entrance, on the south side of the bay. This cave is called Puhi o Kaala, The Spouting Cave of Kaala.*
>
> *Ua, a lover of Kaaialii, told him that Kaala would be hidden by Opunui. He immediately set out to find the father. When Opunui saw Kaaialii he fled for his life and was saved by being able to reach the heiau of refuge at Kaunolu a few moments before Kaaialii.*
>
> *Kaaialii wandered over the island till at the spring Waiakeakua he met a priest from whom he forced the secret of Kaala's hiding place at Kaumalapa'u bay.*
>
> *Kaala had tried to escape by swimming under water, but her strength was not enough. Kaaialii found her half drowned and so badly bitten by eels that she expired soon after. (Emory 1924:23).*

Names of places show the meaning Hawaiians associated with these physical spaces. The fact that landscapes can be symbolic lends to the possibility of defining the landscape as a traditional cultural property. The value arises not from the "spatial moorings" as Basso so adequately describes, but rather from the symbolic value the landscape represents.

Except for the account of Puhi-o-Ka'ala, Mr. Henry Aki had not heard of there being known *ilina* (burials) around the harbor. Mr. Aki also noted that it was the practice of the old residents to leave Puhi-o-Ka'ala alone (not to *maha'oi*, and see if one could dive into it and find the cave etc.). It was the general practice of his mother and other old Hawaiians who lived at Kaumälapa'u, to respect and leave the old places alone. Puhi-o-Ka'ala was known to all of the old Hawaiian families, and pointed out as a storied place at Kaumälapa'u.

Surmising from the vast archaeological features on the cliffs above Kaumälapa'u Gulch, Kaumälapa'u Harbor was probably a very important settlement (seasonal and/or permanent) for native Hawaiians. It is also likely that terraces existed in the Kaumälapa'u Gulch/Valley, as assumed by Emory; no visible evidence of these are present largely due

to the continuous historical disturbance in the area. The archaeological features are no longer in use.

5.0 Summary: Cultural and Historic Significance of Kaumälapa'u Harbor

There are features, sites and areas of significance associated with Kaumälapa'u Harbor. These continue to hold meaning for those born to the land or those whose paths have crossed the lands. Some of the traditional meaning and/or value of the area have been lost. This perhaps is due more to disruptions and changes brought on by historical developments such as building of the harbor and breakwater, than to a decline of the native inhabitants of the area. As to be expected, the interviews reveal that overall memories and experiences of the people who have past or present association with Kaumälapa'u vary. Memories are very personal...one person's history and experience invariably differs from another's. Added to this is the factor of time – as it passes, so does the ability to re-associate all events and places.

Most people had some knowledge about historical sites, such as the heiau complex atop Kaumälapa'u Ridge. The designation of TCP to a specific feature or site however, in general, seems to become less informative as time passes and these sites or features are no longer used. Cultural landscapes, however, seem to maintain their traditional and historical meaning.

The oral histories done for this survey come about nearly 75 years after construction began on the harbor area. It is unclear the extent to which this area was used (for traditional purposes) prior to construction-related activities. There has always been some use of Kaumälapa'u Harbor but how much of that has changed since prior to contact and in traditional ways, is difficult to ascertain. It is reasonable to assume that much of the "traditional uses" of the area was discontinued by the time pineapple farming became established on the island. Fishing is a traditional activity, and fishing is a modern activity. It's a practice that continues but has changed in technology as well as in the availability of resources, e.g. types of fish. So traditional uses of the ocean area have continued but all traditional activities are no longer known nor conducted. The area has lost that character. As a result, the Traditional Cultural Properties, those which meet the definition and guidelines of the National Register, and as well the cultural landscapes that hold traditional meaning to native Hawaiians, became nearly non-existent. Physically that is. What remain are the memories of the people who created or inherited the traditions that bring value and significance to these features and places.

Kaumälapa'u Harbor and the breakwater are now important for the more familiar, non-traditional, but historically significant activities. These speak to the importance of having this area as a resource that allows the people to sustain these historically significant activities. The harbor itself has become a place of importance for the current residents of Läna'i.

REFERENCES CITED

Basso, Keith H.
1996 *Wisdom Sits in Places*. Keith H. Basso, University of New Mexico Press, Albuquerque.

Emerson, O. P.
1920 *The Bad Boy of Lahaina, The Goblin-Killer of Läna'i*. In Annual Report of the Hawaiian Historical Society 1920:16-19.

Emory, Kenneth P.
1969 *The Island of Läna'i: A Survey of Native Culture*. Bernice P. Bishop Museum Bulletin No. 12, Honolulu.

Gibson, Walter Murray
1862 Letter to the Honourable Secretary of the House of Nobles, Honolulu.

Honolulu Star Bulletin
1970 Läna'i: Its Sacred Hawaiian Lands Are Undisturbed. Honolulu Star Bulletin, Thursday, April 16, 1970, p.D-20.

Kaschko, Michael W. and J. Stephen Athens
1987 Archaeological Inventory Survey of the Hulopoe Bay and Manele Bay Areas, Island of Läna'i. International Archaeological Research Institute, Inc., Honolulu.

Dole Company
1931 *Years on Läna'i.* Publication of the Läna'i Plantation Division, Dole Company.

Maly, Kepa
2001 "Kaumälapa'u (Ahupuaa of Kamoku, Island of Läna'i." Ms. Prepared by Kumu Pono Associates for Social Research Pacific, Inc. (Appendix ? in this report).

Parker, P.L. and King, T.E.
1995 Guidelines for Evaluating and Documenting Traditional Cultural Properties. National Register Bulletin 38, National Park Service.

Prasad, Usha K.
2001 Planning Level Oral history Survey, Makua and Kahanahaiki Valleys for Traditional cultural properties at the u.s. Army Makua Military Reservation, Waianae, Oahu island, Hawaii. Report prepared by Social Research Pacific, Inc., for U.S. Army Engineering District, Honolulu.

Rowntree, Lester B.
1996 *Concepts in Human Geography*. Carville Earle, Kent Mathewson and Martin S. Kenzer, Eds. Rowman & Littlefield Publishers, Inc., Lanham, Maryland.

The Friend
1892 The Läna'i Horror, *The Friend*, Vol. 50(7):49.
1892 The Plateau Island of Läna'i, *The Friend*, Vol. 50(12): 95-96.

U.S. Department of Interior
1983 "Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation" (48 CFR 44716). September 29, 1983.

Wentworth, Chester K.
1925 *The Geology of Läna'i.* B. P. Bishop Museum Bulletin 24, Honolulu.

APPENDIX A

Summary Report: Kaumälapa'u (Ahupua'a of Kamoku, Island of Läna'i) Traditional Cultural Places Study – Kaumälapa'u Harbor Project.

Prepared by Kumu Pono Associates.

APPENDIX B

List of Individuals Interviewed/Consulted for Oral Historic Studies for the Determination of Traditional Cultural Places at Kaumälapa'u Harbor, Läna'i

1. Solomon Kaopuiki
2. Edean Desha (and daughters)
3. Henry Aki
4. Samuel Shin
5. Hoss Richardson
6. Lee Tavares
7. Chelsea and Rick Trevino
8. Samuel Kaopuiki
9. Alfred Kimokeo
10. Solomon Kahoohalahala
11. Albert Reinicke
12. Joanna Vawara
13. Roland Lee
14. Hazel Maioho-Tanegawa

The following individuals resided or worked at Kaumälapa'u:

1. Josephine Kauwenaole
2. Grace Kaaikala
3. Harriet Maioho
4. Shigero Yagi
5. Clarence Lincoln
6. Mamo Aiona-Fernandes
7. Ben and Cissy (Kauwenaole) Kaaikala
8. Hazel Maioho-Tanegawa
9. Mr. Minoru Oda

APPENDIX C

Questions on Traditional Cultural Places at Kaumälapa'u Harbor, Läna'i

The following questions are meant to provide a basic format for the oral history interviews. The historian's personal knowledge and experiences will provide direction for the formulation of other detailed questions, determine the need for site visits, and/or other forms of documentation that may be necessary.

Oral Historian-Family Background:

Name: _____ Phone: _____

Address: _____

Interview date: _____ Location: _____

Where were you born: _____
When were you born: _____

Parents (father): _____
(mother): _____

Where did you grow up: _____

How much of your life has been spent on Läna'i: _____

a) Did you spend much time around Kaumälapa'u Harbor: _____

b) If yes, then what length of time: _____

- Additional family background pertinent to the project area, e.g. generations of family residency in the area and approximate time period:

What activities (types of traditional land use practices such as fishing, boating, etc.) took place there? How long did these continue during your lifetime?

Did you use other areas adjacent to the harbor?

How did you learn about these areas, and their significance (was it passed on from your parents/elders?, did you use the area for such practices, etc.)

Do you remember who else used the area (family names), such as your neighbors? Do you remember names of any other people who may have historical knowledge about the area?

Do you have any early photographs, maps or written account of the area?

Do you remember when the harbor was built? Who built it and what was it used for?

What meaning does the harbor, and the area, hold for you today?

Note: Family names (claimants of *kuleana* lands) who can be inquired about

APPENDIX D

Personal Release of Interview Records

Title of Project: **Oral Historic Studies, Kaumälapa'u Harbor, Läna'i**

Study Purpose:

1) You will be asked for your personal insights and remembrances concerning your knowledge about Traditional Cultural Places at Kaumälapa'u Harbor. The focus lies on recording your recollections and knowledge in an effort to identify these sites/features within the valley.
2) The information you provide will be recorded, transcribed, and presented to the U.S. Army Corps of Engineers, and may be made available to the Department of Land and Natural Resource – State Historic Preservation Division. You will be sent a copy of your transcription upon request. Any information you would like to add or delete will be noted at this time.

Benefits: This information will help determine the types of traditional (Native Hawaiian) land uses at Kaumälapa'u Harbor. It is knowledge that is not readily available or known to others.

Confidentiality: The information sought is based on your personal knowledge and insights about this period of history. Use of names for quotations, paraphrasing, and support of other participant information will greatly benefit this study.

Liability: Your signature and consent to participate in this study assures you will not hold the interviewers liable.

Participation: Your participation in this study is voluntary (If you wish to withdraw consent and stop participating, you can). Your signature acknowledges that you have read the information stated and willingly sign this consent form. Your signature also acknowledges that you have received on this date signed, a copy of this document containing 1 page.

Participant name (printed)_____

Participant signature_____ Date_____

Interviewer's signature_____

Contact Name and phone number for Questions: Kepa Maly, 668-1295/384-6656
Or Usha K. Prasad @: 808-263-3114).

If consent given for taped interview, transcript made from recording: Yes ____ No ____
Transcript made from expanded notes of unrecorded interview (if consent given only for written interview):
Yes ____ No ____

Note: a copy of this consent release form will be given to you, the U.S. Army Garrison, and the Army Corps of Engineers, Ft. Shafter.

APPENDIX E

Transcripts of Oral Interviews completed for Oral Historic Studies, Kaumälapa'u Harbor, Läna'i

Hazel Tanegawa
(Interiewed via telephone 8/30/01 and 8/31/01)

Hazel Maioho Tanegawa was born and raised on the island of Lanai. She is part-owner of Tanegawa's Restaurant in Lanai City, which she operates with her second husband who is a former Oahu resident (Phone: 565-6537). Hazel was born in 1940, at Lanai Hospital, and grew up at Kaumalapau Camp. She has two brothers and a sister. She lived there until December 1958.

She lived in one of the plantation homes at Kaumalapau. There were about 19 homes; only three of these remain today (one is the man Kepa and I went to see but who is no longer well enough to talk). Up at the park (the site of the current homes), "they had three swings. We used to play on them all the time. The foundation for these swings is still there". There was a duplex for the captain of the tugboat, and a complex (like an apartment) for all single men. At that time, Tom Knott was the tugboat captain.

In 1960, her mom had an accident and lost both arms. Because of her mother's disability, the company (Dole I assume) had to put her in a "flat ground home". After her father died, her mother no longer wanted to return to Kaumalapau. She left Lanai when she graduated from High School, so she could go to college. She recalls that during the war (1942), "we had to move up to the city…so no lights on the roadway. Couldn't travel on road with light so dad had to move us up. We had to move back in two years".

When growing up in Kaumalapau Camp, there was a shack in Kaumalapau Gulch. There weren't any houses in there. A Filipino man, [she forgot his name] used to raise pigs in the gulch. He also had chickens and dogs. He used to bring slop in nearly every day to feed the pigs. We used to wonder how he got all the slop into the gulch…it was a tough walk along the beach side. [this means that the road was no longer there…from the rail]. There were trails that went into the gulch but these were too steep to walk, and too steep to carry the heavy slop. After the Filipino man left, Mr. Aki went down in there.

The Breakwater "used to be so long". Every week was clean-up, come Friday, they'd run the water and wash down the docks. "they run the water, had one big hose. We had three tanks, four way above the highway. Two in the camp, one down the harbor side. The tank [at the harbor] was used only to wash down the harbor area. The washing was done by the guys who worked at the harbor. They used to keep is so clean. " every year we had luau, for Christmas, down there. Manual Pavao, the company foreman, used to have the harbor all washed down for the luau.

Fishing – "almost all of us kids fished". Mr. Aikala, Martin, every so often he would gather the kids, he would go diving with the bigger boys, and we'd just tag along. Along with his wife Grace, we'd catch crabs and opihi. "it was beautiful growing up down there…we all looked out after one another". Hazel still goes fishing off the harbor but only at nighttime. She catches Enneui, mempache (and one other fish that I couldn't understand).

But there's a "Big change – not like how we used to catch. Back in our days, we only caught enough to eat. We had three bags we'd take down there. One bag was for Aama crab, one bag for Ahukihuki (round purple things with hats…urchin), and one bag for opihi. When I was young, we used to fish during the day. It was faster to fish…now you stay overnight, you might walk away with two [fish]. Still have crab [referring to Aama] but not as galore. Aama crab was hundred of them [back then].

On the heiau's and traditional sites up above Kaumalapau Gulch. Hazel remembers seeing them (the stone wall foundations) from down below and across the way. They never went to touch the rocks but respected them. We also respected the Filipino man and never went into the gulch to see what was there. We never did those things. There was mango [in the gulch], we used to go for that. Men used to use that area [slope with heiaus and foundations] for target practice. From across the camp, they would shoot. "guys from camp would use for target range. Target range for Kaumalapau men…that why there are empty shell casings up there. (Doesn't know about the cement hooks with cables running through).

Hazel's looking forward to having the breakwater rebuilt. She says the waves coming in now are very high. Its dangerous for the boats coming in. "The whole bay we swam in, from one end to the other end. Now its

so scary, the waves are so strong. More waves now then ever before". People my age, their children still go and swim there.

Q: was the rail or a road still there along side the shoreline, leading into Kaumalapau Gulch?

Henry K. Aki, July 26, 2001
Former Kaumälapa'u Resident and Retired Harbor Supervisor

Henry Aki was born in 1924 at Lähainä. He shares familial relations with noted fishing families of the Lähainä Region (Maui), and Läna'i. As a youth, he was brought to Läna'i by Daniel Kaopuiki Sr., and spent summers on Läna'i. In 1941, he moved to Läna'i, first living with *kupuna* of the Makahanaloa line at Pälawai. In 1942, he and his mother (Ella Kekai Haia-Aki) moved to Kaumälapa'u, and Henry began a life-long career, working at the harbor. Henry Aki retired from his position as Harbor Supervisor in 1986.

The following expanded notes are a summary of key historical points regarding Kaumälapa'u—including: traditional practices; residency; and harbor matters—which Mr. Aki recalled. The notes include both his personal experiences and references to earlier events of which he learned from others who were connected with harbor and breakwater development.

Harbor and Breakwater Development 1924-1926

(from conversations with Manuel Pavao, Construction Site Supervisor and first Harbor Supervisor; and others who worked in the early period of harbor use):

- When work on the harbor, wharf, and breakwater was begun, Hawaiian Dredging set up its' base camp in Kaumälapa'u valley. Temporary houses for laborers (including island residents and others from neighbor islands) were set up in the valley, from about 100 feet behind the shore.
- A road from the valley along the shoreward lava flats, out to the area of the present-day wharf was made. It was on this road, that access from the valley to the job site was gained.
- Boulders from the Kaumälapa'u valley were taken off the cliffs, and transported via a track (hauled by mules), along the near-shore road for fill behind the wharf and on part of the breakwater.
- Caves in the Kaumälapa'u valley cliffs were used by laborers to store tools and supplies. Through the 1940s, tools such as chisels and mallets were still occasionally found in caves in the valley.
- Large boulders for the breakwater were also harvested from the Waiakeakua flats, below the Pu'u Manu vicinity.
- Sections of the cliffs on the wharf side of the harbor were leveled and dropped in the water to make fill for the wharf.
- The area from the water-edge of the wharf to around 20 feet inland is supported on pilings, with the fill extending inland from the pilings. Mr. Aki noted that the pilings are cement with heavy rebar inside, and when he was still working at the harbor, he had made recommendations that the pilings be repaired (no work was done on them). His recommendation was based on diving inspections he'd made under the wharf, where over the years, he'd noted that in some areas, the cement was cracking and the iron expanding, thus weakening the pilings.
- Houses developed on the bluff overlooking Kaumälapa'u Bay (Harbor Camp) were built only for harbor employees. A trail along the front (*makai*) side of the bluff gave residents access to the wharf area.

Harbor and Breakwater Operations 1926-1986

(from conversations with elder harbor employees and personal experiences at Kaumälapa'u):

- The breakwater extended out from the wharf a little more than 300 feet. It was generally straight with only a slight curve inland, towards the outer end (*Figure 5*).
- Cement was laid across the top of the breakwater, and a light was situated near the end of the breakwater as one of the markers for harbor access.
- Each year, during summer, the harbor crew would conduct harbor and breakwater maintenance. Regular maintenance included — collection of new boulders from the inland flats; laying a temporary

track across the cement on the breakwater; moving one of the 35-ton cranes onto the breakwater, which was used to set stones in place; and placement of the new boulders. Upon completion of the repair work, the crane would be backed up, and the temporary tracks picked up, and crane returned to operation on the wharf.

- John Kauwena'ole and John Kaiaokamalie were among the crane operators. From around 1942, Henry Aki was a diver who directed stone placement from in the water.

- In the uplands, holes were drilled into the boulders, and pins were set in them. Cranes would lift the boulders onto the trucks, and they would in turn be hauled to the harbor.

- During peak season, the harbor and wharf was used every day of the week. During the slack season there would generally be two barges a week. Fuel barges also ran weekly, and the pipe line (L.C. App. 590-Lot 3) ran from the wharf to the tanks (Lot 2, L.C. App. 590).

- Regular maintenance was continued to around the 1960s; by the 1980s, maintenance was funded only on an "as-needed basis."

- Mr. Aki noted that the ocean and weather has changed since he was young. The storms like those in ca. 1980, and subsequent hurricanes, *Iwa* and *Iniki* (1982 and 1992 respectively), were unknown by the early crew of Kaumälapa'u, and were a new experience in his lifetime. He also observed that while extensive damage was done to the breakwater and harbor in 1980, 1982 and 1992, only minimal repairs were done on the harbor complex. Indeed, the condition of the breakwater is such now, that when there is a westerly swell, the barges cannot enter the harbor.

Harbor Camp and Wharf Facilities (ca. 1940s-1990s)

Mr. Aki recalled that there were about 30 residences and facility buildings associated with the Harbor Camp and Wharf.

Wharf and Outlying Facilities:

- The early office was below the fuel storage tanks, and above the present-day Quonset hut and office facility. Also in the vicinity of the original office was a house (residence of supervisor, Tom Knot).
- The cut stone used on walls fronting the Kaumälapa'u Harbor Road was made by Japanese and Korean stone masons. The stones are generally 12"x12" and set in place with mortar. Key stones are set in various locations. When the storms of 1980 and 1982 hit the stone walls, the mortar was washed out and section of the stone walls were pushed in, causing the Harbor Road (facing the ocean) to buckle.
- One building, the "Scout House," from the old Hawaiian Dredging camp in Kaumälapa'u Valley was still extant in the 1940s, and Mr. Aki, secured a lease of the valley from the company, which he retained until the late 1980s. The old "Scout House" had deteriorated, so Mr. Aki took it down, and used the foundation to build another small house. His primary interest in Kaumälapa'u Valley was as a base camp for fishing. A trail down the side of the *pali*, from the Harbor Camp, was his main route of access. Mr. Aki also raised roosters in the valley.

Harbor Camp:

- Camp residents included (but were not limited to) — Buck Manriki (his house was the first house on the bluff, overlooking the area of the fuel storage tanks); Alfred Kimokea; Manuel Pavao (two houses – his last residence being the brick house which has been remodeled and is now the first house seen when driving into the camp); Junior AhLeong Aki; Shigeru Yagi; Nakama; Hashiba; Captain Kealahao; Lono Pokipala; John Kaiaokamalie; Daniel Kaopuiki Jr.; John Kauwenaole; Asing Ahyo; Alex Maioho; Joe Kaehuaea; Martin Kaaikala; Sonny Fernandez; Minoru Oda; Matsuda; and Henry Aki (his house was the last one on the bluff overlooking Kaumälapa'u Valley; near the trail head that went into the valley).
- There were also at least two long garages; a pool hall; a rooming house (in which six single men lived); a bath house (prior to inside plumbing being installed in the houses); a duplex house; and baseball field.

Hawaiian Practices and Sites:

- While the presence of caves was noted in the Kaumälapa'u vicinity, Mr. Aki does not recall hearing anyone talk about much more than tools (from the harbor construction period) being found in the caves.
- Except for the account of Puhi-o-Ka'ala, Mr. Aki had not heard of there being known *ilina* (burials) around the harbor. Mr. Aki also noted that it was the practice of the old residents to leave Puhi-o-Ka'ala alone (not to *maha'oi*, and see if one could dive into it and find the cave etc.). It was the general practice of his mother and other old Hawaiians who lived at Kaumälapa'u, to respect and leave the old places alone.
- Puhi-o-Ka'ala was known to all of the old Hawaiian families, and pointed out as a storied place at Kaumälapa'u.
- While Mr. Aki, had seen, and traveled past the platforms and other features on the Kalulu Bluff of Kaumälapa'u, he did not recall anyone ever speaking of the sites, or giving them names. Though in his time, elder Hawaiian residents did still go to certain areas on the bluff to *kilo i'a* (spot fish) and direct the fishermen to the schools.
- Daniel Kaopuiki Sr. had told Mr. Aki that Hawaiians once lived at Kaumälapa'u and that it was an important fishing area. He was also told that water for the old residents was found a little ways up the valley, in a well.
- In the old days, *akule* were caught near the shore fronting Kaumälapa'u Valley. The schools would still come in occasionally throughout the years that Mr. Aki worked at the harbor.
- Mr. Aki's mother (Ella Kekai Haia-Aki) and other old Hawaiian residents of Kaumälapa'u regularly gathered *limu* (seaweeds) such as the *kohu* and *lïpoa* from along the shoreline. They also gathered various near shore fish and crabs, and the elder Mrs. Aki, regularly gathered *pa'akai* (salt) from *käheka* (natural salt basins) at the front of the cliff near the Kalulu-Kamoku boundary (in area of the lighthouse). The *pa'akai* was used for all home needs and salting fish caught in the surrounding fishery.
- Among the fish regularly caught around Kaumälapa'u were the — *uhu, kole, akule, 'ü'ü, nenue, päpa'i*, and *'öpihi*. Families also regularly fished from the breakwater, and around the point towards Kalamanui Valley.
- Sharks were known to come into the bay, but Mr. Aki's mother instructed him not to bother them; they were considered family, and would not bother him.

Edean Puahau'oli Desha, July 26, 2001

Edean Puahau'oli Desha was born on O'ahu, and moved to Läna'i with her husband (Swede Desha) in 1946. Since moving to Läna'i, Mrs. Desha has collected articles and historical writings about Läna'i, and traveled around the island with various individuals knowledgeable about Läna'i's cultural and natural resources (both native Hawaiian residents and others who have made studies on the island).

Mrs. Desha's recollections of Harbor development at Kaumälapa'u are similar to those of Henry Aki. The tradition of Puhi-o-Ka'ala is one that stands out in her mind as being told by a few native elders and being retold in historical manuscripts. One additional historical observation shared by Mrs. Desha, which she heard from Manuel Pavao (former Hawaiian Dredging employee and Kaumälapa'u Harbor Supervisor), described continued travel via the old Kaumälapa'u Trail (see *Figure 2*) in the 1920s. Manuel Pavao told Edean:

- When we were living in Kaumälapa'u Valley, working on the harbor and breakwater, we would sometimes be invited to lü'aus up at Kö'ele. The only way for us to go, was to walk the old Kaumälapa'u trail out of the valley, across the flats and up to Kö'ele. It was nothing for us to walk up for a party one night, and walk back down (pers. comm., M. Pavao to E. Desha).

Albert Reinicke, July 27, 2001

Albert Reinicke was born in 1942, and lived at Kaumälapa'u while he was growing up. His mother, is

Josephine Kauwenaole, and his *hänai* father was the late John Kauwenaole (a harbor employee). Mr. Reinicke's recollections about Kaumälapa'u Harbor management and residences are similar to those shared by Mr. Aki. Mr. Reinicke did add that he believed around 1960, following Hurricane Dot (1959), some stone for breakwater repair came from Kawaihae (Island of Hawai'i) as well. The timing of the repair may have coincided with work on the Kawaihae Harbor.

Solomon "Kolomona" Kaho'ohalahala, July 27, 2001

Kolomona Kaho'ohalahala is a Läna'i native; a historian; and cultural practitioner-resource specialist. Mr. Kaho'ohalahala shared the following thoughts regarding traditional cultural places, and care of the cultural-natural resources in the Kaumälapa'u vicinity:

- Puhi-o-Ka'ala is a significant feature on the cultural landscape of Kaumälapa'u. It is a place that needs to be protected.
- In traditional times, the area was an important canoe landing and fishing village. There are native sites and features around Kaumälapa'u, known to some families that should not be disturbed, or made known to the larger public. For the most part, it is not anticipated that the breakwater repairs will affect those sites. But replacement boulders should not be harvested from the Kaumälapa'u cliffs.
- A larger resource issue (that impacts Kaumälapa'u) is the degradation of the *kula* (plateau lands) and remnant native plant community. As a result of the ranching and pineapple business interests, the land has been left almost barren. Kaumälapa'u valley is a catch-all for run off that occurs when heavy rains fall. Siltation in the bay is going to be an on-going problem, and also impacts the fishery resources.
- One of the important trails on Läna'i, connects Kaumälapa'u to the uplands and other areas on the island. This is the trail referenced in the *mo'olelo* of Puhi-o-Ka'ala, and is also the route traveled by native families seasonally, when fishing between the Keömoku and Kaumälapa'u fisheries.
- The place names which occur at, and above Kaumälapa'u, are an indicator of the knowledge and familiarity that the *küpuna* had with the landscape. The alignments of hills were long distance markers used by those people who traveled across Läna'i. Care should be taken to perpetuate those place names, and to not further impact these resources.

Samuel Kaopuiki, July 27 & August 6, 2001

Samuel Kaopuiki was born in 1925 at Keömoku, Läna'i. He is a native of Läna'i, descended from several families with generations of residency on the island, and known for his knowledge of the island. Mr. Kaopuiki has been a fisherman all of his life, and regularly fished at Kaumälapa'u. His elder brother Daniel Kaopuiki Sr. lived and worked at Kaumälapa'u as well, and his own job with the plantation had him regularly at the harbor. Mr. Kaopuiki's recollections of the harbor residences and operations are similar to those of Mr. Henry Aki above. Discussing the Kaumälapa'u vicinity, and fishing customs and practices, Mr. Kaopuiki observed:

- Puhi-o-Ka'ala is one of the important, traditional places of Kaumälapa'u.
- Asked about the Hawaiian sites and petroglyph names — *Pulaa* and *Kuaiwa* — seen during a site visit on one of the platform features (*Figures 8 & 9*) on the Kalulu bluff, overlooking Kaumälapa'u, Mr. Kaopuiki did not recognize the names. And while he was familiar with the platforms and features (he had traveled the area while hunting), he noted that he had never heard anything about the sites.

Mr. Kaopuiki did note that it was a practice of his elders to put their names at various places where they lived or visited. For example, his *kupuna* Ka'enaokalani's name is still seen near Kaunolü.

Kaumälapa'u is an important fishery. There were all kinds of fish which he would catch at Kaumälapa'u. Among them were the — *'äholehole, uouoa, moi, uhu, akule*, and many others. The *akule* used to school in Kaumälapa'u. But now, because people take everything, and don't think about tomorrow, there are very few fish (it's not like it was before).

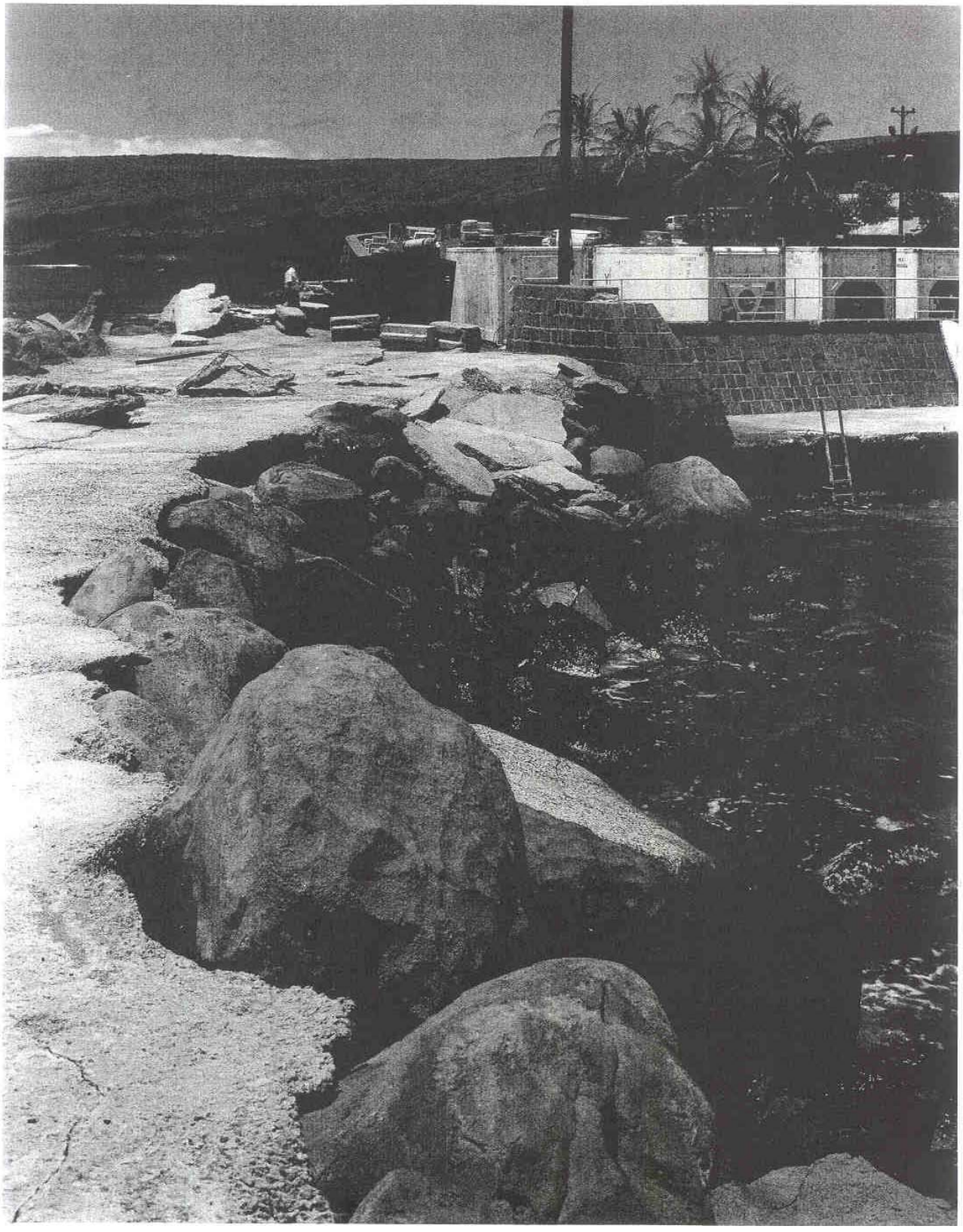
APPENDIX F

HABS/HAER Photographs of the Breakwater at Kaumälapa'u Harbor, Läna'i

LANA'i, HI

Project	Job#	Photo	Bldg #	Description	Area	Shot#	Orienta	Date	Client ID
Kaumalapa' u Breakwater	F45JJ	1	Breakwater	Overview from pali	Kaumalapa' u	1	275	7/26/01	USHA
Kaumalapa' u Breakwater	F45JJ	2	Breakwater	Breakwater from wharf	Kaumalapa' u	2	245	7/26/01	USHA
Kaumalapa' u Breakwater	F45JJ	3	Breakwater	View from seawall toward breakwater. Red bouy and light on pali to far left	Kaumalapa' u	3	205	7/26/01	USHA
Kaumalapa' u Breakwater	F45JJ	4	Breakwater	View across breakwater showing old road bed. Spouting horn on shore at right center.	Kaumalapa' u	4	140	7/26/01	USHA
Kaumalapa' u Breakwater	F45JJ	5	Breakwater	View from channel end of breakwater toward wharf. Compare to old photo to see difference in length/curve.	Kaumalapa' u	5	335	7/26/01	USHA
Kaumalapa' u Breakwater	F45JJ	6	Breakwater	View from channel end straight along tow mountains. Eroded section in foreground. Wharf on right.	Kaumalapa' u	6	345	7/26/01	USHA
Kaumalapa' u Breakwater	F45JJ	7	Breakwater	Shore end of breakwater showing damage and joining of wharf and breakwater.	Kaumalapa' u	7	10	7/26/01	USHA
Kaumalapa' u Breakwater	F45JJ	8	Breakwater	View over end of breakwater toward spouting horn (rt ctr) and valley on left.	Kaumalapa' u	8	130	7/26/01	USHA


7



APPENDIX H: DEA REVIEW COMMENT AND RESPONSE LETTERS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Islands Ecoregion
300 Ala Moana Boulevard, Room 3122
Box 50088
Honolulu, Hawaii 96850

In Reply Refer To: PI-01-145

JUN 27 2001

2 S JUN 2001
HED 6/28
DHER
SECY
PP 6/29

Lt. Colonel Ronald N. Light
District Engineer
Honolulu Engineer District
U.S. Army Corps of Engineers
Building 230
Fort Shafter, HI 96858-5440

Re: Draft Environmental Assessment for Kaumalapau Harbor Breakwater Repair, Lanai, Hawaii.

Dear Lieutenant Colonel Light:

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Environmental Assessment for Kaumalapau Harbor Breakwater Repair, Lanai, Hawaii (DEA). The proposed project proponents are the U.S. Army Corps of Engineers (Corps), Honolulu District and the Hawaii State Department of Transportation, Harbors Division. The following comments have been prepared pursuant to the National Environmental Policy Act of 1969 [42 U.S.C. 4321 *et seq.*; 83 Stat. 852], as amended, the Fish and Wildlife Coordination Act of 1934 [16 U.S.C. 661 *et seq.*; 48 Stat. 401], as amended, the Endangered Species Act of 1973 [16 U.S.C. 1531 *et seq.*; 87 Stat. 884], as amended (Act), and other authorities mandating Service concern for environmental values. Based on these authorities, the Service offers the following comments for your consideration.

GENERAL COMMENTS

The proposed project involves the repair of an existing breakwater in order to reduce wave action and increase safety and usability inside Kaumalapau Harbor. The existing breakwater is in need of repair due to damage caused by multiple severe storms and subsequent inadequate attempts to repair the structure. The materials comprising the existing breakwater and rubble mound would be redistributed shoreward to form the base of a new breakwater that would be 320 feet long with a crest elevation of +14.5 feet at Mean Low Low Water.

The Service released a final Fish and Wildlife Coordination Act (FWCA) report on the proposed project in April 2001. In that report, which is appended to the DEA, the Service supported the implementation of the proposed plan of improvement provided that the recommendations contained in the report are incorporated into and made part of the project.

We believe the DEA adequately identifies the existing species and habitats at the proposed project site and adequately assesses the potential project-related impacts to these resources. A project Environmental Protection Plan (EPP) will be prepared for approval prior to initiation of construction, and we recommend that the EPP contain the recommendations made by the Service in the final FWCA report as well as the mitigation measures contained in the DEA. We further recommend that the EPP require that the contractor comply with Hawaii State Water Quality Standards and that the contractor's compliance with these standards be monitored by either the Corps or the Hawaii Department of Health. The EPP should be reviewed by the Service and the other Federal and State natural resource agencies prior to approval.

Based on the incorporation of the above recommendations, significant adverse impacts to fish and wildlife resources are not anticipated and the Service would support a Finding of No Significant Impact (FONSI) for the proposed project. Nevertheless, the DEA does contain some factual inaccuracies and these are addressed in our specific comments below.

SPECIFIC COMMENTS

Pg. 19, Section 5.1.5 Marine Biology.
The first sentence in the first paragraph refers to a reconnaissance site visit by the National Marine Fisheries Service (NMFS) in December 1998. This site visit actually occurred in December 1999 and the participants also included the Service and the project environmental consultants.

In the last sentence of the second paragraph, the name of sea urchin *Echinometra mathaei* is misspelled.

Pg. 28, Section 6.1.5 Marine Biological Resources.
The fourth sentence in the second paragraph states that the new breakwater will consist of a larger surface area of boulders and concrete than the existing breakwater and suggests that this will lead to a net increase in coral cover in the Kaumalapau area. No data comparing the surface areas of either the existing or proposed breakwater are presented to support this statement. Furthermore, many other variable factors are expected to contribute to the rate and extent future coral colonization in the area. In addition, coral cover on the existing rubble mound that will be lost is not considered. Therefore, the statement and suggestion that the new breakwater will lead to a net increase in coral cover are unsupported and misleading and should be deleted.

Similarly, the last sentence in the last paragraph states that increased complexity (shelter) afforded by the new, larger breakwater should increase favorable fish habitat is unsupported and misleading. Again the shelter afforded by the existing rubble mound that will be lost is not

considered. Therefore, this statement should be deleted.

Pg. 28, Section 6.1.7 Threatened and Endangered Species.
The third sentence in the first paragraph refers to filamentous algae as being preferred food for sea turtles. Green sea turtles (*Chelonia mydas*) prefer certain species of fleshy macroalgae, and certain sponges and other macroinvertebrates and fishes are known to be preferred by hawksbill sea turtles (*Eretmochelys imbricata*). This information should be clarified in this paragraph.

The second sentence in the second paragraph states that both the Service and the NMFS concurred that the proposed project will not impact endangered species. However, both the Service and the NMFS concurred with a determination the proposed project is not likely to adversely affect listed species and this should be clarified in this paragraph.

The last paragraph also addresses FWCA comments submitted by the Service and Essential Fish Habitat comments submitted by the NMFS. It would be more appropriate to include this information in Section 6.1.5.

SUMMARY

The DEA contains some factual inaccuracies but adequately identifies the existing species and habitats at the proposed project site and adequately assesses the potential project-related impacts to these resources. We recommend that the EPP, which should be reviewed by the Service and the other Federal and State natural resource agencies prior to approval, contain the recommendations made by the Service in the final FWCA report as well as the mitigation measures contained in the DEA and require that the contractor's compliance with Hawaii Water Quality Standards be monitored by either the Corps or the Hawaii Department of Health. Based on the incorporation of the above recommendations, the Service would support a FONSI for the proposed project.

The Service appreciates the opportunity to comment on the proposed project. If you have questions regarding these comments, please contact my Environmental Review Coordinator, Michael Molina, at (808) 541-3441.

Sincerely,

Gina Shultz

Paul Henson
Acting Field Supervisor
Ecological Services

cc: NMFS-PIAO, Honolulu
USEPA-Region IX, Honolulu
ACOE, Honolulu
DAR, Hawaii
CZMP, Hawaii
CWB, Hawaii

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

REPLY TO ATTENTION OF

May 20, 2002

Subject: Kaumalapau Harbor Breakwater Repair, Lana'i, Hawai'i

Civil and Public Works Branch

Mr. Paul Henson
Field Supervisor, Ecological Services
U.S. Fish and Wildlife Service
Pacific Islands Ecoregion
P.O. Box 50088
Honolulu, Hawaii 96850

Dear Mr. Henson:

Thank you for your letter dated June 27, 2001, commenting on the Draft Environmental Assessment (EA) for the Kaumalapau Harbor Breakwater Repair project.

Currently, we are in the process of finalizing the EA and a copy of this response letter will be included in the final document. Following the completion of the Draft EA, minor revisions were made to the design of the breakwater repair work. Revisions do not alter the basic scale or scope of the project. The primary purpose was to incorporate the current design practices and experiences gained in using the Core-Loc concrete armor unit. Revisions include the following items.

a. The breakwater crest has been re-designed to increase Core-Loc stability during design storm wave conditions, and to improve constructability. Primary changes are:

(1) Widening the crest width to 40 feet at the top of the underlayer stone (+9.5' elevation),

(2) adding a horizontal row of Core-Loc units on the ocean-side crest, and

(3) replacement of the rib cap on the crest with a solid mass concrete crest cap.

b. A requirement for tremie concrete to be placed in the toe trench following placement of the Core-Loc units has been added to the design for the near shore ocean-side where the toe trench will be excavated into hard rock bottom in very shallow water. The concrete will prevent the movement of Core-Loc units and will increase the stability in the toe area.

c. The range of allowable stone size for under layer and bedding stones has been increased slightly for more efficient use of available quarry stones.

Revisions to the design are included in the Final EA for the project.

The recommendations made by the Fish and Wildlife Service in your final FWCA report will be considered in the Environmental Protection Plan to be prepared prior to initiation of construction. In addition, the Section 401 Water Quality Certification for the project by the State Department of Health will require compliance with the Hawaii State Water Quality Standards and implementation of a Water Quality Monitoring Plan during construction.

Your specific comments on the DEA have been addressed as follows:

a. Page 19, Section 5.1.5: Final EA revised in accord with review comment.

b. Page 28, Section 6.1.5: The larger footprint of the repaired breakwater will result in a longer breakwater than presently exists, and thus a larger surface area of hard substrate on which corals can colonize. We state that the repair will involve the loss of much of the existing coral cover. However we believe that there is reasonable likelihood that coral will colonize the new breakwater concrete and rock in a manner similar to the existing breakwater material, and thus it is valid to assume that in time coral cover will be similar to that existing now. We concur that there are many variables contributing to the rate and extent of future coral colonization, and have therefore revised the Final EA to state "...over the long term (10-20 years), there is likely to be coral coverage on the new structure similar to what is present today."

c. The last sentence has been replaced by "The new breakwater with its large concrete armor units will provide increased interstitial space and complexity, which would replace and increase favorable fish habitat which would be lost by covering the existing structure."

d. Page 28, Section 6.1.7: Third sentence in first paragraph has been changed to "A general paucity or lack of food preferred by green sea turtles and hawksbill sea turtles indicates that the area is not likely a feeding habitat for turtles." The second sentence in the second paragraph and the last paragraph has been revised in accordance with the respective review comments.

If you have any questions or need additional information regarding this project, please do not hesitate to contact Mr. James Hatashima, Project Manager of my Civil and Public Works Branch staff at (808) 438-2264.

Sincerely,

Ray H. Jyo, P.E.
Deputy District Engineer for Program
Project Management

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FACSIMILE (808) 586-4186

June 12, 2001

Mr. Brian Minaai, Director
State Department of Transportation
869 Punchbowl Street
Honolulu, Hawai'i 96813

Dear Mr. Minaai:

Subject: Draft Environmental Assessment for the Kaumalapau Harbor Breakwater Repair, Lāna'i

Thank you for the opportunity to review the subject document. We have the following comments.

1 Please describe why the SHPO is requiring the installation of a fence along the edge of the gulch bordering the Contractor Work and Storage Area. What archaeological or historical resource is expected to be protected by the fence?

2. The justification for supporting the finding of no significant impact must include full evaluation of section 11-200-12(a)(11) of the Hawai'i EIS rules. Please see the enclosed example.

3. The environmental assessment must include a list of all permits and approvals required from federal, state and local agencies.

Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson
Director

Enclosure

c: Jim Hatashima, OE
Sea Engineering, inc.

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

REPLY TO ATTENTION OF

May 20, 2002

Subject: Kaumalapau Harbor Breakwater Repair, Lana'i, Hawai'i

Civil and Public Works Branch

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

Thank you for your letter dated June 12, 2001, to Mr. Brian Minaai, Director, State Department of Transportation, commenting on the Draft Environmental Assessment (EA) for the Kaumalapau Harbor Breakwater Repair project. The Draft EA was prepared by the Honolulu Engineer District, and thus we are responding to your comments on behalf of Mr. Minaai and the Department of Transportation, Harbors Division.

Currently, we are in the process of finalizing the EA and a copy of this response letter will be included in the final document. Following the completion of the Draft EA, minor revisions were made to the design of the breakwater repair work. Revisions do not alter the basic scale or scope of the project. The primary purpose was to incorporate the current design practices and experiences gained in using the Core-Loc concrete armor unit. Revisions include the following items.

a. The breakwater crest has been re-designed to increase Core-Loc stability during design storm wave conditions, and to improve constructability. Primary changes are:

(1) Widening the crest width to 40 feet at the top of the under layer stone (+9.5' elevation),

(2) adding a horizontal row of Core-Loc units on the ocean-side crest, and

(3) replacement of the rib cap on the crest with a solid mass concrete crest cap.

b. A requirement for tremie concrete to be placed in the toe trench following placement of the Core-Loc units has been added to the design for the near shore ocean-side where the toe trench will be excavated into hard rock bottom in very shallow water. The concrete will prevent the movement of Core-Loc units and will increase the stability in the toe area.

c. The range of allowable stone size for underlayer and bedding stones has been increased slightly for more efficient use of available quarry stones.

Revisions to the design are included in the Final EA for the project.

The following responses are provided to address your review comments on the Draft EA:

a. No archaeological or historical resource is known to exist in the gulch bordering the Contractor Work and Storage Area. We have contracted with the consulting firm of Social Research Pacific, Inc. to conduct a study of "Oral Historic Studies for the Determination of Traditional Cultural Places, Kaumalapau Harbor Project, Lana'i, Hawai'i." This study includes oral interviews with local residents who have expertise and knowledge of the area, historical and background research, and identification of Traditional Cultural Practices in and around Kaumalapau Harbor. Our consultant reports that according to oral histories and historic documentation, the gulch (also known as Kaumalapau Valley) adjacent to the Contractor Work and Storage Area was occupied by the construction crew during construction of the breakwater in the 1920's. The settlement was known as Kaumalapau Camp. Following the camp, a farm (including pigs and chickens) was located in the gulch until about 1997. A walk through of the gulch showed considerable disturbance resulting from the activity there over the past 75 years. thus it is considered unlikely that any historic features relating to traditional Hawaiian settlement can still be found. Nevertheless, in order to help insure that no construction equipment or materials are stored outside of the designated area on land that has not been thoroughly investigated for possible historic resources, SHPO has recommended that a fence be constructed as a precautionary measure.

b. An evaluation of the "Significance Criteria" in accord with section 11-200-12(a)(11) of the Hawai'i EIS rules has been added to section 7 of the Final EA.

c. A list of required permits and approvals has been added to section 9 of the Final EA.

Should you have any questions or need additional information regarding this project please call Mr. James Hatashima of my staff at 438-2264.

Sincerely,

Ray H. Iyo, P.E.
Deputy District Engineer for Program
Project Management

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

REF: HP-JEN

JUN 25 2001

Mr. James Hatashima, P.E.
Department of the Army
U.S. Army Engineer District, Honolulu
Fort Shafter, Hawaii 96858-5440

LOG NO: 27666
DOC NO: 0106CD13

Dear Mr. Hatashima,

SUBJECT: National Historic Preservation Act Section 106 Review Pertaining to the Draft Environmental Assessment for the Proposed Kaumalapau Harbor Breakwater Repair Kalulu Ahupua`a, Lahaina District, Island of Lana'i
TMK: 4-9-02

Thank you for the opportunity to comment on the Draft Environmental Assessment (DEA) for the proposed Kaumalapau Harbor Breakwater Repair. Our review is based on reports, maps, and aerial photographs maintained at the Historic Preservation Division. On February 9, 2001, Dr. Melissa Kirkendall, SHPD Maui/Lana`i Island Archaeologist, and SHPD student intern Catherine Cur conducted a field inspection of areas to be impacted by the proposed project. (These areas were indicated by crosshatching on an aerial photograph provided by Mr. James Hatashima, Army Corps of Engineers).

On March 28, 2001, a meeting was held at the State Historic Preservation Office to discuss the proposed undertaking. In attendance were Kanalei Shun, Archaeologist Army Corps of Engineering; James Hatashima, Army Corps of Engineers; Scott Sullivan, Sea Engineering; Carol Ogata, SHPD Historic Architect; and Cathleen Dagher, SHPD staff archaeologist.

Based on the submitted DEA, we understand the proposed undertaking consists of repairs to the existing breakwater. The breakwater was constructed in 1926 and originally was 425 feet long. As a result of wave damage the breakwater has been reduced to approximately 200 to 250 feet. The new breakwater will be aligned and centered on the existing breakwater structure and will extend an additional approximately 50 feet across the mouth of the harbor than the existing breakwater.

As a result of the field inspection, it was determined that the mauka area, marked Lana`i Rock Quarry, was not in the immediate vicinity of the proposed undertaking and would not be impacted by the proposed undertaking. However, if construction activities or ground-altering activities are planned for this area in the future, we request the opportunity to review the plans prior to the commencement of the ground-alterations, as portions of this area appear to be unaltered and may contain historic sites. The more makai area, labeled storage, has been thoroughly graded and previously utilized for storage (Janna Kahaleanu, local resident, personal communication to Dr. Kirkendall). However, this area is bordered by a gulch on the north side, which may contain historic sites, although debris has been pushed into the gulch during previous land-altering episodes.

Given the above information, we recommend that prior to the proposed reconstruction that the existing breakwater be photographically documented to the Historic American Building Standards (4x5 Negatives and prints archivally processed. In addition, we recommend that construction fencing be temporarily placed along the edge of the gulch, as a mitigation measure. As per the March 28, 2001 meeting, the Army Corps of Engineers will be responsible for the placement of the temporary fencing and will verify in writing to this office that the fencing is in place prior to the commencement of t he proposed undertaking.

With the implementation the recommended mitigation measures, we believe that there will be "no historic properties affected" by the proposed undertaking.

Please call Cathleen Dagher at 692-8023, if you have any questions.

Aloha,

Gilbert Coloma-Agaran, ~~Chairperson and~~
State Historic Preservation Officer

CD:jen

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

REPLY TO ATTENTION OF

May 20, 2002

Subject: Kaumalapau Harbor Breakwater Repair, Lana'i, Hawai'i

Civil and Public Works Branch

Mr. Gilbert Coloma-Agaran
State Historic Preservation Officer
Department of Land and Natural Resources
Historic Preservation Division
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawai'i 96707

Dear Mr. Coloma-Agaran:

Thank you for your letter dated June 25, 2001 commenting on the Draft Environmental Assessment (EA) for the Kaumalapau Harbor Breakwater Repair project.

Currently, we are in the process of finalizing the EA and a copy of this response letter will be included in the final document. Following the completion of the Draft EA, minor revisions were made to the design of the breakwater repair work. Revisions do not alter the basic scale or scope of the project. The primary purpose was to incorporate the current design practices and experiences gained in using the Core-Loc concrete armor unit. Revisions include the following items.

a. The breakwater crest has been re-designed to increase Core-Loc stability during design storm wave conditions, and to improve constructability. Primary changes are:

(1) Widening the crest width to 40 feet at the top of the underlayer stone (+9.5' elevation),

(2) adding a horizontal row of Core-Loc units on the ocean-side crest, and

(3) replacement of the rib cap on the crest with a solid mass concrete crest cap.

b. A requirement for tremie concrete to be placed in the toe trench following placement of the Core-Loc units has been added to the design for the near shore ocean-side where the toe trench will be excavated into hard rock bottom in very shallow water. The concrete will prevent the movement of Core-Loc units and will increase the stability in the toe area.

c. The range of allowable stone size for underlayer and bedding stones has been increased slightly for more efficient use of available quarry stones.

Revisions to the design are included in the Final EA for the project.

In accordance with your recommendation, we will photographically document the condition of the existing breakwater based on the Historic American Building Survey standards prior to the start of construction. A copy of these photographs will be provided to the State Historic Preservation Division. We will also include in the construction plans and specifications a requirement that the construction contractor build a fence around the designated Contractor's Work and Storage Area to help insure that no construction material or equipment is placed outside of the designated area.

For your information, we have contracted with the consulting firm of Social Research Pacific, Inc. to conduct a study of "Oral Historic Studies for the Determination of Traditional Cultural Places, Kaumalapau Harbor Project, Lana'i, Hawai'i." This study includes oral interviews with local residents who have expertise and knowledge of the area, HABS/HAER photography of the breakwater, historical and background research, and identification of Traditional Cultural Practices in and around Kaumalapau Harbor.

Our consultant reports that according to oral histories and historic documentation, the gulch (also known as Kaumalapau Valley) adjacent to the Contractor Work and Storage Area was occupied by the construction crew during construction of the breakwater in the 1920's. The settlement was known as Kaumalapau Camp. Following the camp, a farm (including pigs and chickens) was located in the gulch until about 1997. A walk through of the gulch showed considerable disturbance resulting from the activity there over the past 75 years, thus it is considered unlikely that any historic features relating to traditional Hawaiian settlement can still be found. Nevertheless, the gulch will be fenced off during construction to avoid any further disturbance of the area by construction activities.

Should you have any questions or desire additional information regarding this project, please contact Mr. James Hatashima of my staff at 438-2264.

Sincerely,

Ray H. Jyo, P.E.
Deputy District Engineer for Program
Project Management

PHONE (808) 594-1888

FAX (808) 594-1865

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

26 JUN 2001
HED MC 6/26
DHEP
SEC:
PP

Acknowledged receipt of ltr. 6/26

June 19, 2001

LTC Ronald N. Light, USA
District Engineer
U.S. Army Corps of Engineers
Building 230
Fort Shafter, HI 96858-5440

Subject: DRAFT EA – Kaumalapau Harbor Breakwater Repair – Island of Lana'i, Hawai'i

Dear Colonel Light:

Thank you for the opportunity to comment on the above referenced project. According to the DEA, the project consists of repairing the existing breakwater at Kaumalapau Harbor, which will reduce wave action in the harbor and increase harbor safety and usability. The Office of Hawaiian Affairs offers the following comments:

In Section 6.4 – Historic and Cultural Resources, the DEA states that there are no historic properties affected by the proposed project, but there is no indication that there has been consultation with individuals and/or organizations with expertise and knowledge of the area.

Act 50, Session Laws of Hawai'i (SLH) – Regular Session 2000

The purpose of Act 50, SLH 2000, is to:

1) "Require that environmental impact statements include the disclosure of the effects of a proposed action on the cultural practices of the community and State;

2) Amend the definition of 'significant effect' to include adverse effects on cultural practices."

OHA requests that the U.S. Army Corps of Engineers amend the DEA to identify and address the effects on Native Hawaiian culture and traditional and customary rights pursuant to Section 343-2, Hawaii Revised Statutes, as amended.

The cultural assessment should include consultation with individuals and/or organizations with expertise and knowledge of the Lana'i areas. These consultations should encompass the types of cultural resources, practices and beliefs found within the district or ahupua'a of the proposed project areas. It should be noted that in their letter of April 2, 2001, (Appendix D) the State Historic Preservation Division identified a gulch which bordered the north side of the project and suggested that it may contain historic sites.

If you have any questions, please contact Jerry B. Norris at 594-1847, or email him at jnorris@oha.org.

Sincerely,

Colin C. Kippen Jr.

Colin C. Kippen, Jr.
Deputy Administrator

cc: OHA Board of Trustees
Randall K. Ogata, OHA Administrator
Irene Kaahanui, Molokai CAC

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

REPLY TO ATTENTION OF

May 20, 2002

Subject: Kaumalapau Harbor Breakwater Repair, Lana'i, Hawai'i

Civil and Public Works Branch

Mr. Colin C. Kippen, Jr.
Deputy Administrator
Office of Hawaiian Affairs
State of Hawaii
711 Kapi'olani Boulevard, Suite 500
Honolulu, Hawai'i 96813

Dear Mr. Kippen:

Thank you for your letter dated June 19, 2002, commenting on the Draft Environmental Assessment (EA) for the Kaumalapau Harbor Breakwater Repair project.

Currently, we are in the process of finalizing the EA and a copy of this response letter will be included in the final document. Following the completion of the Draft EA, minor revisions were made to the design of the breakwater repair work. Revisions do not alter the basic scale or scope of the project. The primary purpose was to incorporate the current design practices and experiences gained in using the Core-Loc concrete armor unit. Revisions include the following items.

a. The breakwater crest has been re-designed to increase Core-Loc stability during design storm wave conditions, and to improve constructability. Primary changes are:

(1) Widening the crest width to 40 feet at the top of the under layer stone (+9.5' elevation),

(2) adding a horizontal row of Core-Loc units on the ocean-side crest, and

(3) replacement of the rib cap on the crest with a solid mass concrete crest cap.

b. A requirement for tremie concrete to be placed in the toe trench following placement of the Core-Loc units has been added to the design for the near shore ocean-side where the toe trench will be excavated into hard rock bottom in very shallow water. The concrete will prevent the movement of Core-Loc units and will increase the stability in the toe area.

c. The range of allowable stone size for under layer and bedding stones has been increased slightly for more efficient use of available quarry stones.

Revisions to the design are included in the Final EA for the project.

With regard to consultation with individuals or organizations regarding the cultural practices in the project area, we have contracted with the consulting firm of Social Research Pacific, Inc. to conduct a study of "Oral Historic Studies for the Determination of Traditional Cultural Places, Kaumalapau Harbor Project, Lana'i Island, Hawai'i." This study includes oral interviews with local residents who have expertise and knowledge of the area, photography of the existing breakwater in accord with Historic American Building Survey standards, historical and background research, and identification of Traditional Cultural Properties in and around Kaumalapau Harbor. The results of the study will be included in the Final EA.

We have also conducted several public information meetings during the planning phase of this project to solicit input from the community regarding their needs and concerns. In addition, a public meeting was held on July 9, 2001, to discuss the Draft EA and any new or additional community concerns not addressed by the project plan. These meetings were attended by a broad cross section of Lana'i residents.

As you noted, the State Historic Preservation Division in their letter dated April 2, 2001, recommended that a fence be constructed between the area identified as a Contractor's Work and Storage Area (an abandoned quarry site which has been extensively disturbed) and the adjacent gulch (Kaumalapau Valley). According to oral histories and historic documentation, the gulch was occupied by the construction crew during construction of the breakwater in the 1920's. The settlement was known as Kaumalapau Camp. Following the camp, a farm (including pigs and chickens) was located in the gulch until about 1997. A walk through of the gulch showed considerable disturbance resulting from the

activity there over the last 75 years, thus it is considered unlikely that any historic features relating to traditional Hawaiian settlement can still be found. Nevertheless, the gulch will be fenced off during construction in accord with the SHPO recommendation to avoid any further disturbance of the area by construction activities.

Should you have any questions or desire additional information regarding this matter, please contact Mr. James Hatashima of my staff at 438-2264.

Sincerely,

Ray H. Jyo, P.E.
Deputy District Engineer for Program
Project Management

JAMES "KIMO" APANA
Mayor

DAVID C. GOODE
Director

MILTON M. ARAKAWA, A.I.C.P.
Deputy Director

Telephone: (808) 270-7845
Fax: (808) 270-7955

COUNTY OF MAUI
DEPARTMENT OF PUBLIC WORKS AND WASTE MANAGEMENT
200 SOUTH HIGH STREET
WAILUKU, MAUI, HAWAII 96793

RALPH NAGAMINE, L.S., P.E.
Land Use and Codes Administration

RON R. RISKA, P.E.
Wastewater Reclamation Division

LLOYD P.C.W. LEE, P.E.
Engineering Division

BRIAN HASHIRO, P.E.
Highways Division

Solid Waste Division

July 23, 2001

Mr. Ray H. Jyo, P.E.
Department of the Army
U. S. Army Engineer District, Honolulu
Fort Shafter, Hawaii 96858-5440

Dear Mr. Jyo:

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
KAUMALAPAU HARBOR BREAKWATER REPAIR

We reviewed the subject draft environmental assessment and have no comments to offer at this time.

If you have any questions, please call Milton Arakawa at (808) 270-7845.

Sincerely,

for DAVID GOODE
Director of Public Works
and Waste Management

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

REPLY TO ATTENTION OF

May 20, 2002

Subject: Kaumalapau Harbor Breakwater Repair, Lana'i, Hawai'i

Civil and Public Works Branch

Mr. David Goode, Director
Department of Public Works and Waste Management
County of Maui
200 South High Street
Wailuku, Maui, Hawaii 96793

Dear Mr. Goode:

Thank you for your letter dated July 23, 2001, regarding review of the Draft Environmental Assessment (EA) for the Kaumalapau Harbor Breakwater Repair project. We understand that you have no comments to offer at this time.

Currently, we are in the process of finalizing the EA and a copy of this response letter will be included in the final document. Following the completion of the Draft EA, minor revisions were made to the design of the breakwater repair work. Revisions do not alter the basic scale or scope of the project. The primary purpose was to incorporate the current design practices and experiences gained in using the Core-Loc concrete armor unit. Revisions include the following items.

a. The breakwater crest has been re-designed to increase Core-Loc stability during design storm wave conditions, and to improve constructability. Primary changes are:

(1) Widening the crest width to 40 feet at the top of the underlayer stone (+9.5' elevation),

(2) adding a horizontal row of Core-Loc units on the ocean-side crest, and

(3) replacement of the rib cap on the crest with a solid mass concrete crest cap.

b. A requirement for tremie concrete to be placed in the toe trench following placement of the Core-Loc units has been added to the design for the near shore ocean-side where the toe trench will be excavated into hard rock bottom in very shallow water. The concrete will prevent the movement of Core-Loc units and will increase the stability in the toe area.

c. The range of allowable stone size for underlayer and bedding stones has been increased slightly for more efficient use of available quarry stones.

Revisions to the design are included in the Final EA for the project.

If you have any questions or need additional information regarding this project, please do not hesitate to contact Mr. James Hatashima, Project Manager of my Civil and Public Works Branch staff at (808) 438-2264.

Sincerely,

Ray H. Iyo, P.E.
Deputy District Engineer for Program
Project Management

SIERRA CLUB
HAWAI'I CHAPTER
P.O. Box 2577, Honolulu, HI 96803
tel: 808.538.6616 fax: 808.537.9019

20 June 2001

Jim Hatashima
U.S. Army Corps of Engineers
Honolulu Engineer District
Building 230
Fort Shafter, Hawaii 96858-5440

Fred Pascua
State Department of Transportation
Harbors Division
79 S. Nimitz Highway
Honolulu, HI 96813

RE: Kaumalapau Harbor Breakwater Repair

The Sierra Club, Hawai'i Chapter requests that the following issues be addressed more thoroughly in the Environmental Assessment (EA):

1. Humpback Whale Sanctuary. The EA needs to more thoroughly examine the impact of this project on the Humpback Whale National Marine Sanctuary. This analysis should include construction activities, potential accidents, and increased boat traffic resulting from this project.

2. Corals. The EA should more fully discuss the impact to corals and timelines for recovery of the various species. Any loss of corals—which the DEA reveals will occur—are an irretrievable loss of a natural resource. Not only is this loss unmitigated, it is also in and of itself a significant effect. The EA should fully disclose how much coral will be lost, what kind of coral will be destroyed, and how the impact will be mitigated.

3. Secondary effects. The EA should disclose the impact of increased tourism arrivals due to the improvements proposed to the breakwater. Considering the expansion plans that Lanai Company is undergoing, it is clear that more fuel, cargo, supplies, and other goods will need to be imported to Lanai—facilitated by the seawall improvements.

4. Funding. The EA should fully disclose the source of funding for this project and discuss what other projects could have been funded with this federal or state money.

We appreciate the opportunity to offer these comments and look forward to your response.

Sincerely,

Jeff Mikulina
Director, Sierra Club, Hawai'i Chapter
cc: Office of Environmental Quality Control
Scott Sullivan, Ocean Engineering

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

REPLY TO ATTENTION OF

May 20, 2002

Subject: Kaumalapau Harbor Breakwater Repair, Lana'i, Hawai'i

Civil and Public Works Branch

Mr. Jeff Mikulina
Director, Hawai'i Chapter
Sierra Club
P.O. Box 2577
Honolulu, Hawaii 96803

Dear Mr. Mikulina:

Thank you for your letter dated June 20, 2001, commenting on the Draft Environmental Assessment (EA) for the Kaumalapau Harbor Breakwater Repair project.

Currently, we are in the process of finalizing the EA and a copy of this response letter will be included in the final document. Following the completion of the Draft EA, minor revisions were made to the design of the breakwater repair work. Revisions do not alter the basic scale or scope of the project. The primary purpose was to incorporate the current design practices and experiences gained in using the Core-Loc concrete armor unit. Revisions include the following items.

a. The breakwater crest has been re-designed to increase Core-Loc stability during design storm wave conditions, and to improve constructability. Primary changes are:

(1) Widening the crest width to 40 feet at the top of the underlayer stone (+9.5' elevation),

(2) adding a horizontal row of Core-Loc units on the ocean-side crest, and

(3) replacement of the rib cap on the crest with a solid mass concrete crest cap.

b. A requirement for tremie concrete to be placed in the toe trench following placement of the Core-Loc units has been added to the design for the near shore ocean-side where the toe trench will be excavated into hard rock bottom in very shallow water. The concrete will prevent the movement of Core-Loc units and will increase the stability in the toe area.

c. The range of allowable stone size for under layer and bedding stones has been increased slightly for more efficient use of available quarry stones.

Revisions to the design are included in the Final EA for the project.

The following responses are provided to the issues raised in your letter:

a. Humpback Whale Sanctuary: As discussed in section 5.1.7 of the Draft EA, coastal waters seaward of Kaumalapau Harbor to the 100-fathom contours are included in the Hawaiian Island Humpback Whale National Marine Sanctuary. The 100-fathom contour is located approximately one mile offshore of the harbor. Construction activities will simply involve reshaping the existing breakwater material and placing new stone and concrete armor units. No blasting will be required or permitted. Large vessels utilizing the harbor are deepwater tug and barges traveling seaward of the 100-fathom contour, and which would only enter the sanctuary waters in transit from deep water directly to or from the harbor. At present one cargo barge call per week is made by Young Brothers, and typically one fuel barge call per week is made. No increase in scheduled tug and barge calls at the harbor are anticipated in the foreseeable future. There will be a temporary increase in tug and barge calls during the construction period transporting equipment and materials to the site. These vessels also travel outside of the sanctuary waters except to enter or depart the harbor. Smaller commercial fishing and tourist activity boats, as well as small recreational fishing and dive boats also occasionally utilize the harbor and wharf. These vessels may spend more time within the 100-fathom contour, however the breakwater repairs are not anticipated to increase the small boat traffic. The proposed project has been coordinated with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service as required by the Endangered Species Act, and both agencies have concurred that the breakwater repair is unlikely to adversely affect listed endangered or protected species, including whales.

b. Corals: The predominant marine biota inhabiting the present breakwater structure are stont corals, primarily of the genera *Porites, Pocillopora* and *Montipora.* As discussed in section 6.1.5 of the Draft EA, the proposed breakwater repair will involve coverage of the existing breakwater structure with new rock and concrete, resulting in the loss of much of the existing coral cover on the breakwater. Unfortunately, the loss of the coral on the existing structure is an unavoidable cost of repairing the breakwater. However, as the new breakwater will consist of materials similar to those on the existing structure, and the repairs will not otherwise alter conditions for coral growth at the project site, it is reasonable to assume that coral will colonize the new breakwater and that over a 10 to 20 year period coral cover on the new structure will be similar to what is present today. Excess stone removed during the reshaping of the breakwater to form the core of the new structure will be placed on the sand bottom at the toe of the breakwater, which will create additional hard bottom substrate for coral growth. In addition, construction of

a stable breakwater structure will reduce the potential for damage to corals by movement of the breakwater material during storm wave attack.

c. Secondary Effects: Kaumalapau Harbor was constructed in 1926, and for 75 years it has been a functioning port. Repair of the breakwater will not change the harbor size, wharf space or services provided. Up until about the past decade, when the island's economy was based on agriculture, the harbor chiefly was used for the export of pineapple. As the economic base has changed from agriculture to tourism, the primary function of the harbor is also changing from export to the import of supplies and materials to support the new economic environment. Repair of the harbor breakwater will not of itself result in an increase in tourism and visitor arrivals to the island, the fundamental change in economic base is fueling the expansion plans of Lanai Company. Repair of the breakwater will, however, facilitate the safe, timely and consistent delivery of fuel and goods to the island, a benefit to both the social and economic welfare of the residents as well as the Lana`i Company. This discussion has been added to section 6.3 of the Final EA.

d. Funding: The total construction cost of the proposed repair is estimated to be $15 million, of which 80 percent ($12 million) will be federally funded and 20 percent ($3 million) provided by the State of Hawai`i. This is stated in section 3.5 of the final EA.

Should you have any questions or desire additional information regarding this project, please contact Mr. James Hatashima of my Civil and Public Works Branch staff at 438-2264.

Sincerely,

Ray H. Jyo, P.E.
Deputy District Engineer for Program
Project Management