DEPARTMENT OF PUBLIC WORKS  
CITY AND COUNTY OF HONOLULU  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

September 11, 1992

Mr. Brian Choy, Director  
Office of Environmental Quality Control  
State of Hawaii  
2200 South King Street, 4th Floor  
Honolulu, Hawaii 96813

Dear Mr. Choy:

Subject: Draft Environmental Assessment for the Kahaluu Lagoon Bank Restoration Project

The City and County of Honolulu, Department of Public Works, anticipates the preparation of a negative declaration for the subject project. In accordance with Act 241, SLH 1992, we request that a notice for the draft environmental assessment be published in the OEQC Bulletin.

Enclosed are four copies of the draft environmental assessment and a copy of the document for publication form.

Should you have any questions, please call Mel Takakura of the Division of Engineering at 523-4931.

Very truly yours,

[Signature]

C. MICHAEL STREET  
Director and Chief Engineer

Attach.
I. SUMMARY

CHAPTER 343, HAWAII REVISED STATUTES (HRS)
ENVIRONMENTAL ASSESSMENT

PROPOSING AGENCY:
Department of Public Works
City and County of Honolulu

PROJECT NAME:
Kahaluu Lagoon Bank Restoration

PROJECT DESCRIPTION:
The proposed project involves the restoration of approximately 1,500 linear feet of the mauka bank of the Kahaluu Lagoon as shown in Figure 2. The restoration work is required to repair the severe erosion problem along the lagoon banks. The project proposes to line the existing banks of the lagoon between elevations +1.6 to -2.3 with a 12" thick rock riprap on a 9" bedding which will be installed at a 3:1 slope. The bank above the riprap section will be filled and compacted at a slope of either 3:1 or 5:1 and will be covered with an erosion control matting. The bank below the riprap section will be excavated as required to match the existing ground.

Project Location:
Kahaluu, Oahu, Hawaii
Tax Map Key: 4-7-26

State Land Use:
Urban

Contact:
Mel Takakura
Department of Public Works
Division of Engineering
650 South King Street
Honolulu, Hawaii 96813

Telephone No.: 523-4931
December 21, 1992

Mr. Brian Choy, Director
Office of Environmental Quality Control
State of Hawaii
220 South King Street, 4th Floor
Honolulu, Hawaii 96813

Dear Mr. Choy:

Subject: Negative Declaration for the Kahaluu Lagoon Bank Restoration Project,
Kahaluu, Koolaupoko, Oahu, Hawaii, Tax Map Key: 4-7-26: 23

This letter is a notice of Negative Declaration by the proposing agency, the City and County of Honolulu, Department of Public Works. The subject action has been assessed according to Title 11, Chapter 200, Environmental Impact Statement Rules, and Chapter 343, HRS.

A determination has been made that an environmental impact statement is not required based on an environmental assessment which was prepared for the project. Enclosed are four copies of the environmental assessment and a copy of the document for publication form.

The pertinent information for this notice of determination is summarized below.

1. **PROPOSING AGENCY**

   City and County of Honolulu, Department of Public Works.
2. DESCRIPTION OF THE PROPOSED ACTION

The proposed project involves the restoration of approximately 1,500 lineal feet of the mauka bank of the Kahaluu Lagoon. The restoration work is required to repair the severe erosion problem along the lagoon banks. The project proposes to line the existing banks of the lagoon between elevations +1.6 to -2.3 with a 12" thick rock riprap on a 9" bedding which will be installed at a 3:1 slope. The bank above the riprap section will be filled and compacted at a slope of either 3:1 or 5:1 and will be covered with an erosion control matting. The bank below the riprap section will be excavated as required to match the existing ground.

The project will require the excavation of approximately 2,285 cubic yards of material and 830 cubic yards of earthfill. The total graded area to be affected is approximately one acre. The project will also require construction dewatering. The proposed method of dewatering will involve the construction of a cofferdam along the project limit and the use of a sediment basin in or along the lagoon. The dewatering plans will include the filtering or treatment of waters discharged back into the lagoon.

The estimated construction cost of the project is $625,000. The construction cost of the project will be funded primarily by the U.S. Department of Agriculture - Soil Conservation Service with the City and County of Honolulu contributing 7% of the construction cost. Construction of the project is tentatively scheduled to begin in early 1994 and is expected to take approximately 7 months to complete.

3. DETERMINATION

After preparing an environmental assessment and consulting with other agencies, we have determined that the proposed project will not have a significant impact on the environment, and an Environmental Impact Statement is not required.

4. REASONS SUPPORTING DETERMINATION

Reasons and conclusion supporting determination are based on the following criteria.

The proposed project will not:

a. Involve an irrevocable commitment to loss or destruction of any natural or cultural resource;
b. Curtail the range of beneficial uses of the environment;

c. Conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, Hawaii Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders;

d. Substantially affect the economic or social welfare of the community or State;

e. Substantially affect public health;

f. Involve substantial secondary impacts, such as population changes or effects on public facilities;

g. Involve a substantial degradation of environmental quality;

h. Substantially affect a rare, threatened, or endangered species or its habitat;

i. Detrimentally affect air or water quality or ambient noise levels; or

j. Detrimentally affect an environmentally sensitive area, such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.
5. **CONTACT PERSON**

Melvin Takakura  
Department of Public Works  
Division of Engineering  
Honolulu Municipal Building, 15th Floor  
650 South King Street  
Honolulu, Hawaii  96813  

Telephone No.: 523-4931

Very truly yours,

[Signature]

C. Michael Street  
Director and Chief Engineer

Attachment (4 copies)
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU

FINAL
ENVIRONMENTAL ASSESSMENT
FOR THE
KAHALUU LAGOON BANK RESTORATION
KAHALUU, Koolaupoko, Oahu, Hawaii
TAX MAP KEY: 4-7-26: 23

This environmental document is prepared pursuant to Chapter 343, HRS.

PROPOSING AGENCY:
DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET
HONOLULU, HAWAII 96813

RESPONSIBLE OFFICIAL: C. Michael Street
Director and Chief Engineer

DATE
1/12/2002

PREPARED BY
DIVISION OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
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APPENDIX

APPENDIX A - Responses and replies from agencies consulted during the assessment process.
I. DESCRIPTION OF THE PROPOSED ACTION

The proposed project is located on the windward side of the island of Oahu, mauka of Kamehameha Highway at the convergence of the Waihee and Kahaluu Streams (See Figure 1).

The proposed project involves the restoration of approximately 1,500 lineal feet of the mauka bank. The restoration work is required to repair the severe erosion problem along the lagoon bank that is being caused by wave action generated by strong northerly winds.

The first indication of the erosion problem was noticed during an annual operation and maintenance (O & M) inspection in July 1986. The O & M reports between 1986 and 1991 indicate a gradual worsening of the problem. Several large eroded pockets now exist with vertical banks up to six feet high and recession of the shoreline of up to fifteen feet. Som volds have lost several hundred cubic yards of material. A vertical bank of at least one foot exists all along the shoreline. The material that is being eroded is composed of silty clay soil. Erosion will continue and the rate will accelerate if the banks are not repaired.

The project proposes to line the existing banks of the lagoon between elevations +1.6 to -2.3 with a 12" thick rock riprap on a 9° bedding which will be installed at a 3:1 slope (see Figure 3). The bank above the riprap section will be filled and compacted at a slope of either 3:1 or 5:1 and will be covered with an erosion control matting. The bank below the riprap section will be excavated as required to match the existing ground. The project will also include two 80-foot bank sections with 1¾:1 slopes to promote the recreational use of the lagoon.

The project will require the excavation of approximately 2,285 cubic yards of material and 830 cubic yards of earthfill. The total graded area to be affected is approximately one acre. The project will also require construction dewatering. The proposed method of dewatering will involve the construction of a cofferdam along the project limit and use of a sediment basin in or along the lagoon. The dewatering plans will include the filtering or treatment of waters discharged back into the lagoon.

The actual method of construction will be determined by the contractor. However, the construction should commence with the construction of the cofferdams and dewatering of the site. Upon completion of the dewatering work, the required excavation and earthfill work will be accomplished by mechanical means by the use of either a crane, shovel or backhoe. All surplus excavated materials will be hauled away by dump trucks to a suitable site in accordance with Federal, State and local laws.
The estimated construction cost of the project is $625,000. The construction cost of the project will be funded primarily by the U.S. Department of Agriculture - Soil Conservation Service with the City and County of Honolulu contributing 7% of the construction cost. Construction of the project is tentatively scheduled to begin in early 1994 and is expected to take approximately seven months to complete.
II. AFFECTED ENVIRONMENT

A. Project Location

Kahaluu Stream is located on the windward side of Oahu in the Koolauupoko District. The project site is at the convergence of the Waihee, Ahuimanu, and Kahaluu Streams. These streams provide drainage for the Kahaluu Watershed, a drainage basin area of approximately 4,900 acres, beginning at the Koolau Mountains and the Waiahole Forest Reserve. The three streams contribute an aggregate peak stream flow total of approximately 20,000 cubic feet per second during a high flood event. Annual rainfall in the Kahaluu Watershed is among the highest in the State, with an annual average rainfall of 180 inches in the upper watershed near the Koolau mountaintops, and 70 inches in lower flat areas near Kaneohe Bay.

The Kahaluu multipurpose lagoon collects the storm runoff from the previously described streams and was built in two phases in 1976 and 1980. The lagoon was designed with an unlined invert ranging in depth from (-) 5 to (-) 7 feet in elevation. The lagoon outlets into Kaneohe Bay through a channel 280 feet wide.

The Kaneohe Bay receiving water is a Class AA embayment. Recreational uses of the lagoon consist primarily of fishing, crabbing, canoeing, kayaking and radio-controlled boats.

The project is located entirely within the SMA boundary area as shown in Figure 4.

In addition, the project is located in the floodway area and is designated as Zone AE on the Federal Emergency Management Agency's Flood Insurance Rate Map (Figure 5).

B. Kahaluu Watershed

Historically, the Kahaluu Watershed area has been used for agriculture, with the prevailing land uses broken down as follows: 2,298 acres (52%) for forest land; 884 acres (20%) for grassland; 1,017 acres (23%) for crop lands; and 221 acres (5%) for business-residential lands. The agricultural lands are primarily used for the production of leaf taro, papaya, banana, various truck crops (vegetables), poultry, and livestock farms. Tropical flowers, ornamental plants, and orchids are also produced commercially.
Based on the City and County of Honolulu Development Plan Map, the project is within a preservation area and is surrounded by areas designated for residential, public facilities, commercial, agricultural and park use.

The project site is classified as within the State's urban district.

Zoning within the area is P-2, Preservation. Surrounding areas are within AG-2 and B-1 zones.

C. **Environmental Characteristics**

The marine biota of the project area consist of the aquatic stream life and these include the tilapia, oopu nakea, oopu naniha, frog, crayfish, swordtail guppy, shrimp, i.e. opaekula 'ole and opae'oeha'; crab, mullet, papio, and occasionally, nehu. Recent investigations have revealed the presence of aquarium fish which were discarded into the streams. This has resulted in a minor proliferation of exotic species which could threaten the resident indigenous species for food and habitat. There are no known endangered species present at the site.

There are no known archaeological or historical sites located at the project site. The Bishop Museum conducted an archaeological reconnaissance survey of the area on August 22, 1974 and their report stated that no archaeological remains were found in the project area. The Kahalu'u Fish Pond also known as the Kahonua Fish pond is located in the vicinity of the project area and is registered on the National Register of Historic Places. However, the Kahalu'u Fish Pond will not be adversely affected by the bank restoration work.

Most of the terrestrial fauna are found in the lands mauka of the project site and these are the birds and mammals typically found in the mountain areas. Besides the exotic or introduced species, there are some rare indigenous species of Hawaiian birds such as the elepaio found in the forest reserve areas.
III. SUMMARY OF MAJOR IMPACTS AND PROPOSED MITIGATION MEASURES

The proposed project will not have any significant adverse impacts to water quality or to stream and coastal ecosystems or to recreational activities. Only temporary impacts to water quality is anticipated during construction from increased turbidity, but the site will recover at the end of construction operations. To ensure that the construction activities conform to the State's Water Quality Standards, a water quality monitoring program will be implemented as part of the Section 401 Water Quality Certification requirements for the project. The monitoring program will include samplings prior to the start of construction, during construction and after construction to ensure that acceptable turbidity levels are not exceeded. In addition, the contractor will be required to install measures and perform work needed to control and minimize erosion, turbidity, sediment and dust during construction operations. Mitigation measures proposed include silt fences, sediment basins and seeding. Construction operations will also be conducted to prevent discharge or accidental spillage of pollutants, solid waste, debris or other objectional materials in surface and subsurface waters.

The project will not have impact on wildlife or on any endangered Hawaiian waterbirds and their habitat.

There will also be minor instances of increased air and noise levels, but these will be minimized by ensuring compliance with the provisions of Title II, Administrative Rules, Chapter 43, Community Noise Control for Oahu. Other mitigating measures will be to limit hours of operation, and requiring all construction equipment and construction vehicles to be equipped with mufflers.

The project will not affect any existing State or County Land Use Plans.

Traffic will not be seriously impacted since all work will be conducted from the channel banks on existing service roads.

The proposed bank restoration work will require a Department of the Army permit a Special Management Area permit, a Stream Alteration permit, a Section 401 Water Quality Certification and a Coastal Zone Management Certification. In addition, the project may require a NPDES permit from the Department of Health for the proposed dewatering operations. All required permits will be secured before the start of construction.
The erosion problem is not a threat to any structures or seriously affecting the marine environment. However, the bank repair work is required to reestablish the integrity of the flood control lagoon and to provide a safe environment for recreational activities.

The proposed revetment will not have any effects on the remaining unlined sections of the lagoon bank.

The proposed activity complies with the State of Hawaii Coastal Management program and will be conducted in a manner consistent with such program.
V. ALTERNATIVES CONSIDERED

A. No Action

This alternative will not remedy the existing erosion problems along the banks of the Kahaluu Lagoon. If no action is taken, the erosion problem along the banks will continue to expand and will require more costly repairs in the future.

B. Proposed Rock Riprap

The proposed rock riprap at a 3:1 slope is the recommended alternative. This alternative will restore the banks of the lagoon and provide for the future protection of the banks from erosion. In addition, two 80-foot riprap sections at a 1½:1 side slope will be included into the restoration work to promote the recreational use of the Kahaluu Lagoon.
V. LIST OF AGENCIES CONSULTED DURING PREPARATION OF THE ENVIRONMENTAL ASSESSMENT

Federal

U.S. Army Corps of Engineers *
U.S. Department of the Interior, Fish & Wildlife Service

State of Hawaii

Department of Land and Natural Resources *
Department of Transportation *
Department of Health *
Office of State Planning *
University of Hawaii Environmental Center *

City and County of Honolulu

Department of Land Utilization *
Department of General Planning *
Department of Parks and Recreation *

Kahaluu Neighborhood Board No. 29 *

*Responses from agencies are attached in Appendix A.
VI. **DETERMINATION**

After completing an assessment of the potential environmental effects of the proposed project and consulting formally with other governmental agencies, it has been determined that an Environmental Impact Statement is not required. Therefore, this document constitutes a notice of Negative Declaration.

VII. **FINDINGS AND REASONS SUPPORTING THE DETERMINATION**

Findings and reasons supporting the Negative Declaration determination are as follows, using the criteria, policies, guidelines and provisions of Title 11, Chapter 200, Environmental Impact Statement Rules and Chapter 343, HRS. The proposed project will not:

a. Involve an irrevocable commitment to loss or destruction of any natural or cultural resource;

b. Curtail the range of beneficial uses of the environment;

c. Conflict with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, Hawaii Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders;

d. Substantially affect the economic or social welfare of the community or State;

e. Substantially affect public health;

f. Involve substantial secondary impacts, such as population changes or effects on public facilities;

g. Involve a substantial degradation of environmental quality;

h. Substantially affect a rare, threatened or endangered species, or its habitat;

i. Detrimentally affect air or water quality or ambient noise levels; or

j. Detrimentally affect an environmentally sensitive area, such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.
Mr. C. Michael Street  
Director and Chief Engineer  
Department of Public Works  
City & County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813  

Dear Mr. Street:

Subject: Environmental Assessment (EA) for the Kāhaluu Lagoon Bank Restoration Project  
Kāhaluu, Oahu, Oahu  
TMK: 4-7-26

Thank you for allowing us to review and comment on the subject project. We have no comments to offer at this time.

Very truly yours,

[Signature]

JOHN C. LEWIN, M.D.  
Director of Health
October 23, 1992

TO: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: WALTER M. OZAWA, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
HRS CHAPTER 343
KAHALU’U LAGOON BANK RESTORATION PROJECT
KAHALU’U, OAHU, HAWAII
TAX MAP KEY 4-7-26

This memorandum is provided to supplement our earlier memorandum of October 12, 1992 commenting on the DEA for your proposal to restore the mauka bank of Kahalu’u Lagoon (project reference number 92-12-0523). Following our discussion with your department regarding our original comments, we understand that a clarification of our earlier memorandum is necessary.

Although we would prefer a design in which the entire 1,500 lineal feet of the mauka embankment was sloped at 1.5:1, we understand that your department’s ability to design the slope of the embankment is limited by Federal guidelines. However, it was our understanding that your plans would include at least two, eighty-foot sections of embankment with slopes of 1.5:1. These sections were not discussed in the DEA.

If you have any questions, please call John Morihara of our Advance Planning Branch at extension 4246.

WALTER M. OZAWA, Director

WMO: ei
December 8, 1992

MEMORANDUM

TO: MR. WALTER OZAWA, DIRECTOR
DEPARTMENT OF PARKS AND RECREATION

FROM: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

SUBJECT: YOUR MEMORANDUM OF OCTOBER 23, 1992, RELATING TO
THE ENVIRONMENTAL ASSESSMENT FOR THE KAHALUU
LAGOON BANK RESTORATION PROJECT

Thank you for your review of the subject environmental assessment.

Our design will include two 80-foot sections of embankment with slopes of 1½:1, and we
will include a discussion of these sections in the final environmental assessment for the
project.

Should you have any questions, please call Mel Takakura of the Division of Engineering
at extension 1572.

C. Michael Street
C. MICHAEL STREET
Director and Chief Engineer
MEMORANDUM

TO: C. MICHAEL STREET, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF PUBLIC WORKS

FROM: BENJAMIN B. LEE, CHIEF PLANNING OFFICER
DEPARTMENT OF GENERAL PLANNING

SUBJECT: ENVIRONMENTAL ASSESSMENT FOR THE KAHALUU
LAGOON BANK RESTORATION PROJECT,
KAHALUU, OAHU, HAWAII, TAX MAP KEY 4-7-26

October 1, 1992

This in response to your memorandum of September 9, 1992. We
have reviewed the subject environmental assessment and have no
objections to the proposed project.

Thank you for the opportunity to comment. Should you have any
questions, please contact Eugene Takahashi of our staff at
527-6022.

Sincerely,

[Signature]

BENJAMIN B. LEE
Chief Planning Officer

BBL: js

OK