

JOHN WAIHEE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF WATER AND LAND DEVELOPMENT

P. O. BOX 373  
HONOLULU, HAWAII 96809

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

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WATER AND LAND DEVELOPMENT

NOV 25 1992

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REC'D  
OFC. OF ENVIRONMENTAL  
QUALITY CONTROL

Mr. Brian J.J. Choy  
Director  
Office of Environmental  
Quality Control  
220 South King Street, Fourth Floor  
Honolulu, Hawaii 96813

Dear Mr. Choy:

Job No. 2-HW-G1, Upper Hamakua Ditch Improvements,  
Waimea Irrigation System, Waimea, Hawaii

Pursuant to Section 11 of the Environmental Impact Statement Rules, transmitted for processing are four (4) copies of the Final Environmental Assessment and Notice of Determination (Negative Declaration) for the subject project. Also attaches is a completed OEQC Bulletin Publication Form.

If there are any questions on this matter, please have your staff contact Mr. Edward Lau of the Project Development Branch at Extension 70227.

Sincerely,

A handwritten signature in black ink, appearing to read "Manabu Tagomori".

MANABU TAGOMORI  
Manager-Chief Engineer

SL:lc

Enc.

1992-12-08-HI-FA-Upper Hamakua Ditch Improvements Waimea  
Irrigation system

DEC - 8 1992

ENVIRONMENTAL ASSESSMENT

AND

NEGATIVE DECLARATION

Job No. 2-HW-G1

Upper Hamakua Ditch Improvements

Waimea Irrigation System

Waimea, Hawaii

State of Hawaii  
Department of Land and Natural Resources  
Division of Water and Land Development  
November 1992

**NOTICE OF DETERMINATION: Negative Declaration**

**FOR: Job No. 2-HW-G1  
Upper Hamakua Ditch Improvements  
Waimea Irrigation System  
Waimea, Hawaii**

**BY: Division of Water and Land Development  
Department of Land and Natural Resources**

**The proposed action will have no significant effect on the environment and therefore does not require the preparation of an Environmental Impact Statement. This Notice of Determination and Environmental Assessment are being filed as a Negative Declaration.**

Environmental Assessment  
For  
Job No. 2-HW-G1  
Upper Hamakua Ditch Improvements  
Waimea, Hawaii

I. APPLICANT/PROPOSING AGENCY

Division of Water and Land Development  
Department of Land and Natural Resources

II. AGENCIES CONSULTED

State of Hawaii

Department of Agriculture  
Department of Hawaiian Home Lands  
Department of Land and Natural Resources  
Historic Preservation Division  
Division of Forestry and Wildlife

County of Hawaii

Planning Department

III. PROJECT DESCRIPTION

Technical Aspects

The State Department of Land and Natural Resources, Division of Water and Land Development is proposing to continue improvements to the existing Upper Hamakua Ditch by installing 100 feet of aluminum archway in a portion of tunnel and lining approximately 1550 feet of unlined ditch with shotcrete in Waimea, South Kohala on the island of Hawaii. (See Figure 1.)

The proposed aluminum archway, which will provide support to the tunnel's earth ceiling, will be installed in the short segment of tunnel immediately below Mamalahoa Highway, within the University of Hawaii Agricultural Experiment Station identified by TMK: 6-4-03:16. The portion of ditch to be lined is the final section of the Upper Hamakua Ditch system, which leads directly into the existing Puu Pulehu Reservoir on TMK: 6-4-03:15, and is owned by the Department of Hawaiian Home Lands. (See Figure 2.) At present, the two parcels involved are designated as open agricultural land. The Upper Hamakua Ditch is operated by the Department of Agriculture as part of the Waimea Irrigation System.

# ISLAND MAP

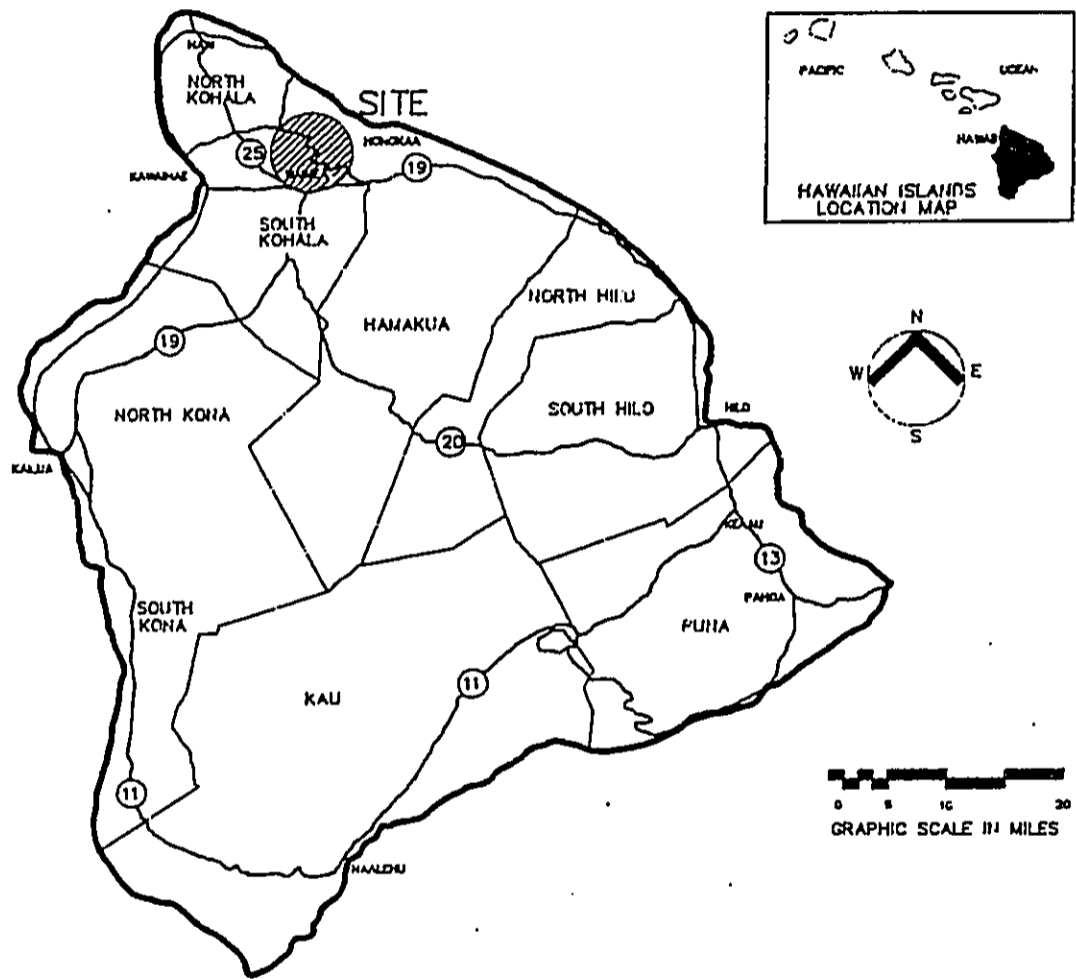


FIGURE 1

# LOCATION MAP

SCALE: 1" = 1000'

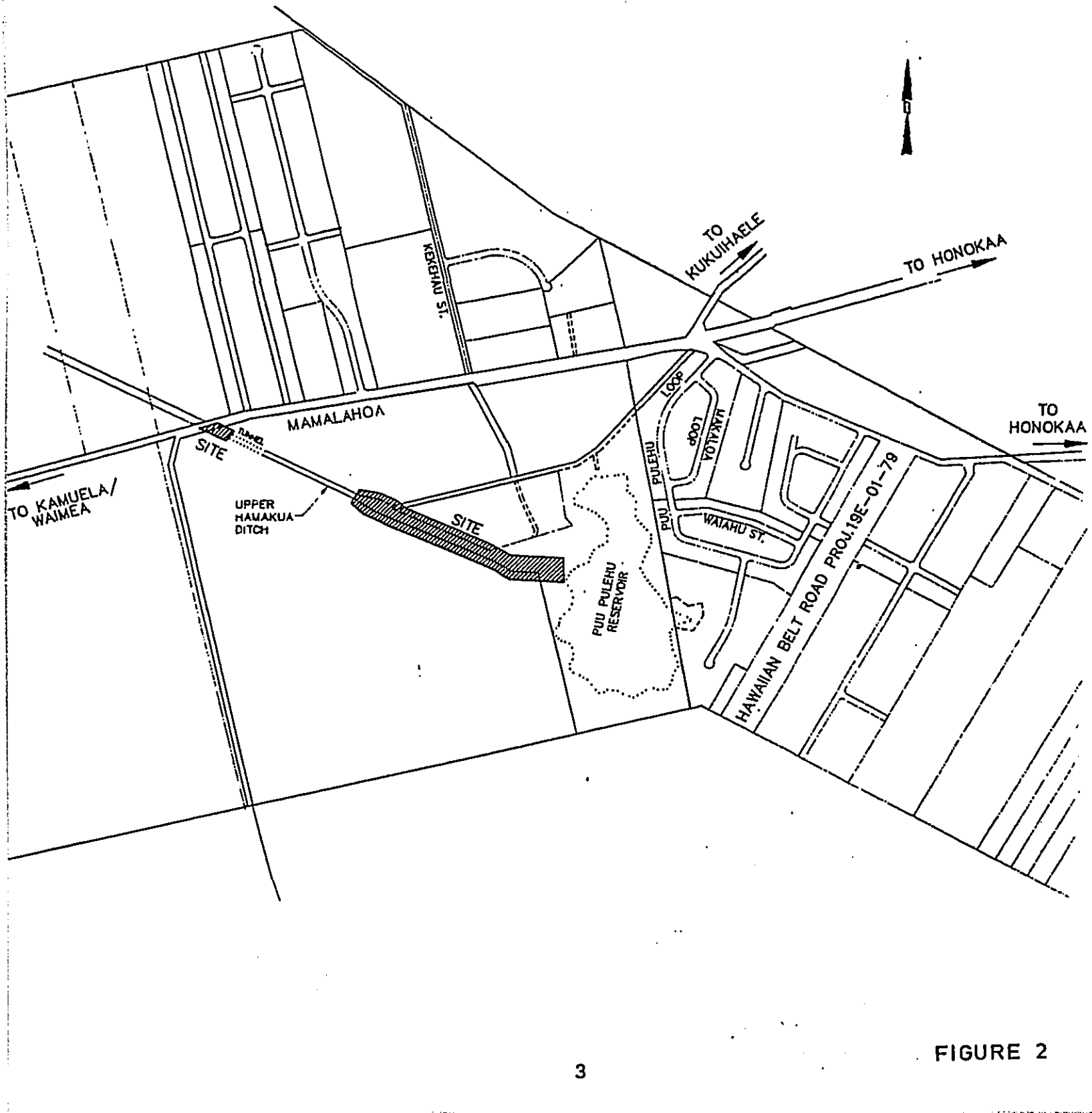


FIGURE 2

#### Socio-Economic Aspects

The community which is served by the Upper Hamakua Ditch and Puu Pulehu Reservoir includes the Lalamilo Farm Lots, Puukapu Homesteads and Hawaiian Homestead Puukapu Lots. These agricultural lots support mainly diversified agricultural products, such as broccoli, burdock, cauliflower, daikon, roses, and cattle. The water from the ditch system helps the farmers to keep their crops irrigated, especially during drier periods. The proposed improvements will serve to increase the efficiency of the ditch system and reduce the amount of water lost. Affording the farmers a steady supply of irrigation water may also indirectly benefit the local consumers, since the farmers can avoid high water costs and subsequently high produce prices.

#### Topography

The sections of the Upper Hamakua Ditch system to be improved are located on gently sloping to relatively flat pasture land. The soils in the Puukapu area include Kahua silty clay loams and Maile silt loams. The Kahua soils consist of somewhat poorly drained silty clay loams that formed in volcanic ash. Permeability is moderately slow, and erosion and runoff hazards are slight. The Maile soil series consist of well-drained silt loams that formed in volcanic ash. Permeability is moderately rapid, while runoff is slow and erosion hazard is slight. All grading involved with this project will be confined to the present ditch system right-of-way.

#### Flora/Fauna

The project site is in grassy, pasture land. Besides the prevalent forage grass, occasional ginger, guava, eucalyptus and exotic weeds can be found. No endangered species, either plant or animal, are associated with the site. All work will be confined to the existing 40-foot right-of-way flanking the ditch.

#### Archaeology

The project is confined to the ditch itself, and extends out only as far as necessary to give the ditch a uniform grade. Because the ditch is man-made, no historic sites are expected to be found. However, if any unanticipated sites or artifacts are discovered during construction, the work will be halted and the State Historic Preservation Division will be contacted.

### **IV. PROJECT SCHEDULE AND COST ESTIMATE**

The construction portion of the project should be completed 240 days after receipt of notice to proceed. The preliminary construction cost estimate for the project is \$750,000.00.

## V. POTENTIAL IMPACTS

### Short Term Impacts

Short term impacts of the proposed project should be minimal. Work will be limited to daylight hours, and because the area is used for agriculture, any noise from construction vehicles will be comparable to the noise from nearby farm vehicles. Dust nuisance and vehicle emissions will be mitigated by strict conformance to environmental regulations. Equipment movement and storage will be governed by current public convenience and safety standards. All other short term impacts will be mitigated by normal construction practices.

### Long Term Impacts

The proposed renovations should increase the efficiency of the current irrigation system by stemming existing and unlocated leaks. Maintenance costs will be drastically reduced because the rapid deterioration of the existing ditch will have been checked. No adverse long term environmental impacts are anticipated.

## VI. ALTERNATIVES TO THE PROPOSED ACTION

### Alternative Site

Large sections of the Upper Hamakua Ditch have already undergone similar renovations. Because this project could be considered the last phase of the overall improvements, it would not be feasible to choose another site.

### No Action

No action would mean a continued deterioration of the ditch and would eventually result in a major breakdown. This would likely result in a severe water shortage to the farmers, the use of costly alternative water sources, and eventually increased prices passed on to the consumers.

## VII. DETERMINATION

In accordance with Chapter 343, Hawaii Revised Statutes, it is determined that the proposed project would not have any significant adverse effects on the environment. Any potentially negative effects have been identified along with suggested mitigative measures. Consequently, an Environmental Impact Statement is not required and this Environmental Assessment is hereby being filed as a Negative Declaration.



VIII. REFERENCES

Department of Land and Natural Resources, Division of Water and Land Development, Environmental Assessment: Improvements to the Upper Hamakua Ditch System, April 1988.

Stearns, H.T., Geology of the Hawaiian Islands, Hawaii Division of Hydrography, Bulletin 8, 1946.

APPENDIX A

Comments and Responses  
to the  
Draft Environmental Assessment

*Cen*

1081

JOHN WAIHEE  
Governor

*Down*

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YUKIO KITAGAWA  
Chairperson, Board of Agriculture

RECEIVED  
ILIMA A. PIIANAIA  
Deputy to the Chairperson

92 JUN 30

AID: 34  
State of Hawaii  
DEPARTMENT OF AGRICULTURE  
1428 So. King Street  
Honolulu, Hawaii 96814-2512

92 JUL 16

FAX: 973-9613

Mailing Address:  
P. O. Box 22159  
Honolulu, Hawaii 96823-2159

REF:WL-LC

DEPT. OF LAND  
& NATURAL RESOURCES  
STATE OF HAWAII

June 29, 1992

COMMISSION ON WATER  
RESOURCE MANAGEMENT

*W*

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

SUBJECT: Environmental Assessment for Job No. 2-HW-G1,  
Upper Hamakua Ditch Improvements, Waimea, Hawaii

We have reviewed the above-mentioned report and have no  
comments.

We support this project, as it would correct deficiencies  
in our Waimea Irrigation System facility.

*Yukio Kitagawa*  
YUKIO KITAGAWA  
Chairperson, Board of Agriculture

c: PDO  
ARM



JOHN WAIHEE  
GOVERNOR  
STATE OF HAWAII

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92 JUL 16 P4:12

HOALIKU L. DRAKE  
CHAIRMAN  
HAWAIIAN HOMES COMMISSION

STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS, WATER  
P. O. BOX 1879  
HONOLULU, HAWAII  
COMMISSION ON WATER RESOURCE MANAGEMENT

July 7, 1992

*[Handwritten signature]*

MEMORANDUM

TO: The Honorable William W. Paty, Chairperson  
Commission on Water Resource Management

FROM: Hoaliku L. Drake, Chairman  
Hawaiian Homes Commission *Hoaliku L. Drake*

SUBJECT: Upper Hamakua Ditch Improvements Environmental  
Assessment

Thank you for the opportunity to comment on the Environmental Assessment for improvements to the Upper Hamakua Ditch at Puu Pulehu Reservoir, Puukapu, Waimea, Hawaii.

This will nearly complete improvements to the Waimea Irrigation System prior to initiation of federally-sponsored improvements outlined in the Waimea-Paauilo Watershed Plan. We sincerely appreciate the priority this project has received, as several agencies have been cooperating in this complex effort to assure long-term benefits to the agricultural industry of Waimea, including homestead lessees on Hawaiian home lands.

We concur with the negative declaration determination, and anticipate your right-of-entry request for this work.

OCEA  
DLEN

92 JUL 8 PM 2:55

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## Planning Department

County of Hawaii • 25 Aupuni Street, Room 109 • Hilo, Hawaii 96720 • (808) 961-8288

Lorraine R. Inouye  
Mayor

Norman K. Hayashi  
Director

Tad Nagasako  
Deputy Director

July 8, 1992

Mr. Manabu Tagomori  
Manager-Chief Engineer  
Department of Land and Natural Resources  
Division of Water and Land Development  
P. O. Box 373  
Honolulu, HI 96809

Dear Mr. Tagomori:

Special Management Area (SMA) Inquiry  
Proposed Upper Hamakua Ditch Improvements  
Road 1 Archway and 1500 Feet of Ditch Lining  
TMK: 6-4-03: 16, 15; Puukapu, South Kohala, Hawaii

We have received and reviewed a Special Management Area (SMA) inquiry and an Environmental Assessment/Negative Declaration for the proposed addition of 100 feet of aluminum archway support in a tunnel beneath Mamalahoa Highway and for lining 1500 feet of existing ditch next to Puu Pulehu Reservoir near the Mealani Agriculture Experiment Station in the Puukapu area.

The project site is outside the Special Management Area; and therefore, it is not subject to SMA permit requirements. Should you have any questions, please contact Rick Warshauer or Alice Kawaha at this office.

Sincerely,

  
NORMAN K. HAYASHI  
Planning Director

FRW:jl  
5765D (2)

cc: SMA Section

JOHN WAIHIEE  
GOVERNOR OF HAWAII



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92 JUL 20 P 4: 12  
STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIV. OF WATER & LAND DEVELOPMENT  
STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 6TH FLOOR  
HONOLULU, HAWAII 96813

July 15, 1992

WILLIAM W. PATY, CHAIRPERSON  
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HISTORIC PRESERVATION

DIVISION

LAND MANAGEMENT

STATE PARKS

WATER AND LAND DEVELOPMENT

LOG NO.: 5627

DOC NO.: 920705dp

2-HAW-51

TO: Manabu Tagomori  
Division of Water and Land Development

FROM: Don Hibbard, Administrator  
State Historic Preservation Division

A handwritten signature in black ink, appearing to be "DH", written over the name "Don Hibbard" in the "FROM:" field.

SUBJECT: Upper Hamakua Ditch Improvements, Waimea, Hawaii

Thank you for allowing us to comment on the improvements for the Upper Hamakua ditch system. We concur with your assessment that this project will have no effect on historic properties.

If you have any questions, please call Daina Penkiunas at 587-0005.



**NATIVE HAWAIIAN ADVISORY COUNCIL**

A NONPROFIT CORPORATION

1088 Bishop Street, Suite 1204, Honolulu, Hawaii 96813

Telephone (808) 523-1445

Facsimile (808) 599-4380

1992 September 18

State of Hawaii Department of Land and Natural Resources  
Division of Water and Land Development

RE: COMMENTS ON DRAFT ENVIRONMENTAL ASSESSMENT FOR JOB NO. 2-HW-G1  
UPPER HAMAKUA DITCH IMPROVEMENTS  
WAIMEA IRRIGATION SYSTEM  
WAIMEA, HAWAII

**IV. PROJECT SCHEDULE AND COST ESTIMATE**

The preliminary construction cost estimate for the proposed project seems outrageously high. This alone would be a significant environmental impact that should be more thoroughly assessed.

Mahalo,

*David L. Martin*

David L. Martin, Vice-President

pc: Office of Environmental Quality Control  
State of Hawaii Commission on Water Resource Management  
Water Commisioners

DIV. OF WATER &  
LAND DEVELOPMENT

92 SEP 21 P 3: 48

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GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
DIVISION OF WATER AND LAND DEVELOPMENT

P. O. BOX 373  
HONOLULU, HAWAII 96809

NOV 20 1992

WILLIAM W. PATY, CHAIRPERSON  
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HISTORIC PRESERVATION  
PROGRAM  
LAND MANAGEMENT  
STATE PARKS  
WATER AND LAND DEVELOPMENT

Mr. David L. Martin  
c/o Native Hawaiian Advisory Council  
1088 Bishop Street, Suite 1204  
Honolulu, Hawaii 96813

Dear Mr. Martin:

Draft Environmental Assessment for  
Upper Hamakua Ditch Improvements  
Waimea Irrigation System, Waimea, Hawaii

Thank you for your comments regarding the subject project. Unfortunately, we do not understand how the construction cost of a particular project can be considered a significant environmental impact. In many cases, mitigation of potential environmental impacts is the very factor which raises construction costs. Disposal of debris, regrassing of disturbed areas and such do cost money.

For your own information, the State's preliminary estimate was actually quite reasonable. The construction contract bids our office received ranged from about \$690,000 to \$990,000. The State's estimate of \$750,000 falls well within this range. We have professional engineers prepare the cost estimates on all our projects and feel they are best qualified to make judgements on the acceptability of construction labor and material costs.

We hope we have addressed your concerns satisfactorily.

Sincerely,

A handwritten signature in black ink, appearing to read "Manabu Tagomori", written over a large, stylized circular flourish.

MANABU TAGOMORI  
Manager-Chief Engineer

SL:lc