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PARTNERS FOR HAWAII

February 6, 2019

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DEPT. OF LAND
& NATURAL RESOURCES
STATE OF HAWAII

Ms. Suzanne Case, Chairperson
Hawaii Department of Land and Natural Resources
Kalanimoku Building
1151 Punchbowl Street
Honolulu, HI 96813

**Subject: Stream Diversion Works Permit Application (“Category 1” Diversions)
East Maui Irrigation Company “Taro Stream” Diversion Abandonments
Request for Landowner Signature**

Dear Ms. Case:

East Maui Irrigation Company (EMI) has previously submitted to the Commission on Water Resource Management (CWRM) a Stream Diversion Works Permit Application (SDWPA, dated September 16, 2016) for the permanent abandonment of seventy of its existing irrigation system stream diversions in furtherance of its commitment to make existing stream flow restorations in several East Maui “taro streams” complete and permanent. Concurrently, EMI has made submittals to other governmental agencies (specifically, the Office of Conservation and Coastal Lands (OCCL), the United States Army Corps of Engineers (USACE), and the County of Maui Department of Planning) to secure approvals for the work to proceed.

Pursuant to guidance provided by CWRM, EMI amended its original SDWPA by splitting it into separate, smaller applications in order to facilitate review and approval of the proposed abandonment work. Three such applications, covering abandonment of fifty-five diversions, are currently pending review and approval by CWRM. A fourth application, covering the remaining fifteen “Category 1” diversions, is enclosed, along with the required filing fee. Each of these fifteen diversions is structurally integral to one of the major EMI irrigation ditches; the ditches themselves will continue to function to carry water diverted from other East Maui streams to off-stream users while the diversions will be abandoned. EMI has obtained a determination from CWRM that work necessary to prevent water from being diverted by these structures while allowing the ditches to continue to operate is considered maintenance of existing structures that does not require a Stream Channel Alteration Permit or Stream Diversion Works Permit. This work is currently underway, and the enclosed application is intended to formally and permanently abandon the diversion portion of each structure upon completion of the work. A detailed description of the work is included with the enclosed application, and no further work beyond the maintenance work already approved is planned in connection with these abandonments.

FILE ID:	SDWP.5083.6
DOC ID:	21474

Ten of the diversions covered by this application are located, entirely or in part, on land owned by the State of Hawaii. Your signature as landowner on the enclosed Form LND-APP is therefore necessary in order for CWRM to accept the application for processing. In accordance with instructions we received from CWRM staff, we respectfully request that you sign the form as Landowner in Box 57 and then forward the complete signed application directly to CWRM for processing. As you know, your signature on the application does not constitute endorsement or approval of the application. A complete copy of the application is included for your records.

Thank you for your consideration of this application, and please feel free to contact me at (808) 877-2959 with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "S.M. O'Keefe", written in a cursive style.

Sean M. O'Keefe
Director, Environmental Affairs
Alexander & Baldwin, Inc.

Enclosures

cc: M. Vaught, M. Ching, N. Chun, J. Schreck, Y. Izu, D. Uyeno



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
MULTIPLE LANDOWNERS/LOCATIONS FORM

For Official Use Only:
RECEIVED
COMMISSION ON WATER
RESOURCE MANAGEMENT
2019 FEB -8 AM 11:02

Instructions: Please print in ink or type and send completed form attached to stream channel alteration or stream diversion works permit application to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. The Commission may not accept incomplete applications without the required landowner signatures. For assistance, contact the Stream Protection and Management Branch at **587-0234**. For further information and updates to this application form, visit <http://dlnr.hawaii.gov/cwmm>.

A. LANDOWNER INFORMATION

For proposed stream channel alterations and stream diversion works affecting multiple landowners, complete the sections below for each individual landowner. **Form LND-APP** provides space for information on five (5) landowners. Complete as many forms as necessary to identify all, and only those, landowners affected by the proposed stream channel alteration or stream diversion works.

1. LANDOWNER'S NAME/COMPANY East Maui Irrigation Company, LLC			Landowner's Contact Person Mark Vaught	Landowner's Phone (808) 579-9516
Landowner's Mailing Address PO Box 791628 Paia, Hawaii 96779			Tax Map Key Parcel(s) 28008007 and 012; 29006001, 002, and 004; 29009019; 29014009	Landowner's E-mail Address mvaught@abhi.com
Print Name: Mark Vaught	Signature: <i>Mark Vaught</i>	Date: 2/4/19		
2. LANDOWNER'S NAME/COMPANY State of Hawaii			Landowner's Contact Person Suzanne Case, BLNR Chair	Landowner's Phone (808) 587-0404
Landowner's Mailing Address State of Hawaii Department of Land and Natural Resources Kalanimoku Building 1151 Punchbowl Street Honolulu, Hawaii 96813			Tax Map Key Parcel(s) 11002002; 29009033; 29014001	Landowner's E-mail Address dlnr@hawaii.gov
Print Name: Suzanne Case	Signature: <i>Suzanne Case</i>	Date: 2/15/19		
3. LANDOWNER'S NAME/COMPANY			Landowner's Contact Person	Landowner's Phone
Landowner's Mailing Address			Tax Map Key Parcel(s)	Landowner's E-mail Address
Print Name:	Signature:	Date:		
4. LANDOWNER'S NAME/COMPANY			Landowner's Contact Person	Landowner's Phone
Landowner's Mailing Address			Tax Map Key Parcel(s)	Landowner's E-mail Address
Print Name:	Signature:	Date:		
5. LANDOWNER'S NAME/COMPANY			Landowner's Contact Person	Landowner's Phone
Landowner's Mailing Address			Tax Map Key Parcel(s)	Landowner's E-mail Address
Print Name:	Signature:	Date:		



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
STREAM DIVERSION WORKS
PERMIT APPLICATION

For Official Use Only:
RECEIVED
COMMISSION ON WATER
RESOURCE MANAGEMENT
2010 FEB -8 AM 11:02

Instructions: Please print in ink or type and send one (1) completed hardcopy and one (1) digital copy of the application with attachments to the Commission on Water Resource Management, P.O. Box 621, Honolulu, Hawaii 96809. Applications must be accompanied by a non-refundable filing fee of \$25.00 payable to the Department of Land and Natural Resources. The Commission may not accept incomplete applications without the required signatures. For assistance, call the Stream Protection and Management Branch at 587-0234. For further information and updates to this application form, visit <http://dlnr.hawaii.gov/cwrm>.

Check here to allow Commission staff to communicate primarily via e-mail.
 Legally required and other key correspondence will still be transmitted via postal mail.

PERMIT TYPE

1. Permit Status: New After-The-Fact
 2. Type of Construction: Installation Modification Removal / Abandonment

APPLICANT INFORMATION

3. APPLICANT'S NAME / COMPANY: East Maui Irrigation Company
 Applicant's Contact Person: Mark Vaught
 Applicant's Phone: (808) 579-9516
 Applicant's Mailing Address: PO Box 791628 Paia, Hawaii 96779
 Applicant's E-mail Address: mvaught@abhi.com

Check here if project will impact multiple landowners. If project impacts multiple landowners, skip Item 4 below, then complete and attach Form LND-APP to identify and verify landowner's approval of proposed stream diversion work.

4. LANDOWNER'S NAME / COMPANY: [Blank]
 Landowner's Contact Person: [Blank]
 Landowner's Phone: [Blank]
 Landowner's Mailing Address: [Blank]
 Landowner's E-mail Address: [Blank]

5. CONSULTANT'S NAME / COMPANY: N/A
 Consultant's Contact Person: [Blank]
 Consultant's Phone: [Blank]
 Consultant's Mailing Address: [Blank]
 Consultant's E-mail Address: [Blank]

6. CONTRACTOR'S NAME / COMPANY: N/A
 Contractor's Contact Person: [Blank]
 Contractor's Phone: [Blank]
 Contractor's Mailing Address: [Blank]
 Contractor's E-mail Address: [Blank]

STREAM INFORMATION

7. Island: (Check only one) Kauai Oahu Molokai Lanai Maui Hawaii
 8. Tax Map Key(s) List all affected tax map key parcels.
 28008007, 29008012, 29006001, 29006002, 29006004, 29009019, 29014009 (EMI)
 11002002, 29009033, 29014001 (State of Hawaii)
 9. Stream / Gulch Name(s) List all affected streams and/or gulches.
 Honopou, Hanehoi, Puolua, Pi'ina'au, Wailuanui

FOR OFFICIAL USE ONLY:
 SWHU ID: _____ FILE ID: _____
 LAT: _____ GWHU ID: _____ DOC ID: _____
 LON: _____ REACH ID: _____

GENERAL PROJECT INFORMATION

10. Diversion No: (if already assigned) see attached 11. Diversion Name: see attached

12. Project Site Location(s): Provide site coordinates of downstream-most point of project in degrees, minutes, seconds (NAD83).

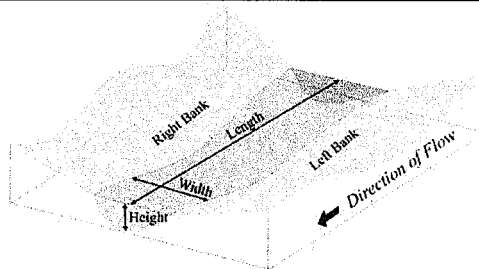
Latitude: see attached° ' " Longitude: see attached° ' " Elevation: see attached ft. above mean sea level

13. Diversion Structure Type: (Check all that apply)

- Unlined channel Hand-built rock Concrete masonry Dam/weir Pipe
 Metal Plastic Wood Pump Direct use
 Other - Describe: multiple; see attached

STREAM DIVERSION WORKS SPECIFICATIONS (For Abandonments, skip to Legal Requirements section, Item #32.)

14. Structure Dimensions: (feet) Width: _____
 Provide generalized dimensions for the entire project / structure area. If the project includes a pipe (e.g., culvert, drain, etc.), provide the pipe diameter. Height: _____
 Length: _____
 Diameter: _____



15. Diversion Location: Left bank (downstream view)
 Provide the general location of the diversion intake structure in relation to the streambank. Right bank (downstream view)
 Across entire stream channel

16. Intake Dimensions: (feet) Width: _____ Height: _____ Length: _____ Diameter: _____

17. Average diversion amount: (cubic feet per second)

18. Diversion is part of a system of diversions: Yes No19. Diverted flow can be controlled: Yes No

Control Dimensions: (feet) Width: _____ Height: _____ Length: _____ Diameter: _____

20. Water will be pumped from the stream: Yes No
 If yes, identify pump capacity: (gallons per minute) Daily average pumping time: (hours)

21. Water will be impounded in the stream channel: Yes No22. Water diversion capacity will be measured daily: Yes No

23. Water will be returned to the stream: Yes No
 If yes, average amount of return flow: (cubic feet per second)

24. Water will be stored off-stream: Yes No Storage capacity: (gallons)
 Describe storage facility:

25. State Land Use Classification: (Check all that apply) Agriculture Conservation Rural Urban**WATER USE INFORMATION**

Check all water use categories below that are intended for the proposed diversion, then describe the proposed use in more detail.

 26. Agriculture 27. Domestic 28. Industrial 29. Irrigation 30. Military 31. Municipal**LEGAL REQUIREMENTS**

If required, the permits or approvals below must be obtained before the Commission on Water Resource Management can legally issue a permit. Visit the Commission's Applications & Forms webpage (<http://dlnr.hawaii.gov/cwrm/info/forms/>) for links to agency websites/contact information.

32. Conservation District Use Permit (CDUP): To find out if your stream diversion works is located in a Conservation District (CD), you may visit to the Land Use Commission (LUC) website at <http://luc.hawaii.gov/maps> to view Land Use District Boundary maps. If the stream diversion works will be located in a CD, contact the Department of Land and Natural Resources' Office of Conservation and Coastal Lands (OCCL) at (808) 587-0377 to determine if a CDUP is required.

- Stream diversion works is in a Conservation District.
 Required. CDUP #: _____ Date CDUP approved: _____
 Not Required. Attach documentation from Office of Conservation and Coastal Lands (OCCL), Department of Land and Natural Resources.
 I have not checked with the OCCL about whether or not a CDUP is required.
 Stream diversion works is not in a Conservation District.

33. Special Management Area Permit (SMAP): To determine if an SMAP is necessary, contact your County Planning Department.

- Required. SMAP #: _____ Date SMAP approved: _____
- Not Required. Attach documentation from applicable County agency.
- I have not checked with the County about whether or not an SMA Permit is required.

34. State Historic Preservation Division (SHPD), Department of Land and Natural Resources: If the parcel(s) affected by the stream alteration has been reviewed by the State Department of Land and Natural Resources Historic Preservation Division (SHPD or through an OEQC Environmental Review, Special Management Area Permit, etc.), check "yes" and attach any relevant documentation from SHDP. If the affected parcel(s) has not undergone SHDP review, attach a photograph of the affected area, a schematic diagram (showing the location, access road and infrastructure for the alteration), and a short description of the prior use(s) of the land on which the alteration resides.

**Please note: You are strongly advised to contact the SHPD to obtain a pre-review of your project. In the event that you do not get an HP pre-review and if during the course of either review or the permit itself it is determined that you need SHPD's concurrence, your application or permit may be held in abeyance or denied until issues with HP are resolved. To contact SHPD, please call (808) 692-8015.*

- I have consulted the SHPD regarding potential impacts of stream channel alteration activities on historic sites. I have attached applicable documentation from the SHPD.
- I have not consulted with the SHPD regarding potential impacts of stream channel alteration activities on historic sites.

35. Chapter 343, Hawaii Revised Statutes, Hawaii Environmental Policy Act:

- An Environmental Assessment was completed, and
- An Environmental Impact Statement was required and has been accepted (attach letter of acceptance).
Publication date in The Environmental Notice: _____
- A Finding of No Significant Impact has been determined (attach letter).
Publication date in The Environmental Notice: _____

This project proposes:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Use of state or county lands, or use of state or county funds | <input type="checkbox"/> A wastewater treatment unit |
| <input checked="" type="checkbox"/> Use within a state conservation district | <input type="checkbox"/> Waste-to-energy facility |
| <input type="checkbox"/> Use within a shoreline setback area | <input type="checkbox"/> Landfill |
| <input type="checkbox"/> Use within a national or Hawaii registered historic site | <input type="checkbox"/> Oil refinery |
| <input type="checkbox"/> Use within the Waikiki Special District | <input type="checkbox"/> Power-generating facility |
| <input type="checkbox"/> The construction, expansion or modification of helicopter facility | <input type="checkbox"/> None of the above 11 items |

OTHER REGULATORY REQUIREMENTS

If the proposed stream channel alteration is subject to the following permits or approvals, indicate by checking the appropriate box below and submit either the approval letter from the appropriate agency or attach a copy of the application form. If the proposed stream channel alteration is not subject to the following permits or approvals, indicate by checking the "N/A" (Not Applicable) field.

	Attached	N/A
36. U.S. Army Corps of Engineers (Harbors and Rivers Act, Section 404, Clean Water Act)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
37. State Department of Health, Clean Water Branch (Section 401, Clean Water Act, Water Quality Certification, Best Management Practices Plan)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
38. Right-of-Entry or Right-of-Way Permit if the proposed stream channel alteration includes State lands. (Chapter 171, Hawaii Revised Statutes)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39. Hawaii Environmental Policy Act (Chapter 343, Hawaii Revised Statutes; Title 11, Chapter 200, Hawaii Administrative Rules)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
40. Soil and Water Conservation District	<input type="checkbox"/>	<input checked="" type="checkbox"/>
41. County Certification of "No-Rise"	<input type="checkbox"/>	<input checked="" type="checkbox"/>
42. County Grading Permit	<input type="checkbox"/>	<input checked="" type="checkbox"/>
43. County Discretionary Permit(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CULTURAL IMPACTS

Articles IX and XII of the State Constitution, other state laws, and the courts of the State, require government agencies to promote and preserve cultural beliefs, practices, and resources of Native Hawaiians and other ethnic groups. If there is not enough space available, please make a note in the field (e.g., "See attached") and attach all information with this application as requested.

44. Please provide the identity and scope of cultural, historical, and natural resources in which traditional and customary native Hawaiian rights are exercised in the area.

Refer to the following:

County of Maui Planning Department, Kalo Kanu O Ka'a'ina: A Cultural Landscape Study of Ke'anae and Wailuanui, Island of Maui, July 1995
 Kepa Maly and Onaona Maly, Wai O Ke Ola: He Wahi Mo'olelo No Maui Hikina, 2001

45. Identify the extent to which those resources, including traditional and customary Native Hawaiian rights, will be affected or impaired by the proposed action.

The proposed action will have a positive impact on stream resources due to the total restoration of flows in affected streams. This in turn will have a positive effect on traditional and customary Native Hawaiian rights, including but not limited to kalo cultivation in areas downstream of the diversions.

46. What feasible action, if any, could be taken by the Commission on Water Resource Management in regards to your application to reasonably protection Native Hawaiian rights?

The Commission's expedited approval of this application will advance the project's work schedule.

PROJECT DESCRIPTION

Please complete the following sections by providing detailed information on the project components identified below. If there is not enough space available, please make a note in the field (e.g., "See attached") and attach all information with this application as requested.

47. Describe the overall project scope and objectives.

This application is to allow the permanent abandonment of 15 stream diversion works, each of which is integral to its respective EMI ditch. Only the portion of each structure which causes water to be diverted from the corresponding stream into the ditch is being abandoned; the larger structures, including the irrigation ditches themselves, will continue to function to carry water diverted from other East Maui streams to off-stream users and are not being abandoned. Maintenance work on the existing structures to allow them to continue to operate as part of the EMI ditch system without diverting water from their respective streams has been or is being conducted under a determination made by the Commission on Water Resource Management (CWRM), dated October 16, 2018 (attached), that no Stream Channel Alteration Permit or Stream Diversion Works Permit is required. No additional work beyond the maintenance already approved is proposed for these abandonments.

48. Describe existing stream channel dimensions and median streamflow conditions at the site of the proposed stream diversion works.

Not applicable as no stream diversion works are proposed.

49. Identify and describe the project components outlined below

A. Materials

None. Maintenance work on the existing structures to allow them to continue to operate as part of the EMI ditch system without diverting water from their respective streams has been or is being conducted under a determination made by the Commission on Water Resource Management (CWRM), dated October 16, 2018, that no Stream Channel Alteration Permit or Stream Diversion Works Permit is required. This work principally involves the use of concrete/grout and stream rocks to seal diversion intakes. No additional work is proposed for these abandonments beyond the maintenance work already approved.

B. Quantities

None. Maintenance work on the existing structures to allow them to continue to operate as part of the EMI ditch system without diverting water from their respective streams has been or is being conducted under a determination made by the Commission on Water Resource Management (CWRM), dated October 16, 2018, that no Stream Channel Alteration Permit or Stream Diversion Works Permit is required. This work principally involves the use of concrete/grout and stream rocks to seal diversion intakes. No additional work is proposed for these abandonments beyond the maintenance work already approved.

C. Excavation

None. Maintenance work on the existing structures to allow them to continue to operate as part of the EMI ditch system without diverting water from their respective streams has been or is being conducted under a determination made by the Commission on Water Resource Management (CWRM), dated October 16, 2018, that no Stream Channel Alteration Permit or Stream Diversion Works Permit is required. This work principally involves the use of concrete/grout and stream rocks to seal diversion intakes. No additional work is proposed for these abandonments beyond the maintenance work already approved.

D. Fill

None. Maintenance work on the existing structures to allow them to continue to operate as part of the EMI ditch system without diverting water from their respective streams has been or is being conducted under a determination made by the Commission on Water Resource Management (CWRM), dated October 16, 2018, that no Stream Channel Alteration Permit or Stream Diversion Works Permit is required. This work principally involves the use of concrete/grout and stream rocks to seal diversion intakes. No additional work is proposed for these abandonments beyond the maintenance work already approved.

E. Disposal

None. Maintenance work on the existing structures to allow them to continue to operate as part of the EMI ditch system without diverting water from their respective streams has been or is being conducted under a determination made by the Commission on Water Resource Management (CWRM), dated October 16, 2018, that no Stream Channel Alteration Permit or Stream Diversion Works Permit is required. This work principally involves the use of concrete/grout and stream rocks to seal diversion intakes. No additional work is proposed for these abandonments beyond the maintenance work already approved.

F. Construction methods

None. Maintenance work on the existing structures to allow them to continue to operate as part of the EMI ditch system without diverting water from their respective streams has been or is being conducted under a determination made by the Commission on Water Resource Management (CWRM), dated October 16, 2018, that no Stream Channel Alteration Permit or Stream Diversion Works Permit is required. This work principally involves the use of concrete/grout and stream rocks to seal diversion intakes. No additional work beyond the maintenance already approved is proposed for these abandonments.

G. Temporary facilities

None. Maintenance work on the existing structures to allow them to continue to operate as part of the EMI ditch system without diverting water from their respective streams has been or is being conducted under a determination made by the Commission on Water Resource Management (CWRM), dated October 16, 2018, that no Stream Channel Alteration Permit or Stream Diversion Works Permit is required. This work principally involves the use of concrete/grout and stream rocks to seal diversion intakes. No additional work beyond the maintenance already approved is proposed for these abandonments.

H. Expected period of time required for construction

Maintenance work on the existing structures to allow them to continue to operate as part of the EMI ditch system without diverting water from their respective streams has been or is being conducted under a determination made by the Commission on Water Resource Management (CWRM), dated October 16, 2018, that no Stream Channel Alteration Permit or Stream Diversion Works Permit is required. This work is expected to be completed on all 15 diversions within nine months, weather permitting. No additional work beyond the maintenance already approved is proposed for these abandonments.

I. Liability during construction

None, as no further construction is proposed beyond the maintenance already approved.

50. Describe the project's consistency with county zoning and development plans.

Not applicable. No new uses are proposed.

51. Identify potential alternatives (sources of water) to the project and describe the relative costs and benefits of each alternative.

Not applicable. Project is intended to restore stream flow.

SUBMITTALS

Please submit the following plans, maps, or drawings in legible form, preferably on 8.5" by 11" sheets.

52. Location Map: Provide a location map of the proposed project relative to major roadways.

53. Plans / Elevations / Sections: Provide a plan view of the proposed stream diversion works structure in relation to the stream channel and property boundaries. Elevation and section views of the diversion structure in relation to the stream channel should also be provided if available.

SIGNATURES

Signing below indicates that the signatories understand and swear that the information provided is accurate and true to the best of their knowledge. Further, the signatories understand that if the permit requested is granted by the Commission on Water Resource Management (Commission), the permit shall be subject to the following conditions:

- 1) The proposed work is to be completed within two (2) years from the date of permit approval.
- 2) The permittee shall notify the Commission, by letter, of the actual dates of project initiation and completion.
- 3) The permittee shall submit a set of as-built plans and photographs to the Commission upon completion of the project.
- 4) The permit may be revoked if work is not started within six (6) months after the date of approval or if work is suspended or abandoned for six (6) months.
- 5) If the commencement or completion date is not met, the Commission may revoke the permit after giving the permittee notice of the proposed action and an opportunity to be heard.

54. APPLICANT

Print Name: Mark Vaught	Signature: 	Date: 2/4/19
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55. CONSULTANT

Print Name: NA	Signature:	Date:
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56. CONTRACTOR

Print Name: NA	Signature:	Date:
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57. LANDOWNER (If multiple landowners, skip Section 53, then complete and attach Form SCAP-LND with appropriate landowner signatures.)

Print Name: Suzanne Case	Signature: 	Date: 9/5/19
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CHECKLIST FOR A COMPLETE APPLICATION and ITEM DESCRIPTIONS (ITEMS 1 - 31)

- Fill in the most recent application form (check <http://dlnr.hawaii.gov/cwrm> or call 587-0234 for updates).
- Fill in every line which includes Items 1-57, as indicated (total 7 pages).
- Enclose a check for \$25 payable to the Department of Land and Natural Resources.
- Mark the proposed diversion location on: the appropriate USGS quad map, TMK map, photo and schematic, and attach to the application.
- Attach Form LND-APP to identify and obtain authorizations for the project if multiple landowners will be impacted.
- Attach a grading plan and cross section profiles showing existing and finish grades, if available.
- Attach documentation from CDUP, SMAP, SHPD when applicable regarding Items 32-34.
- Attach letters from U.S. Army Corps of Engineers, Hawaii Department of Health, Office of Conservation and Coastal Lands, and appropriate county agencies regarding Items 35-43.
- Provide digital copies on CD-ROM or via e-mail, if available.
- Obtain the necessary signatures for the application form.

Send the application and maps, copies, and the filing fee to:

Commission on Water Resource Management

P.O. Box 621

Honolulu, HI 96809

PERMIT TYPE

1. **Permit Status:** Indicate whether this application is for a new stream diversion works project (including medication or abandonment) or if the project has already been completed and an after-the-fact permit is being applied for.
2. **Type of Construction:** Is the permit application for the installation of a new diversion works or modification / abandonment of an existing diversion works.

APPLICANT INFORMATION

3. **Applicant's Information:** Fill in the information for the applicant. This should be the entity that will be responsible for operation and maintenance of the stream diversion works and for reporting water use when the project is completed.
4. **Landowner's Information:** Fill in the information for the landowner of the property where the diversion intake will be located.
5. **Consultant's Information:** Fill in the information for the consultant who will assist with plan and design preparation for the subject project.
6. **Contractor's Information:** Fill in the information for the contractor who will perform the work on the subject stream diversion works.

STREAM INFORMATION

7. **Island:** The island name where the stream diversion will be located.
8. **TMK:** Tax Map Key number (generally there is no lot number, but where a parcel is divided into two lots, fill in the lot number)
9. **Stream / Gulch Name:** Name of the stream or gulch where the stream diversion will be located.

GENERAL PROJECT INFORMATION

10. **Diversion Number:** If you already have a state diversion number assigned, please fill it out here. Otherwise, leave it blank and a diversion number will be assigned by CWRM.
11. **Diversion Name:** Give the diversion a short concise name that will differentiate it from other diversions.
12. **Project Site Location(s):** Fill in diversion location coordinates taken from a GPS unit at the project site. Units are Degrees, Minutes and Seconds (seconds should be filled out to at least one decimal place; e.g. 19°59'32.8"N, 155°14'51.5"W). If more than one site, attach separate sheet. Elevations should be provided in feet above mean sea level.
13. **Diversion Structure Type:** What materials will the diversion works structure consist of and how will it divert water from the stream.

DIVERSION SPECIFICATIONS (For Abandonment applications, skip this section and proceed to the Legal Requirements section, Item #32.)

14. **Structure Dimensions:** What are the physical dimensions of the stream diversion works structure that will be located in the stream channel?
15. **Diversion Location:** Will the diversion intake be located on the right or left bank (facing downstream) or across the entire stream channel?
16. **Intake Dimensions:** What are the physical dimensions for the stream diversion intake (gate, pipe, etc.)?
17. **Average Diversion Amount:** The average amount of water that the diversion is calculated / estimated to divert from the stream.
18. **Diversion is part of a system of diversions:** Is the diversion part of a larger system including multiple stream diversions?
19. **Diverted flow can be controlled:** Will a control structure be located on the intake that can be used to regulate the diversion (gate, valve, etc.)?
20. **Water will be pumped from the stream:** Will a pump be used to remove water from the stream, and if so, what is the pumpage rate?
21. **Water diversion will be impounded in the stream channel:** Will the diversion structure on the stream channel require impoundment?
22. **Water diversion capacity will be measured daily:** Will a meter or other measurement device be installed and recorded on a daily basis?
23. **Water will be returned to the stream:** Will a portion of the diverted water be returned to the stream, and if so, how much?
24. **Water will be stored off-stream:** Will the diverted water be stored in an off-stream facility (reservoir, basin, tank, etc.)? Describe.
25. **State Land Use Classification:** Identify the current State Land Use Classification.

WATER USE INFORMATION

26. **Agriculture:** Water used for aquaculture, crop irrigation and processing, livestock, ornamental and nursery plants, and taro.
27. **Domestic:** Water used for single- and multi-family households, non-municipal commercial businesses, hospitals, churches, hotels, and schools.
28. **Industrial:** Water used for fire protection, mining, dust control, geothermal, power development, and hydroelectric power.
29. **Irrigation:** Water used for golf courses, hotels, landscape and water features, parks, schools, and habitat maintenance.
30. **Military:** Water is used by the military for military-operated water supply systems.
31. **Municipal:** Water is State, county, or private agency-operated to service multiple uses.

Please see header descriptions for remaining Sections in completing Items 32 to 57.

NOTE: Please be aware that some information on this form asks for information in cubic feet per second (CFS). Conversion factors for other commonly used water flow rates are as follows:

1.0 million gallons per day (MGD) equals 1.547 cubic feet per second (CFS)

1.0 gallon per minute (GPM) equals 0.002228 cubic feet per second (CFS)

Attachment to Stream Diversion Works Permit Application
East Maui Irrigation Company, LLC

- Boxes 10 through 13: This application is for abandonment of multiple (15) existing diversions on multiple streams. See attached spreadsheet for details relating to individual diversions.
- Boxes 14 through 31: Not applicable to abandonments.
- Box 32: Two diversions covered by this application are located outside the Conservation District, while the remaining 13 are within the Conservation District. For those located within the Conservation District, no CDUP was required because the maintenance work conducted in connection with the abandonments was either exempt from permitting or required only a Site Plan Approval. A Site Plan Approval for the maintenance work was issued by OCCL on October 19, 2018 and is attached.
- Box 33: Two diversions covered by this application are located within the Special Management Area (SMA), while the remaining 13 are outside the SMA. For those located within the SMA, an SMA Assessment was issued by the County of Maui Department of Planning on November 27, 2017 and is attached, stating that no SMA Permit was required for the maintenance work conducted in connection with the abandonments.
- Box 34: Some diversions covered by this application are considered historic structures because they are more than 50 years old, but none are listed on either the State or National Register of Historic Places. While no formal consultation with SHPD was initiated for the maintenance work conducted in connection with the abandonments, consultation with SHPD has been completed for similar projects in the past. Relevant documentation is attached. Based on mitigation suggested for similar projects conducted previously, we anticipate SHPD recommendations for mitigation, if any, would be limited to scaled photographs of each diversion.
- Boxes 35 and 39: While portions of the proposed project will occur on state lands and/or within a state conservation district, the water diversions are existing uses and the proposed removal/abandonment of existing diversions is an exempt class of action under HAR Section 200-8(a)(8).
- Box 36: Maintenance work conducted in connection with the proposed abandonments is exempt from permitting under Section 404 of the Clean Water Act pursuant to Section 404(f)(1)(c) of the Act. For each project otherwise potentially subject to Section 404 permitting requirements, concurrence with this exemption has been obtained from the U.S. Army Corps of Engineers and is attached.

Attachment to Stream Diversion Works Permit Application
East Maui Irrigation Company, LLC

- Box 37: A Section 401 Water Quality Certification is not required for the maintenance work conducted in connection with the proposed abandonments because EMI is not an applicant for a federal license or permit to conduct these activities. Appropriate Best Management Practices are being implemented during the work.
- Box 38: No Right-of-Entry or Right-of-Way Permit is required for this project because all of the diversions on state land are existing diversions and EMI already has permission to access state land for the purpose of operating and maintaining these diversions.
- Box 52: Not applicable, as no new stream diversion works are proposed.

EMI Taro Stream Diversions

Hydrologic Unit	Stream	Possible Regulatory Approvals Required					DIVERSIONS BY DITCH					Approximate Location and Elev		
		Army Corps	DLNR-OCCL	SMA	CWRM category	EMI Map # REG	Parcel	Owner	Latitude (N)	Longitude (W)				
Honopou (6034)	Honopou	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P Subzone	Not in SMA	Maintenance work	W-22a minor	2-9-014:001	State of HI (FR)	20° 53' 07.60"	156° 14' 57.79"				
Honopou (6034)	Honopou	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P Subzone	Not in SMA	Maintenance work	NH-22 247.6	2-9-014:001	State of HI (FR)	20° 53' 11.00"	156° 15' 08.50"				
Honopou (6034)	Honopou	confirmed exempt under CWA 404(f)(1)(c)	Possible Site Plan - R Subzone/AG	Not in SMA	Maintenance work	NH-23 246.6	2-8-008:007	EMI	20° 53' 12.91"	156° 15' 26.59"				
Hanehoi (6037)	Hanehoi	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P Subzone	Not in SMA	Maintenance work	W-18 191.6	2-9-014:001	State of HI (FR)	20° 53' 00.90"	156° 13' 54.40"				
Hanehoi (6037)	Hanehoi	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P Subzone	Not in SMA	Maintenance work	NH-17 264.6	2-9-014:001	State of HI (FR)	20° 53' 04.20"	156° 13' 52.50"				
Hanehoi (6037)	Hanehoi	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - R Subzone	Not in SMA	Maintenance work	L-5 240.6	2-9-014:009	EMI	20° 53' 43.44"	156° 13' 27.40"				
Hanehoi (6037)	Hanehoi	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - R Subzone	Not in SMA	Maintenance work	L-6 242.6	2-9-009:019	EMI	20° 53' 49.05"	156° 13' 37.98"				
Hanehoi (6037)	Hanehoi	confirmed exempt under CWA 404(f)(1)(c)	Not in Conservation District	SMA exemption confirmed	Maintenance work	H-3 217.6	2-9-008:012	EMI	20° 54' 5.34"	156° 13' 26.57"				
Hanehoi (6037)	Puolua	confirmed exempt under CWA 404(f)(1)(c)	Possible Site Plan - R Subzone/AG	Not in SMA	Maintenance work	L-7 155.6	2-9-014:009	EMI	20° 53' 52.46"	156° 13' 40.00"				
Hanehoi (6037)	Puolua	confirmed exempt under CWA 404(f)(1)(c)	Not in Conservation District	SMA exemption confirmed	Maintenance work	H-4 225.6	2-9-006:001	EMI	20° 54' 11.76"	156° 13' 32.38"				
Pi'ina'au (6053)	Pi'ina'au	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - R Subzone	Not in SMA	Maintenance work	K-31 330.6	1-1-002:002	State of HI	20° 49' 42.53"	156° 10' 27.82"				
Wailuanui (6056)	Wailuanui (East and West)	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P Subzone	Not in SMA	Maintenance work	K-18 331.6	1-1-002:002	State of HI (FR)	20° 49' 14.09"	156° 08' 26.75"				
Wailuanui (6056)	Wailuanui (East and West)	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P Subzone	Not in SMA	Maintenance work	K-19 324.6	1-1-002:002	State of HI (FR)	20° 49' 20.42"	156° 08' 26.61"				
Wailuanui (6056)	Wailuanui (East and West)	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P Subzone	Not in SMA	Maintenance work	K-20 322.6	1-1-002:002	State of HI (FR)	20° 49' 22.70"	156° 08' 28.63"				
Wailuanui (6056)	Wailuanui (East and West)	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P/R Subzone	Not in SMA	Maintenance work	K-21 321.6	1-1-002:002	State of HI (FR)	20° 49' 28.71"	156° 08' 41.71"				



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

RFD.4893.6

October 16, 2018

Sean M. O'Keefe
Director, Environmental Affairs
Alexander & Baldwin
P.O. Box 266
Puunene, Hawaii 96784

Dear Mr. O'Keefe:

Request for Determination
Stream Diversion Works Maintenance
Honopou, Hanehoi, Puolua, Pi'ina'au, Wailuanu (East and West) Stream Flow Restoration at
Ko'olau, Wailoa, New Hamakua, Lowrie, and Ha'ikū Ditch Diversions

We are responding to your July 23, 2018, request for determination which proposes certain actions per the list below in order to be in compliance with the interim instream flow standards. Based on the information that you provided, the Commission on Water Resource Management (Commission) does not require a stream diversion works permit application to be submitted because maintenance of existing facilities are exempt from obtaining a permit per Hawaii Administrative Rules §13-169-50. We understand that your intent is to eventually abandon these diversions, but that the current work is intended to provide for intermediate restoration of streamflow until more permanent work can be performed.

Stream: Honopou

Diversion and ID: Lupi Long intake at Wailoa Ditch, W-22a (none).

Landowner TMK: (2) 2-9-014:001 (State).

Structure Type: Concrete masonry (with grate).

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout.

The amount of fill material (concrete/grout) is a few cubic feet in volume.

Stream: Honopou

Diversion and ID: New Hamakua Ditch intake, NH-22 (247.6).

Landowner: (2) 2-8-008:007 (EMI); (2) 2-9-014:001 (State).

Structure Type: Concrete masonry (with grate).

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout.

The amount of fill material (concrete/grout) is 1-2 cubic yards.

Stream: Honopou

Diversion and ID: Wailole intake New Hamakua Ditch, NH-23 (246.6).

Landowner: (2) 2-8-008:007 (EMI).

Structure Type: Concrete masonry (with grate).

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout.

The amount of fill material (concrete/grout) is about 1 cubic yard.

Stream: Hanehoi

Diversion and ID: Huelo #1 intake Lowrie Ditch, L-5 (240.6).

Landowner TMK: (2) 2-9-014:009 (EMI); (2) 2-9-009:019 (EMI).

Structure Type: Concrete masonry (with grate).

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout.

The amount of fill material (concrete/grout) is 3-5 cubic yards.

Stream: Hanehoi

Diversion and ID: Huelo intake Wailoa Ditch, W-18 (191.6).

Landowner TMK: (2) 2-9-014:001 (State).

Structure Type: Concrete masonry (with grate).

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout.

The amount of fill material (concrete/grout) is 1-2 cubic yards.

Stream: Hanehoi

Diversion and ID: Huelo intake New Hamakua Ditch, NH-17 (264.6).

Landowner TMK: (2) 2-9-014:001 (State).

Structure Type: Concrete masonry (with grate).

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout.

The amount of fill material (concrete/grout) is 1-2 cubic yards.

Stream: Hanehoi

Diversion and ID: Huelo #2 intake Lowrie Ditch, L-6 (242.6).

Landowner TMK: (2) 2-9-014:009 (EMI); (2) 2-9-009:019 (EMI).

Structure Type: Concrete masonry (with grate).

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout.

The amount of fill material (concrete/grout) is 1-2 cubic yards.

Stream: Hanehoi

Diversion and ID: Huelo #3 intake Lowrie Ditch, L-7 (155.6).

Landowner TMK: (2) 2-9-014:009 (EMI); (2) 2-9-009:019 (EMI); (2) 2-9-006:001 (EMI).

Structure Type: Concrete masonry (with grate).

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout.

The amount of fill material (concrete/grout) is 1-2 cubic yards.

Stream: Hanehoi

Diversion and ID: Pancho intake Ha'ikū Ditch, H-3 (217.6).

Landowner TMK: (2) 2-9-006:002 (EMI); (2) 2-9-008:012 (EMI); (2) 2-9-009:033 (State).

Structure Type: Concrete masonry (with grate and sluice gate).

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is 1-2 cubic yards. Sluice gate will be removed.

Stream: West Hanehoi (Puolua/Huelo)

Diversion and ID: School intake Ha'ikū Ditch, H-4 (225.6).

Landowner TMK: (2) 2-9-006:004 (EMI).

Structure Type: Concrete masonry (with grate and sluice gate).

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is about 1 cubic yard. Sluice gate will be removed.

Stream: Pi'ina'au (Palauhulu)

Diversion and ID: Intake at Ko'olau Ditch, K-31 (330.6)

Landowner TMK: (2) 1-1-2:002 (State).

Structure Type: Concrete masonry.

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is 1 cubic yard.

Stream: Wailuanui (East and West)

Diversion and ID: #6 intake and sluice basin at Ko'olau Ditch, K-18 (331.6).

Landowner TMK: (2) 1-1-2:002 (State).

Structure Type: Concrete masonry.

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is 1 cubic yard. Sluice gate will be removed.

Stream: Wailuanui (East and West)

Diversion and ID: #6 control house intake at Ko'olau Ditch, K-19 (324.6).

Landowner TMK: (2) 1-1-2:002 (State).

Structure Type: Concrete masonry with grate.

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is 1-2 cubic yards.

Stream: Wailuanui (East and West)

Diversion and ID: #7 intake at Ko'olau Ditch, K-20 (322.6).

Landowner TMK: (2) 1-1-2:002 (State).

Structure Type: Concrete masonry.

Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is 1 cubic yard. Control gate has been removed.

Stream: Wailuanui (East and West)

Diversion and ID: #9 intake at Ko'olau Ditch, K-21 (321.6).

Landowner TMK: (2) 1-1-2:002 (State).

Structure Type: Concrete masonry

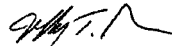
Proposed Work: Prevent flow into the ditch by filling the grate openings with concrete/grout.

The amount of fill material (concrete/grout) is 1-2 cubic yards. Sluice gate will be removed.

The Commission's Stream Protection and Management Branch has the responsibility to protect stream channels from alteration whenever practicable to provide for fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses in the State under the authorization of the State Water Code, HRS Chapter 174C, and HAR Chapter 13-169, Protection of Instream Uses of Water. The Commission requires that a permit be approved prior to undertaking a stream channel alteration, however, routine streambed and drainageway maintenance activities are exempt from obtaining a permit.

Please be advised that the project may require other agency approvals regarding wetlands, water quality, grading, stockpiling, and floodways. This letter should not be used for other regulatory jurisdictions or used to imply compliance with other federal, state, or county rules. Work performed without appropriate permits or authorizations may be subject to fines and/or remedial actions. If you have any questions, contact Rebecca Alakai at 587-0266, or rebecca.r.alakai@hawaii.gov.

Sincerely,



JEFFREY T. PEARSON, P.E.
Deputy Director



ALEXANDER & BALDWIN
PARTNERS FOR HAWAII

July 19, 2018

Mr. Jeff Pearson
Deputy Director, Commission on Water Resource Management
Hawaii Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Subject: Maintenance Work on East Maui Irrigation Company Diversions

Dear Mr. Pearson:

As you know, East Maui Irrigation Company (EMI) has previously submitted to the Commission on Water Resource Management (CWRM) a Stream Diversion Works Permit Application (SDWPA) for the abandonment of seventy of its existing irrigation system stream diversions in furtherance of its commitment to make existing stream flow restorations in several East Maui “taro streams” complete and permanent. Concurrently, EMI has made submittals to other governmental agencies (specifically, the Office of Conservation and Coastal Lands (OCCL), the United States Army Corps of Engineers (USACE), and the County of Maui Department of Planning) to secure approvals for the work to proceed. Pursuant to guidance from your office, EMI is now in the process of amending its original application to CWRM in order to facilitate your review and approval of the proposed work. This submittal is the first of four in that process.

Recently, CWRM amended Interim In-Stream Flow Standards (IIFS) for twenty-five East Maui Streams. For each of the “taro streams” addressed in our submittals, the amended IIFS calls for full flow restoration at a specified location in the stream. Besides meeting the voluntary commitments EMI made to restore flow in these seven “taro streams”, EMI’s implementation of temporary measures (i.e., that did not require modifications to the diversions) aimed at flow restoration soon after that commitment was made, along with our ongoing efforts to obtain the necessary approvals to make these flow restorations complete and permanent, are anticipated to accelerate achievement of the new regulatory requirements imposed by the June 20, 2018 Decision and Order.

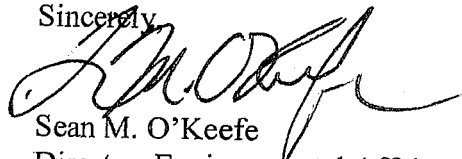
This submittal describes work proposed to be conducted at fifteen diversions, located on six streams, at which the intake structure is integral to the associated irrigation ditch. A detailed description of the work at each diversion can be found in our October 6, 2017 letter to USACE, which has previously been provided to your office. The major EMI ditches are expected to continue to operate to transport irrigation water from East Maui to off-stream users, and the proposed work is necessary in order to permanently and completely prevent any diversion of water into the ditches at these locations while allowing the ditches to continue to serve their

intended purpose. Because the associated ditches could not continue to function in compliance with applicable regulatory requirements (specifically, the amended IIFS) without the proposed work, we view this work to be normal and essential maintenance of these existing structures. Accordingly, EMI understands that the proposed work to be conducted at these fifteen diversions, as described in the submittal to USACE¹, requires neither a Stream Channel Alteration Permit under Hawaii Administrative Rules (HAR) Chapter 11-169 nor a Stream Diversion Works Permit under HAR Chapter 13-168 in order to proceed.

EMI requests your written concurrence with our determination that no permits are required from your office for the work proposed herein. EMI is anxious to proceed with the work as expeditiously as possible, and we look forward to your favorable reply.

If you have any questions or comments regarding this request, please feel free to contact me at (808) 877-2959.

Sincerely,



Sean M. O'Keefe
Director, Environmental Affairs
Alexander & Baldwin, Inc.

Attachments

Request for Determination Form

Table of EMI Taro Stream Diversions with General Description of Work

Excerpt from October 2017 USACE submittal - Honopou Stream diversions

Excerpt from October 2017 USACE submittal - Hanehoi/Puolua Stream diversions

Excerpt from October 2017 USACE submittal - Pi'ina'au Stream diversion

Excerpt from October 2017 USACE submittal - East and West Wailuanui Stream diversions

cc: J. Schreck, D. Strand, M. Vaught, M. Ching, N. Chun, Y. Izu

¹ For ease of reference, relevant excerpts from the USACE submittal are provided as attachments to this letter. Where appropriate, revisions to the submittal have been made to correct typographical errors in the original and to reflect minor changes in the description of the proposed work.



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT**

REQUEST FOR DETERMINATION

RECEIVED
COMMISSION ON WATER RESOURCE MANAGEMENT
2010 FEB -8 AM 11:03

Instructions: Please print in ink or type and send completed form with any attachments to the Commission on Water Resource Management via mail to P.O. Box 621, Honolulu, Hawaii 96809; or via e-mail to dlnr.cwrm@hawaii.gov. For assistance, call the Stream Protection and Management Branch at 587-0234. For further information and updates to this application form, visit <http://hawaii.gov/dlnr/cwrm>.

The purpose of this form is to request that a determination be made for a proposed stream-related project. Based upon the information provided, the Commission staff shall review the request and make a determination whether a Stream Channel Alteration Permit or Stream Diversion Work Permit will be required prior to the project being initiated. Information should be as complete and accurate as possible so that a determination can be made in a timely and efficient manner. For more information, refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Chapter 13-169, Hawaii Administrative Rules (Protection of Instream Uses of Water).

CONTACT INFORMATION

Name / Company: Sean M. O'Keefe/Alexander & Baldwin, Inc.		Mailing Address: PO Box 266 Puunene, Hawaii 96784	
Phone Number: 808.877.2959	Fax Number: 808.871.7663	E-mail Address: sokeefe@hcsugar.com	<input checked="" type="checkbox"/> Check here to allow Commission staff to communicate primarily via e-mail. Legally required and other key correspondence will still be transmitted via postal mail.

PROJECT INFORMATION

Island: (Check only one) Kauai Oahu Molokai Lanai Maui Hawaii

Tax Map Key(s):
multiple TMK's; see attached table

Stream / Gulch Name(s):
multiple streams; see attached table

Describe the Project Location:
Please provide a map, property address, GPS coordinates, and photo(s) of the proposed location identified if possible. Attach additional pages if needed.
The project location is as described on the attached tables and maps.

Describe the Proposed Project:
Provide a detailed description of the project. If possible, attach a simple design plan of the project in relation to the stream. Attach additional pages if needed.
The proposed project involves maintenance of existing stream diversions/irrigation ditches for the purpose of allowing the ditches to continue to operate without diverting water at the locations specified. A detailed description of the proposed project is attached.

FOR OFFICIAL USE ONLY:	SWHU ID: _____	FILE ID: _____
LAT: _____	GWHU ID: _____	DOC ID: _____
LON: _____	REACH ID: _____	

DAVID Y. IGE
GOVERNOR OF
HAWAII



SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

OFFICE OF CONSERVATION AND COASTAL LANDS
POST OFFICE BOX 621
HONOLULU, HAWAII 96809

REF: OCCL: AJR

SPA: MA-18-23

Sean O'Keefe
c/o East Maui Irrigation Company, Inc.
P.O. Box 266
Pu'unene, HI 96784

OCT 19 2018

SUBJECT: SITE PLAN APPROVAL (SPA) MA-18-23 FOR THE ABANDONMENT OF EXISTING WATER DIVERSIONS
Makawao and Hana Districts, Island of Maui
TMKs: (2) 2-9-014:001, 009; 2-8-008:007; 2-9-004:038, 039, 042; 2-9-006:004, 033 and (2) 1-1-002:002

Dear Mr. O'Keefe,

The Office of Conservation and Coastal Lands (OCCL) is in receipt your Site Plan Approval (SPA) application for a proposal to abandon thirty-three (33) existing stream diversions located on the subject parcels in the Makawao and Hana Districts, Island of Maui (**Exhibit 1**). For reference the project areas are located within the State Land Use (SLU) Conservation District, *Resource* and *Protective* Subzones (**Exhibit 2**).

EXISTING CONDITIONS:

The East Maui Irrigation Company (EMI) operates an extensive ditch system which diverts water from numerous East Maui streams to provide irrigation water for agricultural operations in Central Maui. The ditch system has been in use for over 100 years and is considered a legally non-conforming use established in the Conservation District. This proposal includes multiple sites within four (4) hydrologic units of east Maui: 1) Honopou, 2) Hanehoi (Puoloa), (**Exhibit 3**) 3) Pi'ina'au (Palauhulu), and 4) East and West Wailuanui (**Exhibit 4**). Within the four (4) hydrological units there are approximately 33 sites (i.e., stream diversions) that require attention within the SLU Conservation District. Staff notes that other diversions and work is being proposed, but occurs outside the Conservation District and therefore is not included in this approval. The following section provides a description of the overall hydrologic unit, as specific site conditions are not available. Most discussions were obtained via the various *Instream Flow Standard Assessment Report(s)* compiled for each of the following hydrologic units.

(1) *Honopou*

The hydrologic unit of Honopou is situated on the windward flank of the East Maui Volcano (**Exhibit 5**). The hydrologic unit receives near-daily orographic rainfall of 170-190 inches per year in the upper slopes, with little or no rainfall near the coast.

The surface geology of the Honopou hydrologic unit is characterized by Kula volcanics, which are mainly a'a flows (lava characterized by jagged, sharp surfaces with massive, relatively dense interior). Honopou consists largely of soils that are fairly permeable, except for parts of the mauka (landward) section of the hydrologic unit. In that section, some ridge areas are poorly drained, meaning that water does not move quickly through the soil and the soil remains wet for long periods. The remainder of the hydrologic unit consists of well-drained soils; thus, allowing rainwater to feed both streams and ground water.

The land cover of Honopou consists mainly of forested areas. More than half of the hydrologic unit is made up of alien forests, with some native Koa-Ōhia forests that spread throughout the upper slopes as part of the Ko'olau Forest Reserve. A mixture of uluhe shrub lands, alien grasslands, and low intensity developed areas covers the intermediate slopes. Small farms can be found at lower altitudes near the coast in support of small-scale agriculture.

According to public hunting data, *Hunting Unit B* on the island of Maui consists of portions of the Ko'olau Forest Reserve. The portion of the hunting area unit within the Honopou hydrologic unit is approximately 0.63 square miles or 23.5 percent of the hydrologic unit. A permit is required for the hunting of wild pigs and goats, using rifles, shotguns, bows and arrows, and dogs.

According to a 1990 Hawaii Coastal Zone Management Program Hawaiian Fishpond Study for the Islands of Hawaii, Maui, Lanai, and Kauai, there are no fishponds present in the Honopou hydrologic unit.

(2) Hanehoi

The hydrologic unit of Hanehoi is located in the northwest section of the East Maui Volcano (Haleakala), which forms the eastern part of the Hawaiian island of Maui (**Exhibit 6**). It covers an area of 1.41 square miles on the lower slopes of Haleakala from 1,361 feet elevation to the sea. Hanehoi Stream is 3.2 miles in length, traversing in a northeasterly direction from its headwaters originating in the Ko'olau Forest Reserve at 1,200 feet to Hoalua Bay.

The geology of the Hanehoi hydrologic unit is characterized by Kula volcanics, which are mainly flows of a'a. The Hanehoi hydrologic unit, the head of which is at about 2,250 feet elevation, consists largely of soils that are fairly permeable. The upper section of the unit, however, from the head to near the New Hāmākua Ditch, consists of soils of the Honomanu-Amalu association. About 60 percent of the association are well-drained soils, occurring on the steeper slopes. The other 40 percent, occurring on less sloping tops of ridges and interfluves (regions of higher land between valleys in the same hydrologic unit) are poorly drained. The hydrologic unit of Hanehoi lies within the Honopou aquifer system that has an area of 17.8 square miles.

The land cover of Hanehoi consists mainly of forested areas. Over half of the hydrologic unit is made up of alien forests that spread throughout the upper slopes as part of the Ko'olau Forest Reserve. A mixture of Ōhia forests and uluhe shrub lands can be found at intermediate slopes. Alien grasslands cover a majority of the lower altitudes near the coast with very little urban or industrial developments. There is no major residential development within the unit, making population relatively small. The recreational resources of Hanehoi Stream were classified as "limited" by the regional recreation committee, having no identified recreational opportunities listed or observed.

(3) Pi'ina'au

The hydrologic unit of Pi'ina'au is located on the northeast slope of East Maui Volcano (Haleakala), which forms the eastern part of the Hawaiian island of Maui (**Exhibit 7**). Pi'ina'au Stream is 13.1 miles in length, traversing in a northeasterly direction from its headwaters originating in the Waikamoi Preserve to Waiāhole Pond before entering the ocean.

A vast majority of the Pi'ina'au hydrologic unit's surface geology consists of permeable basalts. The entire length of the hydrologic unit is composed predominantly of basalts of the Hana volcanic series, with some lavas of the older Kula volcanic series near the hydrologic unit boundary. The soils of the Pi'ina'au hydrologic unit are generally permeable with low to moderate runoff and erosion. In other words, rain water will generally descend from the surface fairly well into the soils and the underlying lava, with low to moderate amounts running off the surface, except when the ground is saturated, at which times water will run off more rapidly. The hydrologic unit of Pi'ina'au lies within the Keanae aquifer system, which has an area of 55.6 square miles.

The land cover of Pi'ina'au consists mainly of forested areas. Approximately half of the hydrologic unit is made up of native Ōhia forests that spread throughout the intermediate slopes as part of the Ko'olau Forest Reserve and Waikamoi Preserve. The lower half of Pi'ina'au is dominated by alien forests with a mixture of alien grasslands. The upper slopes are part of the Haleakala National Park, where a majority of the area is classified as bare land with little or no vegetation.

The recreational resources of Pi'ina'au Stream were classified as "outstanding" by the Hawaiian Islands regional recreation committee; however, Pi'ina'au was not ranked as one of the outstanding streams statewide. The committee identified opportunities for hiking, fishing, swimming, hunting, nature study, and scenic views related to Pi'ina'au.

The watershed for Pi'ina'au stream contains Waiāhole pond which is the largest estuarine pond surveyed on the island of Maui. Palauhulu (a tributary of Pi'ina'au) and Pi'ina'au streams join above Waiāhole Pond which flows to the ocean during moderate flows. Depending upon large ocean swells, a berm of sand and boulders often blocks water from flowing into the ocean.

(4) East-West Wailuanui

The hydrologic unit of Wailuanui is located on the northeast slope of East Maui Volcano (Haleakala), which forms the eastern part of the Hawaiian island of Maui (**Exhibit 8**). It covers an area of 6 square miles from the upper slopes of Haleakala at 8,891 feet elevation to the sea.

Wailuanui Stream is 6.4 miles in length with two main tributaries, West Wailuanui and East Wailuanui.

The surface geology of the vast majority of the Wailuanui hydrologic unit is characterized by permeable lavas; the older Kula volcanics and Hana volcanics.

The soils of the Wailuanui hydrologic unit are mostly well-drained. The head of the hydrologic unit consists of cinders, rock outcrops, and very stony and rough mountainous land with little soil cover. Some of the land is very steeply sloping. The middle section of the hydrologic unit is characterized by soils that developed in volcanic ash and material weathered from cinders and basic igneous rock. The slope varies greatly so the soils range from well- to poorly-drained. Because of their ability to absorb water and to transmit it rapidly, these soils are important for maintenance of ground water for domestic use and irrigation.

The land cover of Wailuanui consists mainly of forested areas. Approximately half of the hydrologic unit is made up of native Ōhia forests that spread throughout the intermediate slopes as part of the Ko'olau Forest Reserve and Waikamoi Preserve. The lower half of Wailuanui is dominated by alien forests with a mixture of alien grasslands. The upper slopes are part of the Haleakala National Park where a majority of the area is classified as bare land with little or no vegetation.

The recreational resources of Wailuanui Stream were classified as “outstanding” by the regional recreation committee; however, it was not ranked as one of the outstanding streams statewide. The committee identified opportunities for fishing, hunting, swimming, and scenic views related to East and West Wailuanui

PROPOSED USE:

The applicant, East Maui Irrigation Company (EMI), is proposing to abandon 33 existing stream diversions within the four (4) hydrologic units described above and shown in **Exhibit 2**. A *Stream Diversion Works Permit Application* for the proposed abandonments has been submitted to the *Commission on Water Resource Management (CWRM)* for review and processing. All of the diversions proposed for abandonment are listed below the corresponding hydrologic unit; a short description of the procedures for abandonment at each site are also provided. Exhibits provided detail examples of the proposed work as closure procedures are repeated:

(1) Honopou

W-22a: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate opening with concrete/grout, or by bolting a steel plate over the grate opening (**Exhibit 9**).

W-22: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate with concrete/grout, or by bolting a steel plate over the grate opening.

NH-22: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate with concrete/grout, or by bolting a steel plate over the grate opening.

W-22b: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate with concrete/grout, or by bolting a steel plate over the grate opening.

NH-23: The grate in the diversion is proposed to be sealed. This will occur via filling the grate opening with concrete/grout and stream rocks.

(2) *Hanehoi (Puolua)*

L-5a: In order to prevent flow from being intercepted by the ditch, a concrete “stream overpass” will be constructed to permit flow over the channel and continue downstream (**Exhibit 10**).

L-5: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate with concrete/grout, or by bolting a steel plate over the grate opening.

W-18: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate with concrete/grout, or by bolting a steel plate over the grate opening.

NH-17: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate with concrete/grout.

L-5b: In order to prevent flow from being intercepted by the ditch, a concrete “stream overpass” will be constructed to permit flow over the channel and continue downstream.

L-5c: In order to prevent flow from being intercepted by the ditch, a concrete “stream overpass” will be constructed to permit flow over the channel and continue downstream.

L-6: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate with concrete/grout, or by bolting a steel plate over the grate opening.

L-7: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate with concrete/grout, or by bolting a steel plate over the grate opening.

NH-17a: In order to prevent flow from being intercepted by the ditch, a concrete “stream overpass” will be constructed to permit flow over the channel and continue downstream

(3) *Pi'ina'au (Palauhulu)*

K-26: Most flow will be restored at this diversion by the removal of a sluice gate.

K-27: Scope of work for full restoration has not been determined, although all work is proposed within the diversion tunnel, not in the stream.

K-28: Scope of work for full restoration has not been determined, although all work is proposed within the diversion tunnel, not in the stream.

K-29: Scope of work for full restoration has not been determined, although all work is proposed within the diversion tunnel, not in the stream.

K-30: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate with concrete/grout, or by bolting a steel plate over the grate opening.

K-29a: The diversion tunnel will be sealed with rock and concrete; all work will occur within the diversion tunnel.

K-30a: A concrete catchment basin captures seepage and routes it to a ditch via a pipe; the pipe will be removed.

K-30b: A concrete and stone dam/ditch routes a tributary into the ditch; the diversion dam will be removed from the stream and deposited off site.

K-30c: A concrete catchment basin captures seepage and routes it to a ditch via a pipe; the pipe will be removed.

K-30d: In order to prevent flow from being intercepted by the ditch, a concrete "stream overpass" will be constructed to permit flow over the channel and continue downstream.

K-31a: A tributary is diverted and routed to the main Pi'ina'au intake via a pipe; the pipe will be removed.

K-31: In order to prevent flow into the ditch via this diversion, the intake openings will be sealed with stream rocks and concrete (**Exhibit 11**).

(4) East/West Wailuanui

K-18: In order to prevent flow into the ditch via this diversion, the intake openings will be sealed with stream rocks and concrete

K-19: The grate in the diversion is proposed to be sealed. This will occur via filling of the grate with concrete/grout, or by bolting a steel plate over the grate opening.

K-19a: A submerged three (3) inch aluminum pipe collects water from a tributary; the pipe will be removed completely.

K-20: In order to prevent flow into the ditch via this diversion, the intake openings will be sealed with stream rocks and concrete

K-20a: This diversion consists of a concrete masonry wall which captures seepage via a pipe; the pipes will be completely removed.

K-21: In order to prevent flow into the ditch via this diversion, the intake openings will be sealed with stream rocks and concrete, and a sluice gate will be closed (**Exhibit 12**).

K-21a: This diversion consists of a rock wall which captures seepage via a pipe; the pipes will be completely removed.

The existing ditch system will remain in use to continue to provide irrigation water from other diverted streams for agricultural and other existing uses. No secondary improvement or expansion of the ditch or conveyance system are proposed.

DISCUSSION:

OCCL staff, along with representatives of EMI, Inc., CWRM, DOFAW, and DAR visited a number of diversion sites to better understand this proposed process, and discussed what each division was hoping to obtain through this approval. OCCL staff notes that the proposed project is just the beginning of the stream improvements, and includes only a portion of the overall diversions to be addressed (most of which lie outside the Conservation District).

At high flows, stream diversions are overtopped and streamflow is continuous from the upper reaches to the sea. When flow returns to normal level, diversions could quickly remove water from the stream, leaving sections dry. These diversions may prevent the upstream migration of native stream animals, restrict surviving adult animals to the disconnected deep pools, and could cause post larvae recruits to be stranded at the stream mouth. The diversions also have significantly reduced baseflows in the stream, limiting overall habitat for native species. Restoration of streamflow and increased connectivity could lead to the development of a more native-dominated community in the stream.

It has been stated by the applicant and others that the east Maui watershed is the single largest source of surface water in the state, and is home to some of the most intact and extensive native forests left in Hawaii (along with having the State's largest concentration of endangered forest birds).

The maintenance of instream flows is important to the protection of traditional and customary Hawaiian rights, as they relate to the maintenance of stream resources (e.g., *hihiwai*, *opae*, *o'opu*) for gathering, recreation, and the cultivation of taro.

ANALYSIS:

The abandonment of existing stream diversion structures with minor construction and maintenance is considered an identified land use in the Conservation District Resource and Protective Subzones pursuant to Hawaii Administrative Rules (HAR) §13-5-22 P-8, **STRUCTURES AND LAND USES, EXISTING (B-1) Demolition, removal, or minor alteration of existing structures, facilities, land, and equipment. Any historic properties shall be evaluated by the department for historical significance;**

As this proposed project involves the closure or abandonment of existing stream diversions for the purposes of improving stream flow, water quality, and habitat of streams located in East Maui, Staff believes the proposal is exempt from requiring an environmental assessment pursuant to HAR §11-200-8, and the department exemption list: **DLNR Exemption Class 8 (2)** – *Demolition and removal or existing structures, facilities, utilities, and other improvements on state lands, except those structures located on any historic site as designated in the National Register or Hawaii Register as provided for in the National Historic Preservation Act of 1966.*

OCCL staff notes that the aforementioned exemption classification was reviewed by the Department of Land and Natural Resources (DLNR) Commission on Water Resource

Management (CWRM). The CWRM confirms the exemptions and will continue to process the *Stream Diversion Works Permit Application*.

Authorization is hereby granted to EMI to conduct abandonment and closure activities at thirty-three (33) existing stream diversions located in East Maui, Hana and Makawao Districts, on *TMK(s): (2) (2) 2-9-014:001, 009; 2-8-008:007; 2-9-004:038, 039, 042; 2-9-006:004, 033 and (2) 1-1-002:002*. This authorization is subject to the following terms and conditions:

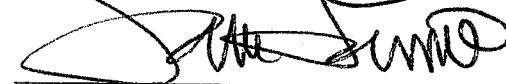
1. The permittee shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, state, and county governments, and applicable parts of this chapter;
2. The permittee, its successors and assigns, shall indemnify and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, and death arising out of any act or omission of the applicant, its successors, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit;
3. The permittee shall obtain appropriate authorization from the department for the occupancy of state lands, if applicable;
4. The permittee shall comply with all applicable department of health administrative rules;
5. Unless otherwise authorized, any work or construction to be done on the land shall be initiated within one (1) year of the approval of such use, and shall be completed within three (3) years of the approval of such use. The permittee shall notify the department in writing when construction activity is initiated and when it is completed;
6. The permittee understands and agrees that the permit does not convey any vested right(s) or exclusive privilege;
7. In issuing the permit, the department and board have relied on the information and data that the permittee has provided in connection with the permit application. If, subsequent to the issuance of the permit such information and data prove to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and the department may, in addition, institute appropriate legal proceedings;
8. When provided or required, potable water supply and sanitation facilities shall have the approval of the department of health and the county department of water supply;
9. Provisions for access, parking, drainage, fire protection, safety, signs, lighting, and changes on the landscape shall be provided;
10. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the permittee shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
11. Obstruction of public roads, **trails**, lateral shoreline access, and pathways shall be avoided or minimized. If obstruction is unavoidable, the permittee shall provide alternative roads, trails, lateral beach access, or pathways acceptable to the department;

- 12. During construction, appropriate mitigation measures shall be implemented to minimize impacts to off-site roadways, utilities, and public facilities;
- 13. **Cleared areas shall be revegetated**, in accordance with landscaping guidelines provided in this chapter, **within thirty days** unless otherwise provided for in a plan on file with and approved by the department;
- 14. Use of the area shall conform with the program of appropriate soil and water conservation district or plan approved by and on file with the department, where applicable;
- 15. The permittee acknowledges that the approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native Hawaiians in the immediate area, to the extent the practices are provided for by the Constitution of the State of Hawaii, and by Hawaii statutory and case law; and
- 16. Other terms and conditions as prescribed by the chairperson.
- 17. Failure to comply with any of these conditions shall render a permit void under the chapter, as determined by the chairperson or board.

Please acknowledge receipt of this approval, with the above noted conditions, in the space provided below. **Please sign both copies, keep one and send the other copy to the Office of Conservation and Coastal Lands, P.O. Box 621, Honolulu, HI, 96809.**

Should you have any questions, please feel free to contact Alex J. Roy of our Office of Conservation and Coastal Lands staff at 808-587-0316 or via email at alex.j.roy@hawaii.gov

Sincerely,



Samuel J. Lemmo, Administrator
Office of Conservation and Coastal Lands

Receipt acknowledged:

Applicant's Signature

Date

CC: *Chairperson*
 CWRM

Attachments: *Exhibits 1-12 (12 pgs.)*



ALEXANDER & BALDWIN, INC.

October 9, 2017

Mr. Sam Lemmo
Hawaii Department of Land and Natural Resources
Office of Conservation and Coastal Lands
Kalanimoku Building
1151 Punchbowl St., Room 131
Honolulu, HI 96813

Subject: Abandonment of Water Diversions in East Maui Streams

Dear Mr. Lemmo:

East Maui Irrigation Company, LLC (EMI), a subsidiary of Alexander & Baldwin, LLC (A&B), has committed to permanently restoring flow in seven streams in East Maui that have historically been diverted for the irrigation of sugarcane (Honopou, Hanehoi/Puolua, Pi'ina'au, Palauhulu, Waiokamilo, and East and West Wailuanui Streams). A Stream Diversion Works Permit Application for abandonment of the diversions (copy attached) was submitted to the State of Hawaii Commission on Water Resource Management (CWRM) in 2016, and flow has been substantially restored in each of the streams primarily through operation of the diversions, while flow in Waiokamilo Stream was permanently restored in 2007. In order to make the flow restorations in the remaining six streams permanent, EMI needs to make alterations to 41 diversions located in or near these streams. Because the majority of the major diversion structures are integral to the associated irrigation ditches, and because these ditches will remain in operation for the foreseeable future transporting irrigation water from other East Maui streams, in most cases the diversions cannot be completely removed without compromising the integrity of the ditch.

Of the 41 diversions to be abandoned, 34 are known or suspected to be located within the Conservation District Protective (P) and Resource (R) subzones. The enclosed Site Plan Approval Application includes a listing of all of the diversions to be abandoned, including those located outside of the Conservation District, and the enclosed correspondence with the U.S. Army Corps of Engineers details the work EMI proposes to complete in order to abandon each of the diversions.

Each of the subject diversion structures is associated with one of four existing irrigation ditch systems (i.e., the Koolau/Wailoa, New Hamakua, Lowrie, and Haiku Ditches) which historically provided water to the former Hawaiian Commercial and Sugar Company (HC&S) plantation and to other Maui farming operations. These ditch systems have been in operation more than 100 years and are all nonconforming uses established prior to October 1, 1964. EMI intends to continue providing irrigation water from other existing diversions via these ditches for ongoing agricultural operations on the former HC&S lands and elsewhere. The proposed work is

necessary to allow the ditches to continue to operate without diverting any water from the subject streams and their tributaries.

Under Hawaii Administrative Rules (HAR) Chapter 13-5, Conservation District, identified land uses within the P and R subzones which require no permit from the department or board include the following:

- P-8 Structures and Land Uses, Existing
- (A-1) Minor repair, maintenance, and operation to an existing structure, facility, use, land, and equipment, whether it is nonconforming or permitted, that involves mostly cosmetic work or like-to-like replacement of component parts, and that results in negligible change to or impact to land, or a natural and cultural resource.

Also under HAR Chapter 13-5, identified land uses within the P and R subzones which require a Site Plan Approval from the department include the following:

- P-8 Structures and Land Uses, Existing
- (B-1) Demolition, removal, or minor alteration of existing structures, facilities, land, and equipment.

- P-9 Structures, Accessory
- (B-1) Construction or placement of structures accessory to existing facilities or uses.

EMI believes that the proposed work can be classified as “minor repair, maintenance, and operation to an existing structure” because the work is necessary to maintain the ditch systems in a condition that will allow them to continue to operate without diverting water from the subject streams, and because the work will result in negligible change to or impact to land or a natural or cultural resource. Alternatively, EMI believes that the proposed work can be classified as “minor alteration of existing structures, facilities, land, and equipment” because the work within the Conservation District affects only a small portion of the existing, expansive ditch system. EMI also believes that the work can be classified as “construction or placement of structures accessory to existing facilities or uses” because any additions to the ditch system necessary to return flow to the streams (e.g., the installation of “stream overpasses”) will be accessory to the existing water system as a whole.

Based on the foregoing, EMI respectfully requests your concurrence that a permit is not required for the proposed work under HAR Chapter 13-5, or that the work can proceed with a Site Plan Approval. Application for a Site Plan Approval is enclosed, along with the required filing fee.

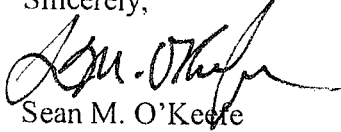
No other federal, state, or county approvals are anticipated to be required in order for the proposed work to proceed, though we are seeking concurrence from appropriate agencies in this regard.

Finally, whether it is more correctly identified under HAR Section 13-5-22, P-8 Structures and Land Uses, Existing (A-1) or (B-1), or P-4 Structures, Accessory (B-1), the project is an exempt

class of action under HAR Section 11-200-8 as “operations, repairs, or maintenance of existing structures, facilities, equipment, or topographical features involving negligible or no expansion or change of use beyond that previously existing”.

Thank you for your review of this matter, and please feel free to call me at (808) 877-2959 if you require any additional information in order to approve this project.

Sincerely,



Sean M. O'Keefe
Director, Environmental Affairs
Alexander & Baldwin, Inc.

Enclosures

cc: R. Volner, A&B
N. Chun, A&B
M. Ching, A&B
M. Vaught, EMI



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

January 26, 2018

SUBJECT: Determination of No Permit Required, Abandonment of Water Diversions in Seven East Maui Streams, Island of Maui, Hawaii, Department of the Army File No. POH-2017-00230

Sean M. O'Keefe
East Maui Irrigation Co., LLC
PO Box 266
Puunene, HI 96784

Dear Mr. O'Keefe:

The Honolulu District, U.S. Army Corps of Engineers (Corps), Regulatory Branch has received your request for a determination whether a Department of the Army (DA) permit is required for the proposed Abandonment of Water Diversions in Seven East Maui Streams located on the Island of Maui, Hawaii. Your request has been assigned Department of the Army (DA) file number POH-2017-00230. Please reference this number in all future correspondence with our office relating to this action.

We have reviewed your submittal pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344; "Section 404") and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403; "Section 10"). Section 404 requires DA authorization for the discharge (placement) of dredged and/or fill material into waters of the U.S., including wetlands. Section 10 requires DA authorization for the placement of structures in, under or over navigable waters of the U.S. and/or other work affecting the course, location, condition or navigable capacity of such waters. To determine if a DA permit is required for a proposed action, the Corps must first determine whether the proposed project is located within the Corps' geographic jurisdiction (i.e., whether the activity is located within a water of the U.S.). If the activity is within a water of the U.S., the Corps must then determine whether the proposed activity is a regulated activity under Section 10 and/or Section 404, or if the activity is exempt under Section 404(f) and is not recaptured. The determination provided in this letter pertains only to whether your proposed project is an activity we regulate; it does not address geographic jurisdiction.

While we have not made a determination of the jurisdictional status of the aquatic resource(s) affected, based on the information you provided, we have determined that your proposed project is an activity that is exempted under Section 404(f) of the Clean Water Act and therefore, a DA permit is not required. This determination of no permit required addresses only the proposed work activities described in your submitted

documentation and does not convey our determination of the jurisdictional status of the East Maui streams. Should you require a geographic jurisdictional determination (JD) for this project, you must complete and return a JD Request Form, which can be requested from our office.

While a DA permit is not required for your proposed project, you are responsible for obtaining all other applicable Federal, state, or local authorizations required by law. Be advised, a DA permit may be required if you alter the method, scope, or location of your proposed work. You should contact our office if you are considering modifying your project.

Thank you for your cooperation with the Honolulu District Regulatory Program. Should you have any questions related to this determination, please contact me at 808-835-4307 or via e-mail at Rebecca.m.fragger@usace.army.mil. You are encouraged to provide comments on your experience with the Honolulu District Regulatory Office by accessing our web-based customer survey form at http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. For additional information about our Regulatory Program, please visit our web site at <http://www.poh.usace.army.mil/Missions/Regulatory.aspx>.

Sincerely,

**FRAGER.REBECCA.M
ABLE.1508149111**

**Becca Frager
Regulatory Specialist**

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ALEXANDER & BALDWIN, INC.

October 6, 2017

Ms. Shelly Lynch
Chief, Regulatory Branch, CEPOH-EC-R
Department of the Army
U.S. Army Engineer District, Honolulu
Building 230
Ft. Shafter, HI 96858-5440

Subject: Abandonment of Water Diversions in Seven East Maui Streams

Dear Ms. Lynch:

As has previously been discussed with Ms. Joy Animizu of your staff, East Maui Irrigation Company, LLC (EMI), a subsidiary of Alexander & Baldwin, LLC (A&B), has committed to permanently restoring flow in seven streams in East Maui that have historically been diverted for the irrigation of sugarcane (Honopou, Hanehoi/Puolua, Pi'ina'au, Palauhulu, Waiokamilo, and East and West Wailuanui Streams). A Stream Diversion Works Permit Application for abandonment of the diversions (copy attached) was submitted to the State of Hawaii Commission on Water Resource Management (CWRM) in 2016, and flow has been substantially restored in each of the streams primarily through operation of the diversions, while flow in Waiokamilo Stream was permanently restored in 2007. In order to make the flow restorations in the remaining streams permanent, EMI needs to make alterations to 41 diversions located in or near these six streams. Because the majority of the major diversion structures are integral to the associated irrigation ditches, and because these ditches will remain in operation for the foreseeable future transporting irrigation water from other East Maui streams, in most cases the diversions cannot be completely removed without compromising the integrity of the ditch.

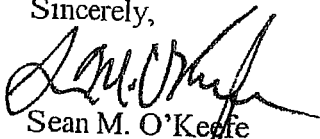
A&B has preliminarily determined that the proposed work is exempt from the Section 404 permitting program under Clean Water Act Section 404(f)(1)(c), which provides that "the discharge of dredged or fill material for the purpose of construction or maintenance of farm or stock ponds or irrigation ditches, or the maintenance of drainage ditches...is not prohibited by or otherwise subject to regulation" under Section 404. Clarification is provided at 33 CFR Section 323.4(a)(3) that "discharges associated with siphons, sumps, pumps, headgates, wingwalls, weirs, diversion structures, and such other facilities as are appurtenant and functionally related to irrigation ditches are included in this exemption". Exceptions to this exemption relate only to the discharge of toxic pollutants (not relevant to this project), and to activities whose purpose is to convert an area of waters of the United States to a use to which it was not previously subject. Pursuant to 33 CFR Section 320.1(a)(6), A&B requests your concurrence with our determination that a Clean Water Act Section 404 Permit is not required for the planned work described herein.

Each of the subject diversion intakes is "appurtenant to and functionally related to" one of four existing irrigation ditches (i.e., the Koolau/Wailoa, New Hamakua, Lowrie, and Haiku Ditches) which historically provided water to the former Hawaiian Commercial and Sugar Company (HC&S) plantation and to other Maui farming operations. All of these ditches are intended to remain in operation to provide irrigation water for ongoing agricultural operations on the former HC&S lands and elsewhere. The proposed work is solely intended to allow these ditches to continue to transport water from other existing stream diversions in East Maui without diverting any water from the subject streams and their tributaries. The work will not result in the conversion of any area of waters of the United States to a use to which it was not previously subject, since its objective is to restore flow these streams.

HC&S has obtained several previous determinations from your office that similar projects involving alterations to irrigation diversions in both East Maui and West Maui Streams did not require permits from the Corps of Engineers in order to proceed. The most relevant of these, issued on March 27, 2009 (POH-2008-284), related to the alteration of seven diversion structures for the purpose of meeting Interim Instream Flow Standards established by CWRM; each of these seven structures is among those now proposed for further alteration.

Details of each of the planned diversion alterations are provided in the enclosed attachments. A&B requests that you kindly provide formal written concurrence with our determination for each of the 41 subject diversions so that we may proceed with these permanent flow restorations. We thank you for your assistance, and look forward to your response. Should you require any additional information regarding this matter, please feel free to contact me at (808) 877-2959.

Sincerely,



Sean M. O'Keefe
Director, Environmental Affairs
Alexander & Baldwin, LLC

Enclosures

cc: Rick Volner, Jr., A&B
Nelson Chun, A&B
Meredith Ching, A&B
M. Vaught, EMI

ALAN M. ARAKAWA
Mayor

WILLIAM R. SPENCE
Director

MICHELE CHOUTEAU McLEAN
Deputy Director



COUNTY OF MAUI
DEPARTMENT OF PLANNING

November 27, 2017

Mr. Rick W. Volner, Jr., Vice President
Alexander & Baldwin, LLC Series T
P.O. Box 791628
Paia, Hawaii 96779

Dear Mr. Volner:

**SUBJECT: SPECIAL MANAGEMENT AREA (SMA) ASSESSMENT FOR
ABANDONMENT OF STREAM DIVERSIONS AT THREE
LOCATIONS, HUELO, ISLAND OF MAUI, HAWAII;
TMK: (2) 2-9-006:002, (2) 2-9-006:004, AND (2) 2-9-003:042
(SMX 2017/0338) (SM5 2017/0224)**

In response to your application received on October 17, 2017, and in accordance with the SMA Rules for the Maui Planning Commission (Commission), Sections 12-202-12, a determination has been made relative to the above project that:

1. The project is not a development, pursuant to Section 205-A-22 and may be issued a SMA Exemption;
2. The project has a valuation not in excess of \$500,000.00;
(Valuation: \$16,060.00)
3. The proposed scope of work consists solely abandoning stream diversion facilities at Haiku Ditch "Pancho" intake at East Hanehoi Stream (East Maui Irrigation (EMI) Diversion Number H-3) by sealing the intake grates with rocks and concrete and removing the sluice gate from the diversion; and Haiku Ditch "School" intake at West Hanehoi Stream (also known as Huelo Stream or Puolua Stream, EMI Diversion Number H-4) by sealing the ditch intake opening with rocks and concrete and removing the sluice gate from the diversion; and Haiku Ditch intake at Honopou stream EMI Diversion Number H-8), by sealing intake grates with rocks and concrete, seal openings below the grate on the downstream side with rocks and concrete, and extending an existing wingwall on the west end of the diversion to just beyond the downstream edge;
4. The proposed action is in Flood Zone X and will not have an adverse impact on a flood zone or streamway.
5. The project has no significant adverse environmental or ecological effects, provided Best Management Practices (BMPs) are implemented;

Mr. Rick W. Volner, Jr.
November 27, 2017
Page 2

6. The project is consistent with the objectives, policies, and Special Management Area guidelines set forth in the Hawaii Revised Statutes (HRS), Chapter 205-A, and is consistent with the County General Plan and Zoning.

In consideration of the above determination, you are hereby granted a SMA Exemption (SM5 2017/0224).

Furthermore, in accordance with the Shoreline Rules for the Maui Planning Commission, Sections 12-203-3, 12-203-6, 12-203-10, 12-203-11, and 12-203-12, a determination has been made relative to the above-referenced project that:

1. The site is not a shoreline property and is not subject to the Maui Planning Commission Shoreline Rules;

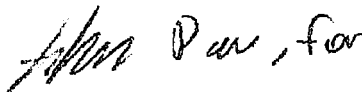
Accordingly, no Shoreline Setback Approval is required.

Moreover, the Department finds that the proposed action does not trigger compliance with environmental review, Hawaii Revised Statutes Chapter 343.

In summary, the Department grants a SMA Exemption (SM5 2017/0224) for the work described in your SMA Assessment Application (SMX 2017/0338). No Shoreline Setback Approval or environmental review are required. PLEASE NOTE THAT OTHER PERMITS OR APPROVALS MAY BE REQUIRED.

Thank you for your cooperation. If additional clarification is required, please contact Staff Planner Keith Scott by email at keith.scott@mauicounty.gov or by phone at (808) 463-3867.

Sincerely,



CLAYTON I. YOSHIDA, AICP
Planning Program Administrator

for WILLIAM SPENCE
Planning Director

xc: John S. Rapacz, Planning Program Administrator (PDF)
Keith C. Scott, Staff Planner (PDF)
Rick Volner (PDF)
CZM File (SMX)
Project File
General File

WRS:CIY:KCS:lk

K:\WP_DOCS\PLANNING\SM5\2017\0224_EastMauiIrrigation_StreamDiversion\SM5StreamDiversionAbandonment.doc

EAST MAUI IRRIGATION COMPANY, LLC
P.O. BOX 791628, PAIA, MAUI, HAWAII 96779

October 11, 2017

Mr. William Spence, Director
County of Maui
Department of Planning
200 South High Street
Wailuku, HI 96793

Subject: **Special Management Area (SMA) Assessment Application for Stream
Diversion Abandonment Work: Honopou and Hanehoi/Puolua Streams
TMK Numbers (2) 2-9-003:042, (2) 2-9-006:002 and (2) 2-9-006:004**

Dear Mr. Spence:

East Maui Irrigation Company, LLC (EMI) operates an extensive system of stream diversions and ditches in East Maui in order to bring irrigation water to agricultural operations and other water users in Central Maui. EMI, through its parent company Alexander & Baldwin, Inc. (A&B) announced on April 20, 2016 its decision to fully and permanently restore flow in priority taro streams in East Maui, and to continue to participate in the current East Maui interim instream flow standard (IIFS) proceedings to address appropriate restoration of other streams. Among the streams to be permanently restored are Honopou and Hanehoi (Puolua) Streams.

As part of its stream flow restoration effort, EMI proposes to abandon the following water diversions located on the Haiku ditch within the Special Management Area (SMA):

Diversion Description	EMI Diversion Number	TMK Number
Haiku Ditch "Pancho" intake at East Hanehoi Stream	H-3	(2) 2-9-006:002
Haiku Ditch "School" intake at West Hanehoi Stream (also known as Huelo Stream or Puolua Stream)	H-4	(2) 2-9-006:004
Haiku Ditch intake at Honopou Stream	H-8	(2) 2-9-003:042

At the East Hanehoi diversion (H-3), EMI proposes to seal the intake grates with rocks and concrete and remove an existing sluice gate from the diversion.

At the Puolua diversion (H-4), EMI proposes to seal the ditch intake opening with rocks and concrete and remove an existing sluice gate from the diversion.

At the Honopou Stream diversion (H-8), EMI proposes to seal the intake grate with rocks and concrete, seal openings below the grate on the downstream side with rocks and concrete, and extend an existing wing wall on the west end of the diversion to just beyond the downstream edge (the latter two actions are required on this diversion in order to prevent water which passes over the sealed grate from entering the ditch at other points).

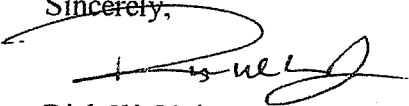
All work will be conducted within the existing footprints of the diversions, and most of the work will occur on or within the ditch itself.

The Haiku Ditch will remain in service providing irrigation water to agricultural operations from other stream diversions along the ditch. Since the diversion structures are integral to the ditch itself, it is not possible to completely remove the diversions without compromising the integrity and continuity of the ditch. The proposed work is necessary to allow the ditch to continue to operate without withdrawing any water at these three diversions. EMI believes that the proposed work can be properly characterized as operation, maintenance, repair, or interior alteration of an existing structure and is therefore not a "development" under Section 205A-22, Hawaii Revised Statutes (HRS). Further, the proposed work, in combination with similar work to be conducted at other diversions outside the SMA, will completely and permanently restore flow in these streams and will therefore provide a significant environmental and ecological benefit to the SMA. As such, EMI believes that an SMA Permit is not required for this project and requests your concurrence with this determination.

In the event that the County determines that the proposed action is considered a development, EMI believes that it is eligible for an SMA Minor Permit because it has a valuation well below \$500,000, will provide a significant environmental and ecological benefit, and is fully consistent with the objectives, policies, and SMA guidelines set forth in Chapter 205A, HRS, and with the countywide policy plan, applicable island plan, zoning and subdivision codes, and other applicable ordinances. In that case, we request that you issue a SMA Minor Permit so that the work can proceed.

Thank you for your attention to this request. If you have any questions, please feel free to contact Mark Vaught at (808) 579-9516.

Sincerely,



Rick W. Volner, Jr.

Vice-President, Alexander & Baldwin, LLC Series T
(Sole Member and Manager, East Maui Irrigation Company, LLC)

LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

STATE HISTORIC PRESERVATION DIVISION
601 KAMOKILA BOULEVARD, ROOM 555
KAPOLEI, HAWAII 96707

LAURA H. THIELEN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RUSSELL Y. TSUJI
FIRST DEPUTY

KEN C. KAWAHARA
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

December 15, 2008

Mr. Sean O'Keefe
Director, Environmental Affairs
Alexander and Baldwin, Inc.
PO Box 266
Pu'unene, Hawai'i 96784

LOG NO: 2008.4842
DOC NO: 0812PC04
Archaeology

Dear Mr. O'Keefe:

SUBJECT: Request for Information Regarding Mandatory Interim In-Stream Flow Standard Modifications for Historic Era East Maui Irrigation Ditches -- Wailoa, Haiku and New Hamakua Ditches at Honopou and Hanehoi Streams; Lowrie Ditch at Hanapou, Hanehoi and Huelo (Puolua) Streams; and Hauolo Tunnel at Lalahai, Lalapipi, Ka'auau and Hauoli Wahine Streams, Makawao and Ko'olau Districts, Island of Maui
TMK: (2) 2-2-008:007; (2) 2-9-014:001; (2) 2-9-009:019; (2) 2-9-006:001

Thank you for the opportunity to comment on proposed interim in-stream flow standard (IIFS) modifications for the above historic period irrigation ditches. We understand that the modifications to specified portions of the ditches have been mandated by the State of Hawai'i Commission on Water Resource Management (CWRM). The purpose of the modifications is to ensure that certain minimum stream flows are maintained at all times at various points within the above named streams, as well as to consider the upstream migration of native aquatic species across the diversions. We further understand that because the proposed work is considered repair of existing infrastructure which will cost far below the replacement cost of the entire ditch system, a permit is not required and the Department of Land and Natural Resources (DLNR) Office of Conservation and Coastal Land (OCCL) has determined that it is exempt from environmental review under Hawai'i Administrative Rules §11-200-8(a) (1) due to negligible or no expansion or change in use beyond what the ditches are already used for and has authorized it, provided you consult with this office regarding the historic importance of the ditches themselves.

Proposed changes to the New Hamakua Ditch at Honopou Stream include sealing the inlet opening in an existing divider wall by bolting a steel plate over it. The height of the divider wall will be raised by 6" at its lowest point with a 1 to 2 foot wide notch cut into the dam and a steel control gate installed. All work will be done by hand during periods of low or no flow with no mechanized equipment used in the stream.

Proposed changes to the New Hamakua Ditch at Hanehoi Stream include cutting a 1 to 2 foot notch into the existing dam and installing a metal control gate. Work here will also include repairing an existing 6 foot berm adjacent to the intake gate by encasing a steel rail in concrete. All work will be done by hand during periods of low or no flow with non-mechanized equipment used in the stream.

Sean M. O'Keefe
Page 2

Proposed changes to Wailoa Ditch at Honopou and Hanehoi Streams include the installation of prefabricated "low flow channels" which will be bolted into place on top of existing diversion gates. All work will be done by hand during periods of low or no flow with non-mechanized equipment used in the streams.

Proposed changes to the Hauolo Tunnel in four tributaries of the Palauhulu Stream (Lalahai, Lalapipi, Ka'auau and Hauoli Wahine Streams), all of which are located in the Conservation District, involves placing rocks into the open ditches which lead into the tunnel so that water flow will back up and overflow the existing diversions.

Although modification to the Lowrie and Haiku Ditches where they cross Honopou and Hanehoi Streams also appears necessary, there is no description of the proposed alterations at these locations included in your correspondence.

Several of the East Maui Irrigation ditches, such as the Lowrie Ditch (ca. 1900) are included on the State Inventory of Historic Places under Site Number #50-50-06-1508, with the New Hamakua Ditch (ca. 1904), Wailoa Ditch (ca. 1923) and Hauolo Tunnel old enough to also be included. Therefore, we believe that the best way to mitigate the structural changes necessary to meet the State Commission on Water Resource Management's (CWRM) Interim In-Stream Flow Standards (IIFS) mandate is to for your agency to take or arrange for the taking of scaled before and after photographs of the areas to be affected by the proposed modifications. The photographs may either be black and white prints or digital files on CD which are clearly labeled with the subject, date and cardinal direction of the image.

Please forward the photos to the attention of Dr. Astrid Liverman, SHPD Architecture Branch Chief at the above address.

Aloha,



Nancy McMahon, Deputy SHPO/State Archaeologist
State Historic Preservation Division

c: Jeff Hunt, Director, Dept. of Planning, 250 S. High Street, Wailuku, Hawai'i 96793
Maui CRC, Dept. of Planning, 250 S. High Street, Wailuku, Hawai'i 96793

Additional Attachments – Description of Work

This application is to allow the permanent abandonment of 15 stream diversion works, each of which is integral to its respective EMI ditch. Only the portion of each structure which causes water to be diverted from the corresponding stream into the ditch is being abandoned; the larger structures, including the irrigation ditches themselves, will continue to function to carry water diverted from other East Maui streams to off-stream users and are not being abandoned.

The following attachments describe maintenance work on the existing structures that has been or is being conducted to allow them to continue to operate as part of the EMI ditch system without diverting water from their respective streams. A determination was made by the Commission on Water Resource Management (CWRM), dated October 16, 2018, that no Stream Channel Alteration Permit or Stream Diversion Works Permit is required for this work. These attachments are provided for information purposes only to describe the location and details of each diversion structure, including its configuration upon completion of the maintenance work and at the time of abandonment. No additional approvals are required for this maintenance work and no additional work beyond the maintenance already approved is planned in connection with these abandonments.

Stream Flow Restoration in Honopou Stream
Summary of Relevant Information

1. Parties involved in the work:

Organization: East Maui Irrigation Company, LLC
Contact: Sean O'Keefe
Address: P.O. Box 266, Puunene, HI 96784
Telephone: (808) 877-2959
2. Project name or title: Stream Flow Restoration at Wailoa, New Hamakua, Lowrie, and Haiku Ditch Diversions on Honopou Stream
3. Name of water body: Honopou Stream
4. Project street address: Not applicable
5. Location of project: Haiku (Hamakualoa moku), Maui County, Hawaii
6. Other location descriptions: See attached Table of Honopou Stream Diversions for latitude and longitude, elevation, and Tax Map Key Number of each individual diversion.
7. Directions to the site: Please contact East Maui Irrigation Company for directions.
8. Nature of activity: See Description of Work on attached Table of Honopou Stream Diversions. Except as otherwise noted, all work will be done by hand and no mechanized equipment will be used in the stream. Work will be conducted during low stream flows in order to minimize the potential for any short-term water quality impacts.
9. Project purpose: The purpose of the project is to permanently restore flow in Honopou Stream.
10. Reason for discharge of dredged and/or fill material: Seal openings in existing diversion structures and/or allow stream to pass over irrigation ditch; see attached Table of Honopou Stream Diversions.
11. Types of material being discharged and the amount in cubic yards: See attached Table of Honopou Stream Diversions. In addition to any materials used to permanently alter the configuration of the diversions, sandbags and/or pipes may be temporarily placed in the stream as necessary to divert stream flow around work areas; any such materials will be removed from the stream upon completion of the work. Alternatively, where feasible, stream rocks may be re-positioned in the stream for this purpose.

Stream Flow Restoration in Honopou Stream
Summary of Relevant Information
(continued)

12. Surface areas of wetlands or other areas filled: None – this work is intended to restore flow in the stream and will not result in filling of any wetlands

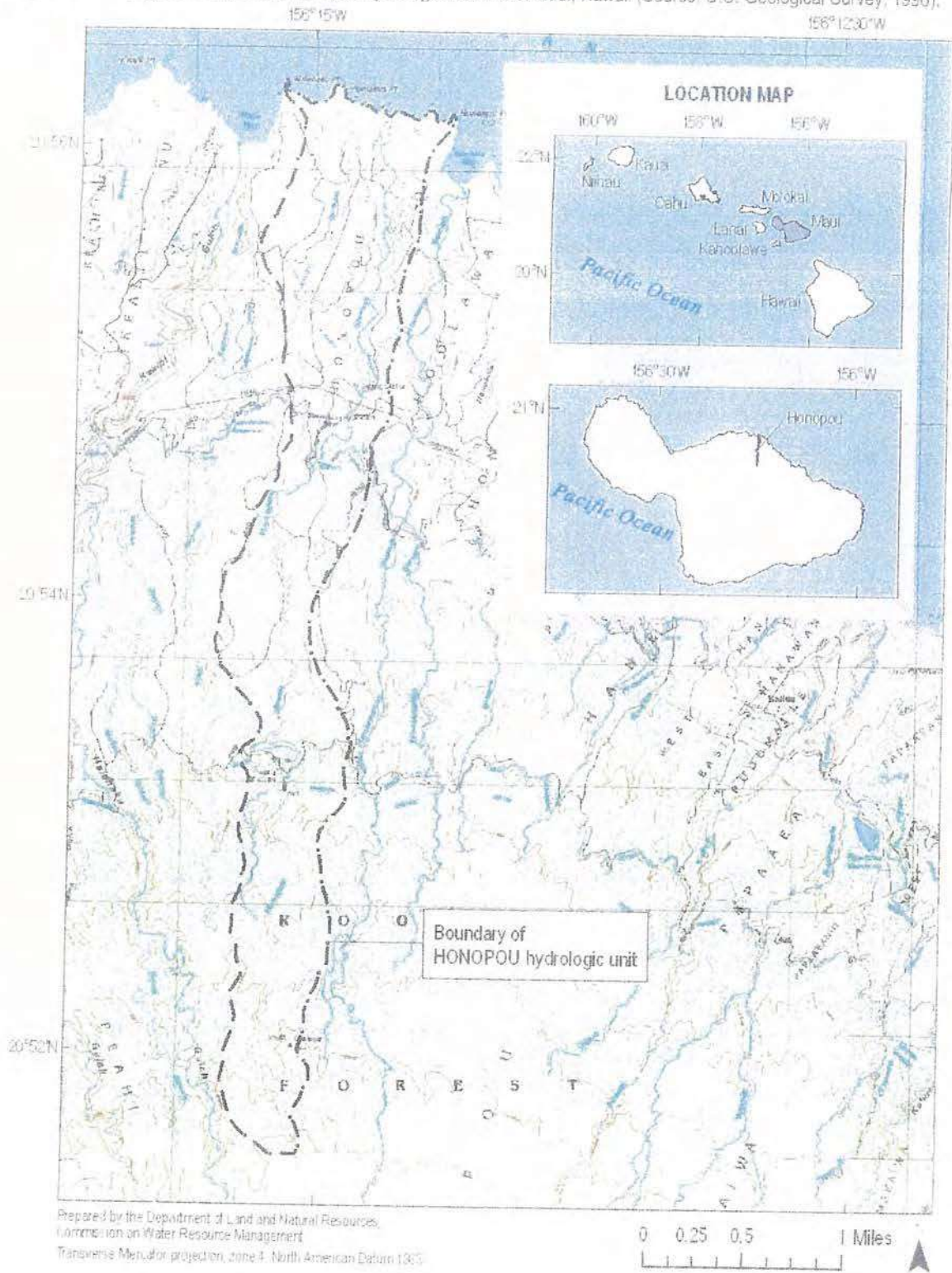
13. Attachments:
 - Honopou Hydrologic/Watershed Unit Maps
 - USGS Haiku Quadrangle Map, Site Locations – Honopou Stream Diversions
 - Table of Honopou Stream Diversions
 - Site Photographs, Honopou Stream Diversions
 - Conceptual Sketches, Honopou Stream Diversions

Honopou Watershed Unit

TRUE NORTH



Figure 1-3. Topographic map of the Honopou hydrologic unit in east Maui, Hawaii (Source: U.S. Geological Survey, 1996).



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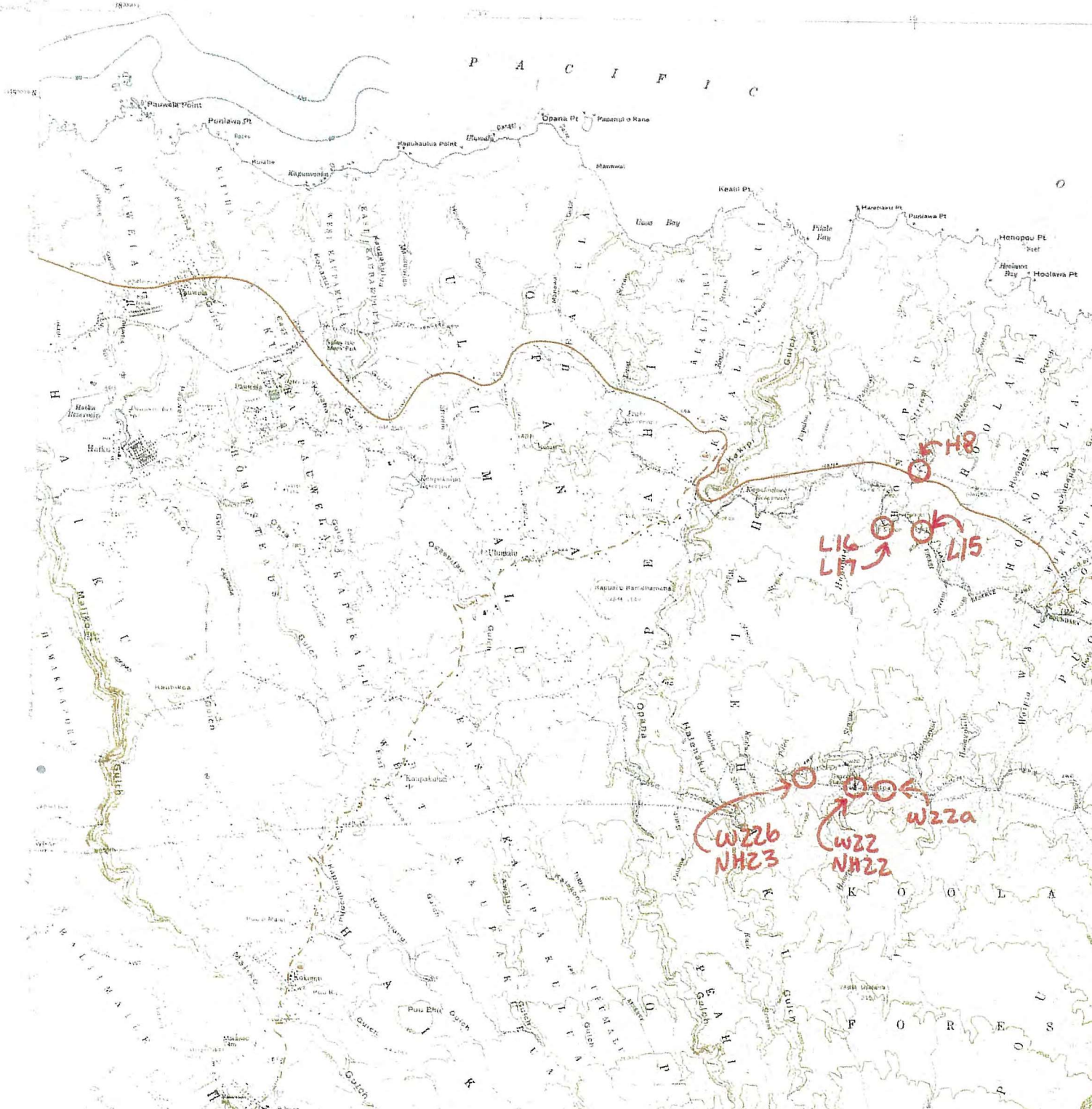


Table of Honopou Stream Diversions

Diversion	EMI Map #	Latitude Longitude Elevation	TMK No. (owner)	Diversion Structure Type	Description of Work and Amount/Type of Fill Material
Lupi Long intake at Wailoa Ditch	W-22a	20° 53' 7.6" N 156° 14' 57.79" W 1,274 feet	2-9-14:001 (State of Hawaii)	Concrete masonry (with grate)	In order to prevent flow into the ditch via this diversion, the grate in the diversion must be sealed. This will be accomplished by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) will be negligible (i.e., on the order of a few cubic feet in volume), and will be installed directly on the existing grate. See Photo 1 and Figure 1, attached.
Honopou at New Hamakua Ditch (New Hamakua Ditch intake)	NH-22	20° 53' 11.0" N 156° 15' 8.5" W 1,194 feet	2-8-8:007 (EMI) 2-9-14:001 (State of Hawaii)	Concrete masonry (with grates)	In order to prevent flow into the ditch via this diversion, the grates in the diversion must be sealed. This will be accomplished by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is anticipated to be no more than about one to two cubic yards in volume and will be installed directly on the existing grate. See Photo 2 and Figure 2, attached.
Wailole at New Hamakua Ditch (Wailole intake at New Hamakua Ditch)	NH-23	20° 53' 12.91" N 156° 15' 26.59" W 1,190 feet	2-8-8:007 (EMI)	Concrete masonry (with grate)	In order to prevent flow into the ditch via this diversion, the grate in the diversion must be sealed. This will be accomplished by filling the grate openings with concrete/grout and stream rocks. The amount of fill material (concrete/grout) is anticipated to be less than one cubic yard in volume and will be installed directly on the existing grate. See Photo 3 and Figure 3, attached.

Photographs – Maintenance Work on Honopou Stream Diversions

(Photos 1 through 3)

Site Photographs – Honopou Stream Diversions

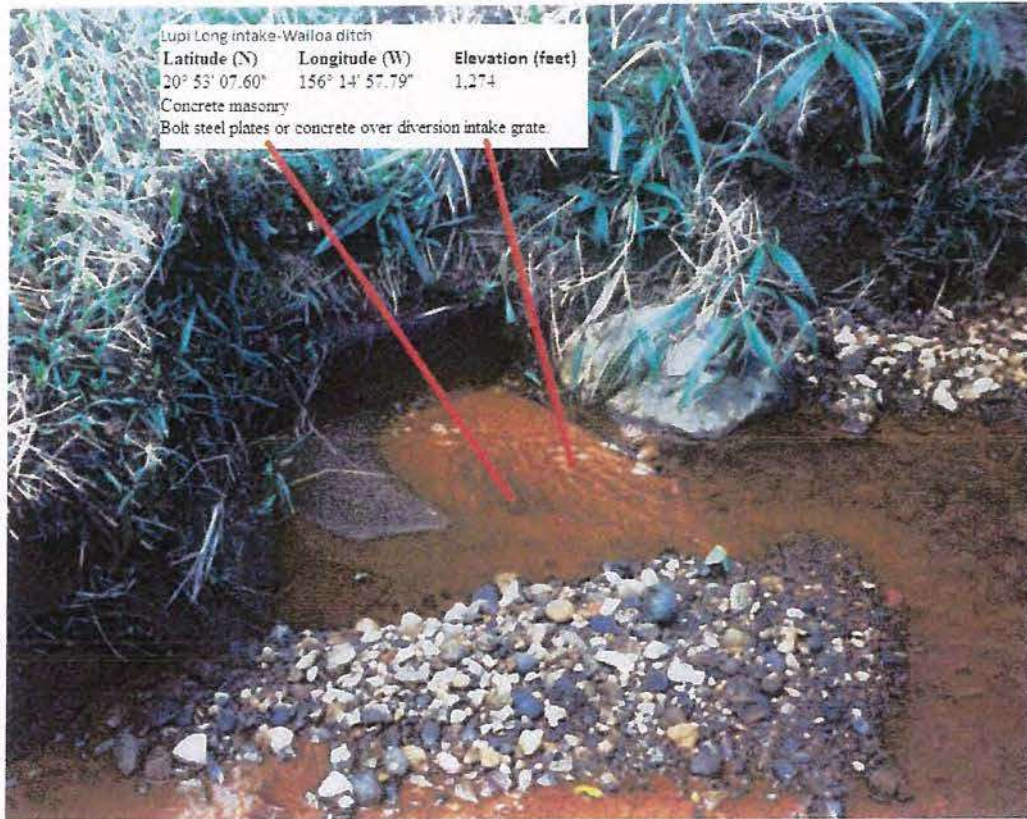
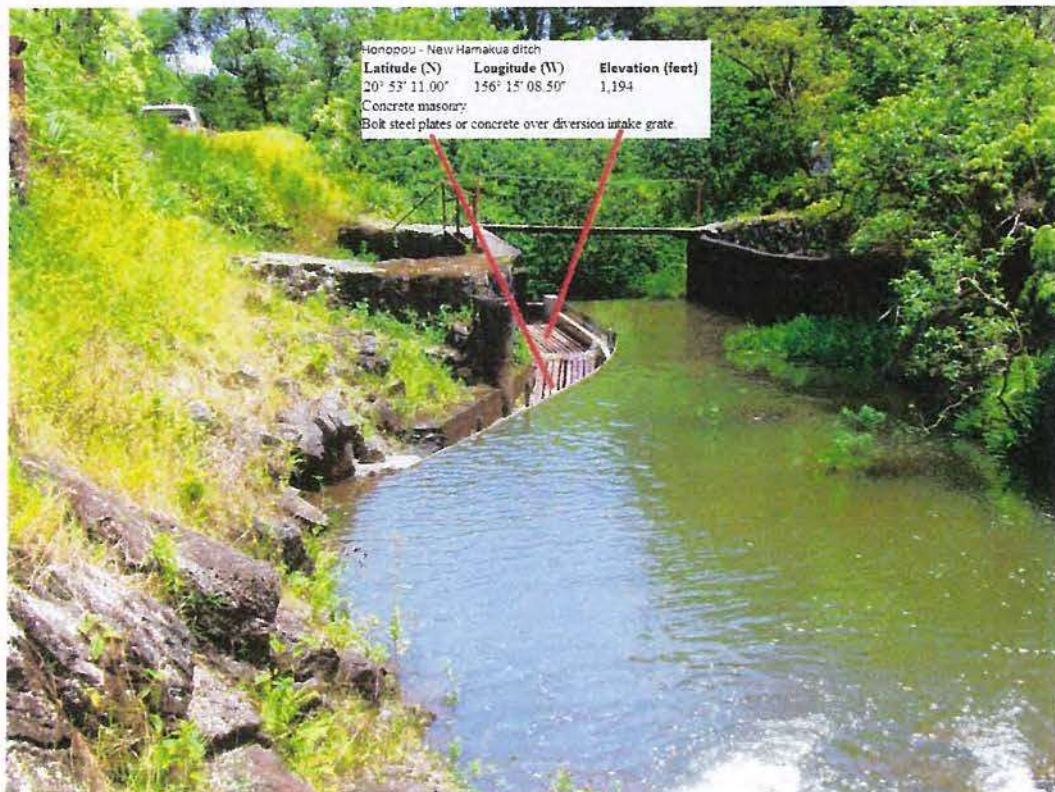


Photo 1 (above): Lupi Long intake at Wailoa Ditch (W-22a)

Photo 2 (below): Honopou at New Hamakua Ditch (NH-22)

(Note: Disregard references to bolted steel plates. Intakes will be sealed with concrete/grout.)



Site Photographs – Honopou Stream Diversions



Photo 3 (above): Wailole at New Hamakua Ditch (NH-23)

Conceptual Sketches – Maintenance Work on Honopou Stream Diversions

(Figures 1 through 3)

Lupi Long intake
at Wailoa Ditch

Honopou - Lupi Long intake - Wailoa Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 53' 07.60"	156° 14' 57.79"	1,274

Diversion Structure Type - Concrete masonry

General Description of Work - Bolt steel plates or concrete over diversion intake grate.

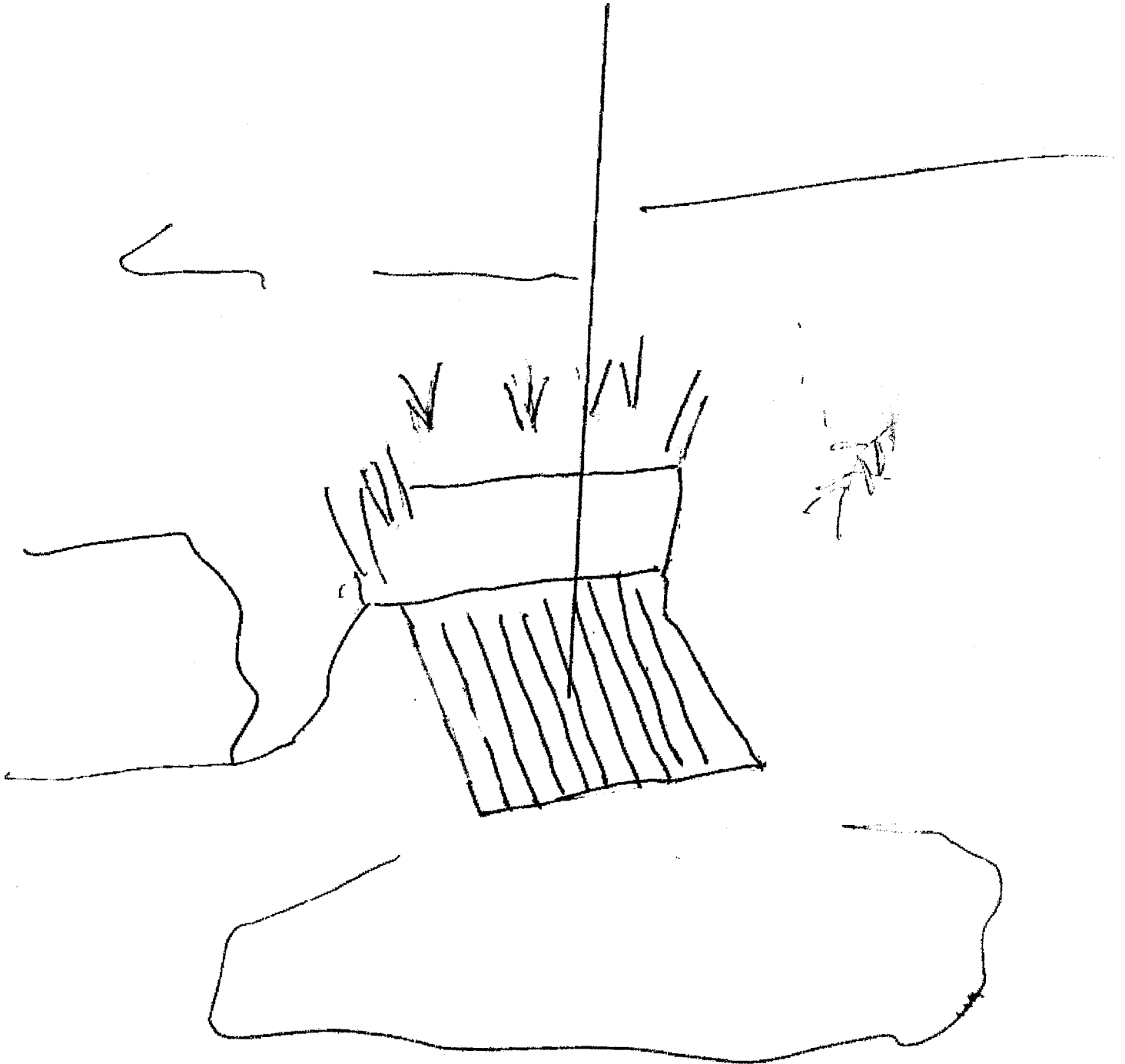


FIGURE 1
(W-22a)

Honopou at
New Hamakua Ditch

Honopou-New Hamakua Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 53' 11.00"	156° 15' 08.50"	1,194

Diversion Structure Type - Concrete masonry

General Description of Work - Bolt steel plates or concrete over diversion intake grate.

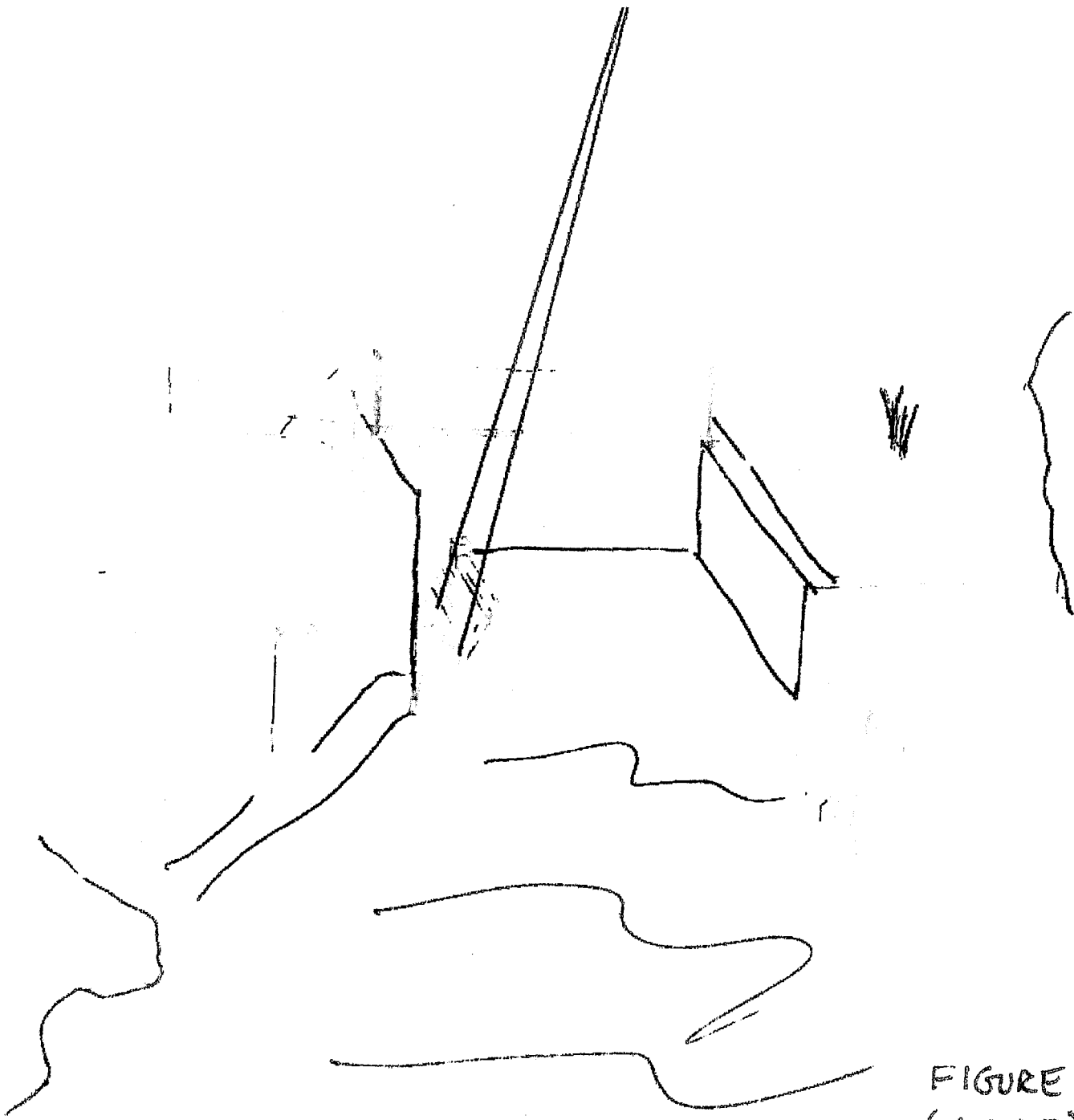


FIGURE 2
(NH-22)

Waiale at
New Hamakua Ditch

Waiale- New Hamakua Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 53' 12.91"	156° 15' 26.59"	1,190

Diversion Structure Type – Concrete masonry

General Description of Work – Seal intake opening with rocks and concrete.



FIGURE 3
(NH-23)

Stream Flow Restoration in Hanehoi (Puolua) Stream
Summary of Relevant Information

1. Parties involved in the work:

Organization: East Maui Irrigation Company, LLC
Contact: Sean O'Keefe
Address: P.O. Box 266, Puunene, HI 96784
Telephone: (808) 877-2959
2. Project name or title: Stream Flow Restoration at Wailoa, New Hamakua, Lowrie, and Haiku Ditch Diversions on Hanehoi Stream
3. Name of water body: Hanehoi Stream (including tributary Puolua (Huelo) Stream)
4. Project street address: Not applicable
5. Location of project: Haiku (Hamakualoa moku), Maui County, Hawaii
6. Other location descriptions: See attached Table of Hanehoi (Puolua) Stream Diversions for latitude and longitude, elevation, and Tax Map Key Number of each individual diversion.
7. Directions to the site: Please contact East Maui Irrigation Company for directions.
8. Nature of activity: See Description of Work on attached Table of Hanehoi (Puolua) Stream Diversions. Except as otherwise noted, all work will be done by hand and no mechanized equipment will be used in the stream. Work will be conducted during low stream flows in order to minimize the potential for any short-term water quality impacts.
9. Project purpose: The purpose of the project is to permanently restore flow in Hanehoi (Puolua) Stream.
10. Reason for discharge of dredged and/or fill material: Seal openings in existing diversion structures and/or allow stream to pass over irrigation ditch; see attached Table of Hanehoi (Puolua) Stream Diversions.
11. Types of material being discharged and the amount in cubic yards: See attached Table of Hanehoi (Puolua) Stream Diversions. In addition to any materials used to permanently alter the configuration of the diversions, sandbags and/or pipes may be temporarily placed in the stream as necessary to divert stream flow around work areas; any such materials will be removed from the stream upon completion of the work. Alternatively, where feasible, stream rocks may be re-positioned in the stream for this purpose.

Stream Flow Restoration in Hanehoi (Puolua) Stream
Summary of Relevant Information
(continued)

12. Surface areas of wetlands or other areas filled: None – this work is intended to restore flow in the stream and will not result in filling of any wetlands

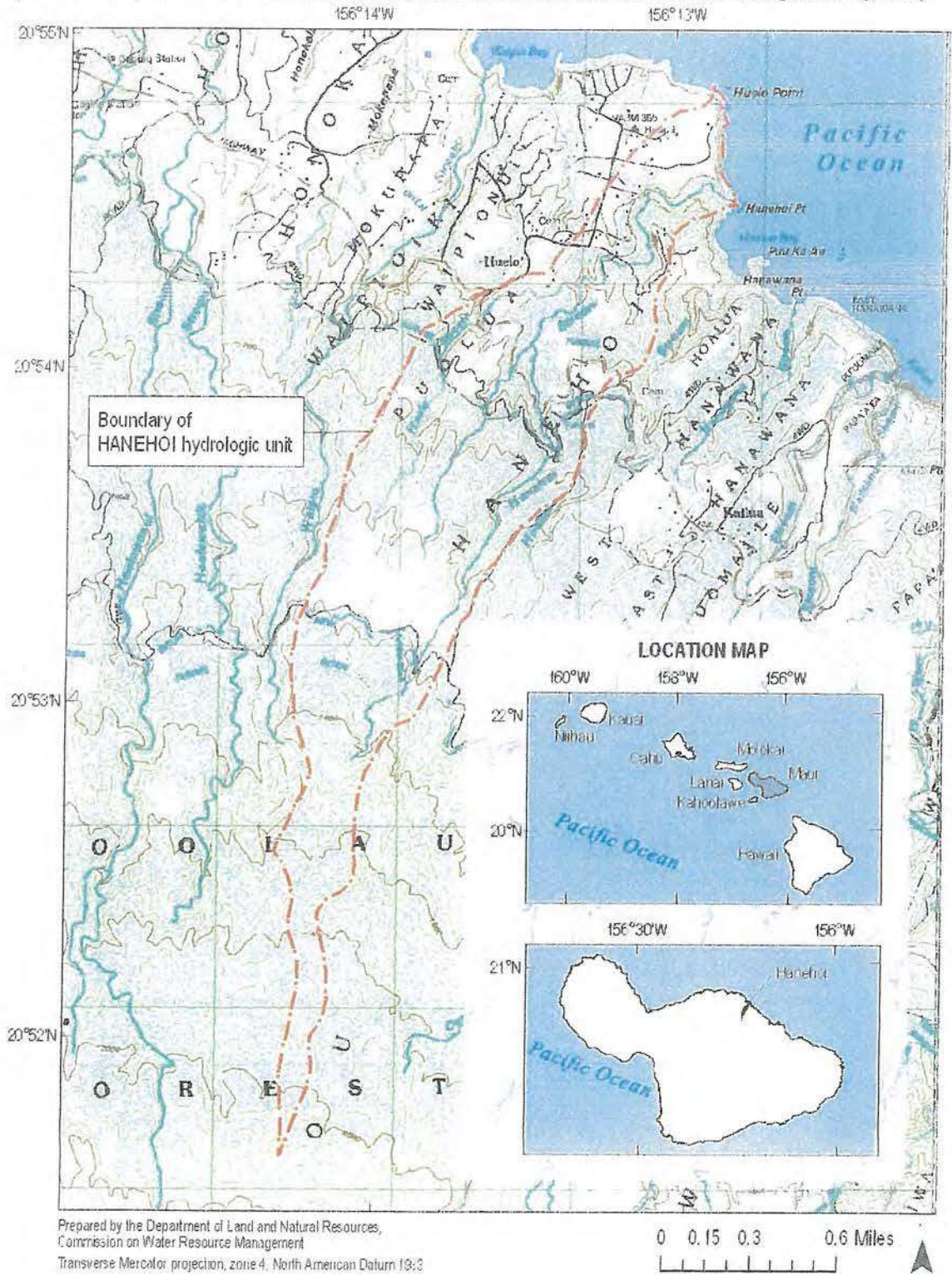
13. Attachments:
 - Hanehoi Hydrologic/Watershed Unit Maps
 - USGS Haiku Quadrangle Map, Site Locations – Hanehoi (Puolua) Stream Diversions
 - Table of Hanehoi (Puolua) Stream Diversions
 - Site Photographs, Hanehoi (Puolua) Stream Diversions
 - Conceptual Sketches, Hanehoi (Puolua) Stream Diversions

Hanehoi Watershed Unit



Puakoa (Huaioa) • Haka Ditch
Hanehoi • Haka Ditch
Hanehoi West #2 • Lowrie Ditch
Puakoa (Huaioa) • Lowrie Ditch
Hanehoi #3 • Lowrie Ditch
Hanehoi #2 • Lowrie Ditch
Hanehoi Small • Lowrie Ditch
Hanehoi West #1 • Lowrie Ditch
Hanehoi #1 • Lowrie Ditch
East Hanehoi • Lowrie Ditch
Puakoa (Huaioa) • New Hamaoia Ditch
Hanehoi • New Hamaoia Ditch
Hanehoi • Waihoa Ditch

Figure 1-3. Topographic map of the Hanehoi hydrologic unit in east Maui, Hawaii (Source: U.S. Geological Survey, 1996).



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L7a
L7b
L6
L7
NH17a
WB
NH17

Table of Hanehoi (Puolua) Stream Diversions

Diversion	EMI Map #	Latitude Longitude Elevation	TMK No. (owner)	Diversion Structure Type	Description of Work and Amount/Type of Fill Material
Hanehoi #1 at Lowrie Ditch (Hanehoi Huelo #1 intake at Lowrie Ditch)	L-5	20° 53' 43.44" N 156° 13' 27.4" W 708 feet	2-9-14:009 (EMI) 2-9-9:019 (EMI)	Concrete masonry (with grate)	In order to prevent flow into the ditch via this diversion, the grate in the diversion must be sealed. This will be accomplished by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is anticipated to be no more than about three to five cubic yards in volume and will be installed directly on the existing grate. See Photo 4 and Figure 4, attached.
Hanehoi at Wailoa Ditch (Hanehoi Huelo intake at Wailoa Ditch)	W-18	20° 53' 00.9" N 156° 13' 54.4" W 1,242 feet	2-9-14:001 (State of Hawaii)	Concrete masonry (with grate)	In order to prevent flow into the ditch via this diversion, the grate in the diversion must be sealed. This will be accomplished by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout or steel) is anticipated to be no more than about one to two cubic yards in volume and will be installed directly on the existing grate. See Photo 5 and Figure 5, attached.
Hanehoi at New Hamakua Ditch (Hanehoi Huelo intake at New Hamakua Ditch)	NH-17	20° 53' 4.2" N 156° 13' 52.5" W 1,204 feet	2-9-14:001 (State of Hawaii)	Concrete masonry (with grate)	In order to prevent flow into the ditch via this diversion, the grate in the diversion must be sealed. This will be accomplished by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is anticipated to be no more than about one to two cubic yards in volume and will be installed directly on the existing grate. See Photo 6 and Figure 6, attached.
Hanehoi #2 at Lowrie Ditch (Hanehoi Huelo #2 intake at Lowrie Ditch)	L-6	20° 53' 49.05" N 156° 13' 37.98" W 676 feet	2-9-14:009 (EMI) 2-9-9:019 (EMI)	Concrete masonry (with grate)	In order to prevent flow into the ditch via this diversion, the grate in the diversion must be sealed. This will be accomplished by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is anticipated to be no more than about one to two cubic yards in volume and will be installed directly on the existing grate. See Photo 7 and Figure 7, attached.
Hanehoi #3 at Lowrie Ditch (Hanehoi Huelo #3 intake at Lowrie Ditch)	L-7	20° 53' 52.46" N 156° 13' 40.0" W 653 feet	2-9-14:009 (EMI) 2-9-9:019 (EMI) 2-9-6:001 (EMI)	Concrete masonry (with grate)	In order to prevent flow into the ditch via this diversion, the grate in the diversion must be sealed. This will be accomplished by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is anticipated to be no more than about one to two cubic yards in volume and will be installed directly on the existing grate. See Photo 8 and Figure 8, attached.
Hanehoi at Haiku Ditch (East Hanehoi (Pancho) intake at Haiku Ditch)	H-3	20° 54' 5.34" N 156° 13' 26.57" W 459 feet	2-9-6:002 (EMI) 2-9-8:012 (EMI) 2-9-9:033 (State of Hawaii)	Concrete masonry (with grate and sluice gate)	In order to prevent flow into the ditch via this diversion, the grate in the diversion must be sealed. This will be accomplished by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is anticipated to be no more than about one to two cubic yards in volume and will be installed directly on the existing grate. Additionally, a sluice gate will be removed at this diversion. See Photo 9 and Figure 9, attached.

Table of Hanehoi (Puolua) Stream Diversions (continued)

Diversions	EMI Map #	Latitude Longitude Elevation	TMK No. (owner)	Diversions Structure Type	Description of Work and Amount/Type of Fill Material
Puolua (Huelo) at Haiku Ditch (West Hanehoi (School) intake at Haiku Ditch) (Puolua/Huelo Stream)	H-4	20° 54' 11.76" N 156° 13' 32.38" W 484 feet	2-9-6:004 (EMI)	Concrete masonry (with grate and sluice gate)	In order to prevent flow into the ditch via this diversion, the intake opening will be sealed with stream rocks and concrete. The amount of fill material (concrete and stream rocks) is anticipated to be no more than about one cubic yard in volume and will be installed within the existing concrete structure. Additionally, a sluice gate will be removed at this diversion. See Photo 10 and Figure 10, attached.

Photographs – Maintenance Work on Hanehoi (Puolua) Stream Diversions

(Photos 4 through 10)

Site Photographs – Hanehoi (Puolua) Stream Diversions

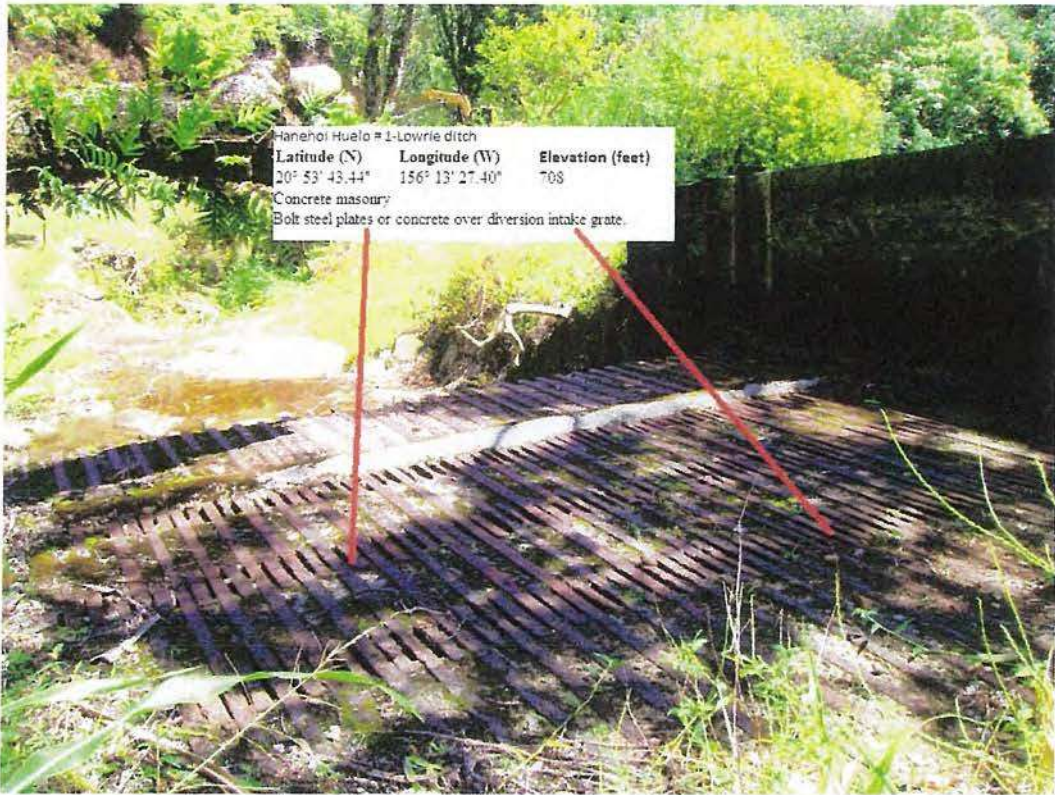


Photo 4 (above): Hanehoi #1 at Lowrie Ditch (L-5)

Photo 5 (below): Hanehoi at Wailoa Ditch (W-18)

(Note: Disregard references to bolted steel plates. Intakes will be sealed with concrete/grout.)



Site Photographs – Hanehoi (Puolua) Stream Diversions

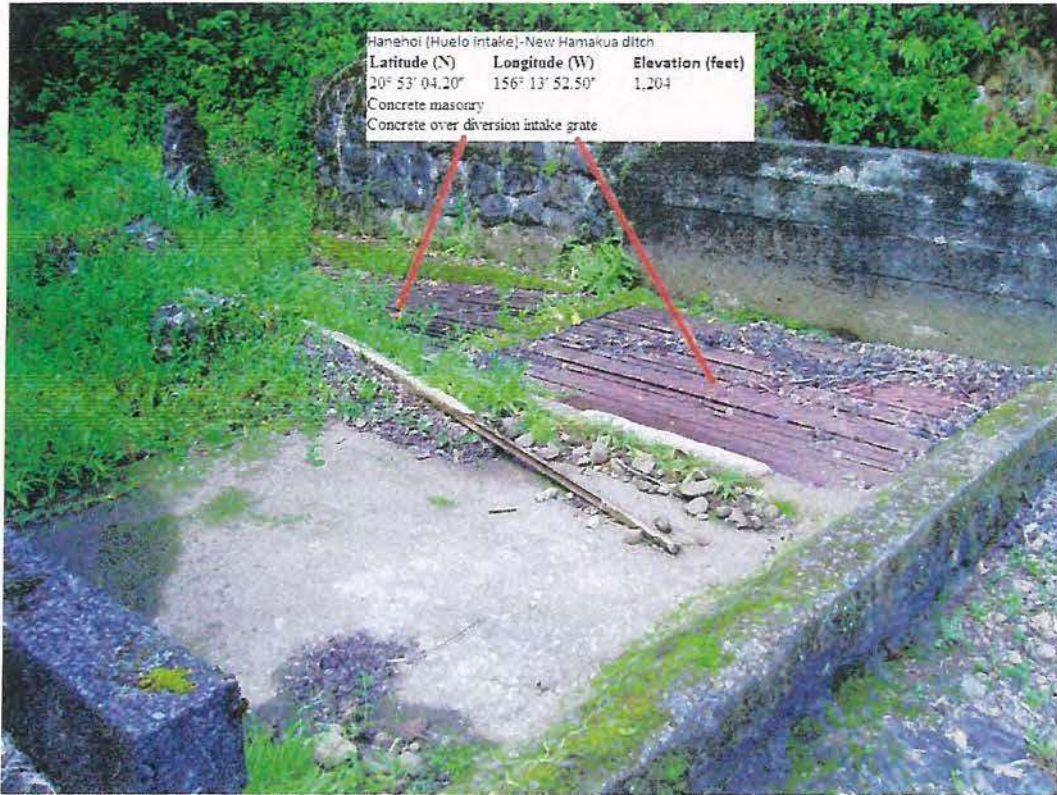
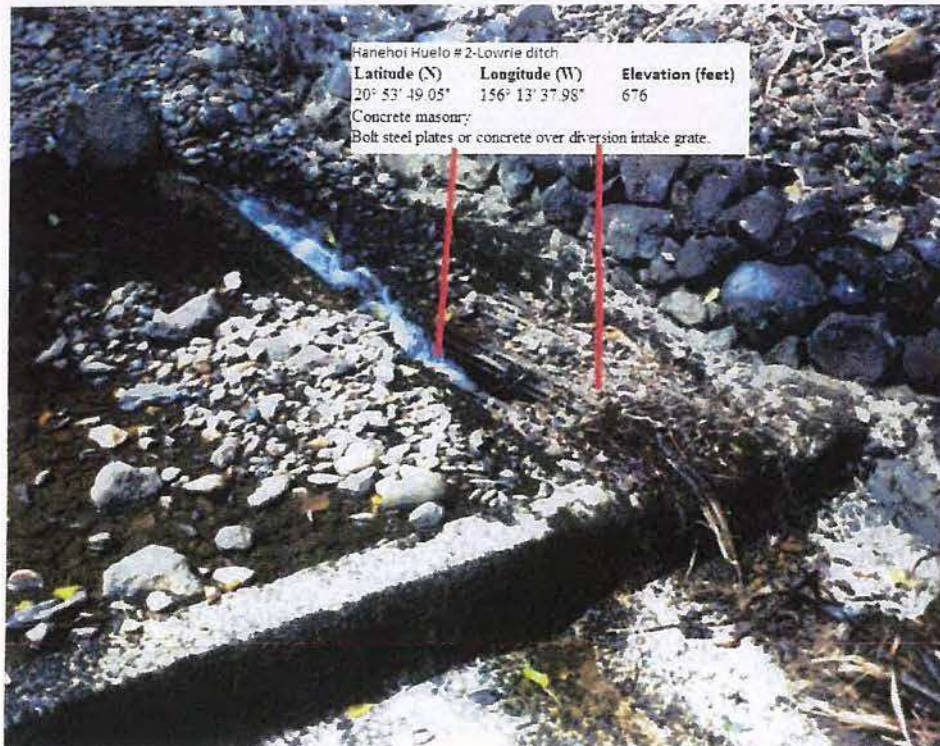


Photo 6 (above): Hanehoi at New Hamakua Ditch (NH-17)

Photo 7 (below): Hanehoi #2 at Lowrie Ditch (L-6)

(Note: Disregard references to bolted steel plates. Intakes will be sealed with concrete/grout.)



Site Photographs – Hanehoi (Puolua) Stream Diversions

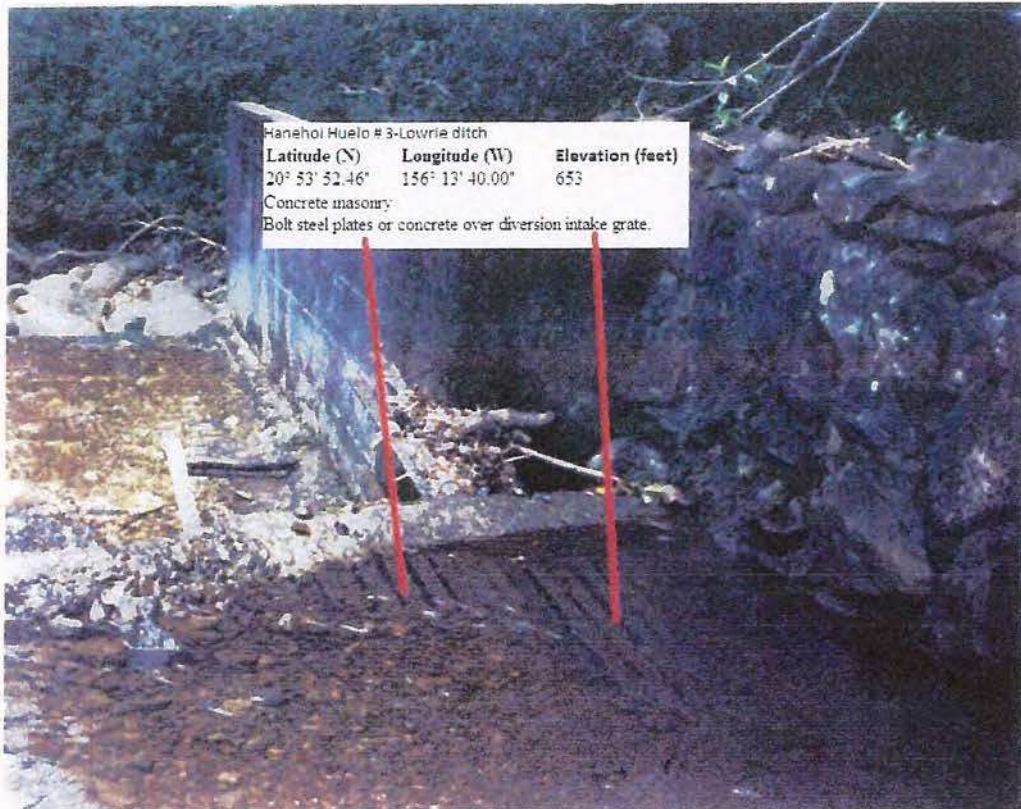


Photo 8 (above): Hanehoi #3 at Lowrie Ditch (L-7)

(Note: Disregard references to bolted steel plates. Intakes will be sealed with concrete/grout.)

Photo 9 (below): Hanehoi at Haiku Ditch (Pancho intake) (H-3)

(Note: Disregard latitude and longitude, which were inadvertently reversed with H-4.)



Site Photographs – Hanehoi (Puolua) Stream Diversions



Photo 10 (above): Puolua (Huelo) at Haiku Ditch (School intake) (H-4)
(Note: Disregard latitude and longitude, which were inadvertently reversed with H-3.)

Conceptual Sketches – Maintenance Work on Hanehoi (Puolua) Stream Diversions

(Figures 4 through 10)

Hanehoi #1 at
Lowrie Ditch

Hanehoi Huelo # 1- Lowrie Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 53' 43.44"	156° 13' 27.40"	708

Diversion Structure Type – Concrete masonry

General Description of Work – Bolt steel plates or concrete over diversion intake grate.

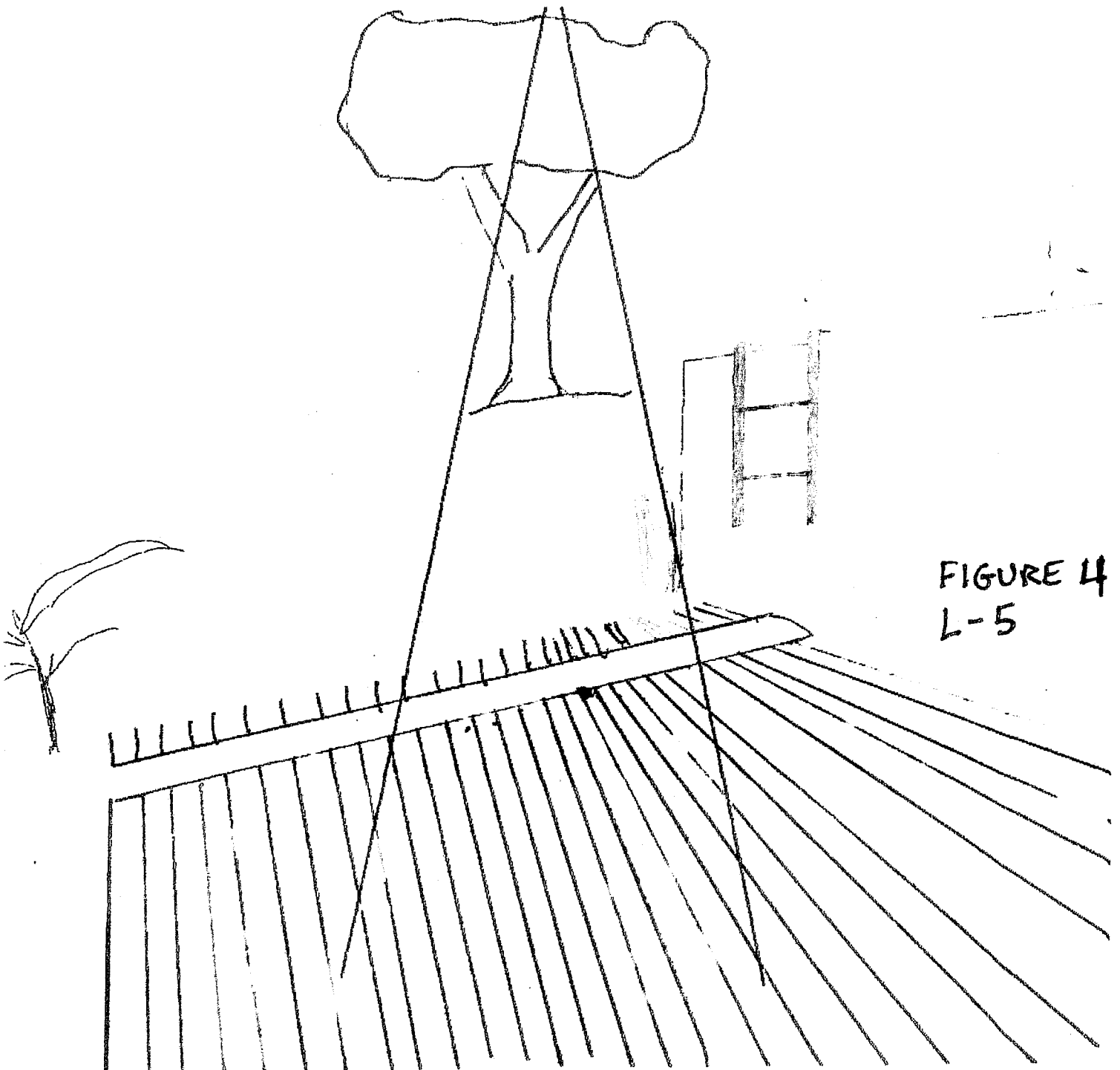


FIGURE 4
L-5

Hanehoi at Wailoa Ditch

Hanehoi (Huelo intake)-Wailoa Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 53' 00.90"	156° 13' 54.40"	1,242

Diversion Structure Type - Concrete masonry

General Description of Work - Bolt steel plates or concrete over diversion intake grate.

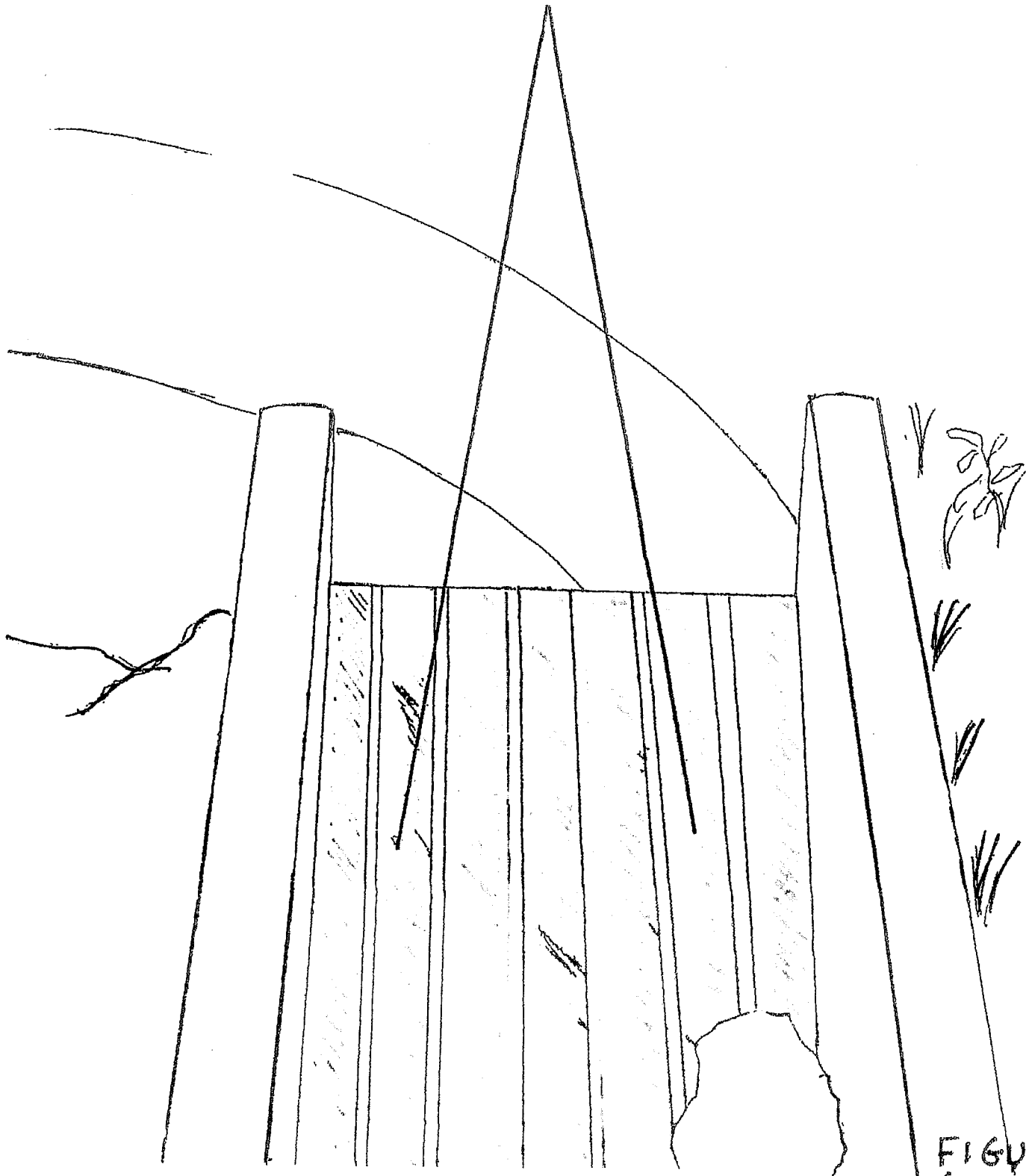


FIGURE 5
(W-18)

Hanehoi (Huelo intake)-New Hamakua Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 53' 04.20"	156° 13' 52.50"	1,204

Diversion Structure Type - Concrete masonry

General Description of Work - Concrete over diversion intake grate.

Hanehoi at
New Hamakua
Ditch

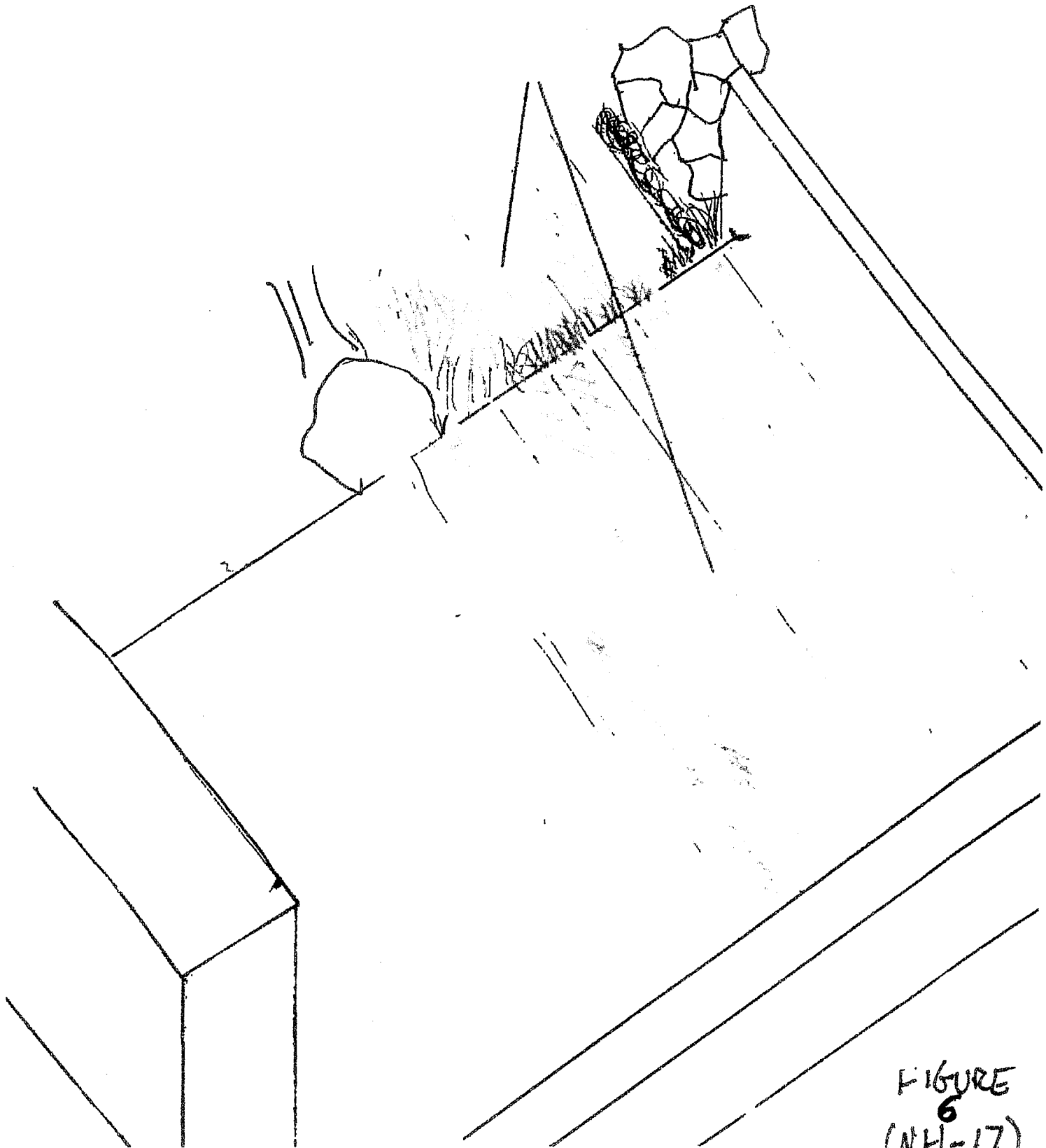


FIGURE
6
(NH-17)

Hanehoi #2 at Lowrie Ditch

Hanehoi Huelo #2 Lowrie Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 53' 49.05"	156° 13' 37.98"	676

Diversion Structure Type Unlined channel

General Description of Work Construct stream overpass over ditch

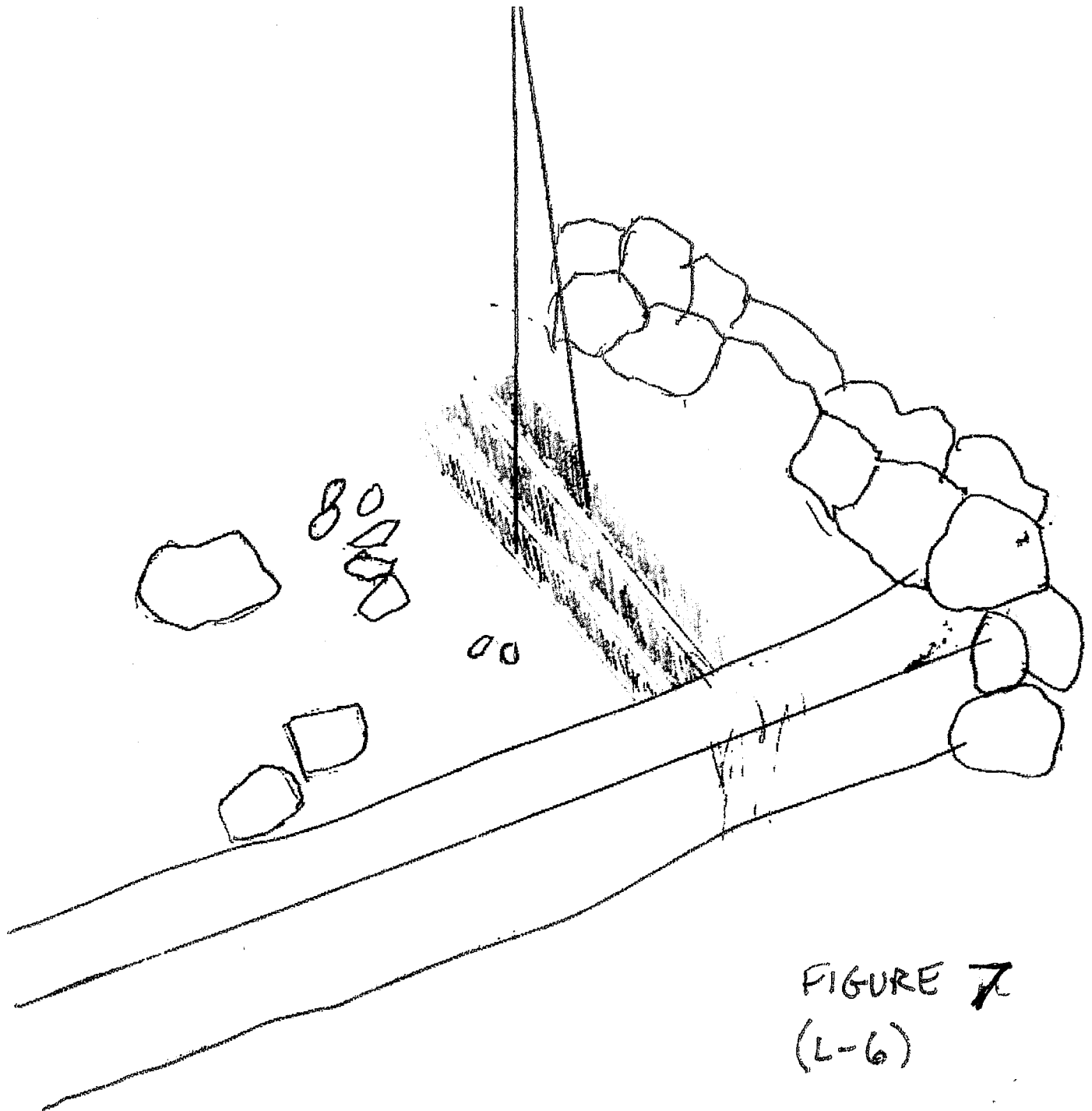


FIGURE 7
(L-6)

Hanehoi #3 at
Lowrie Ditch

Hanehoi Huelo # 3 - Lowrie Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 53' 52.46"	156° 13' 40.00"	653

Diversion Structure Type - Concrete masonry

General Description of Work - Bolt steel plates or concrete over diversion intake grate.

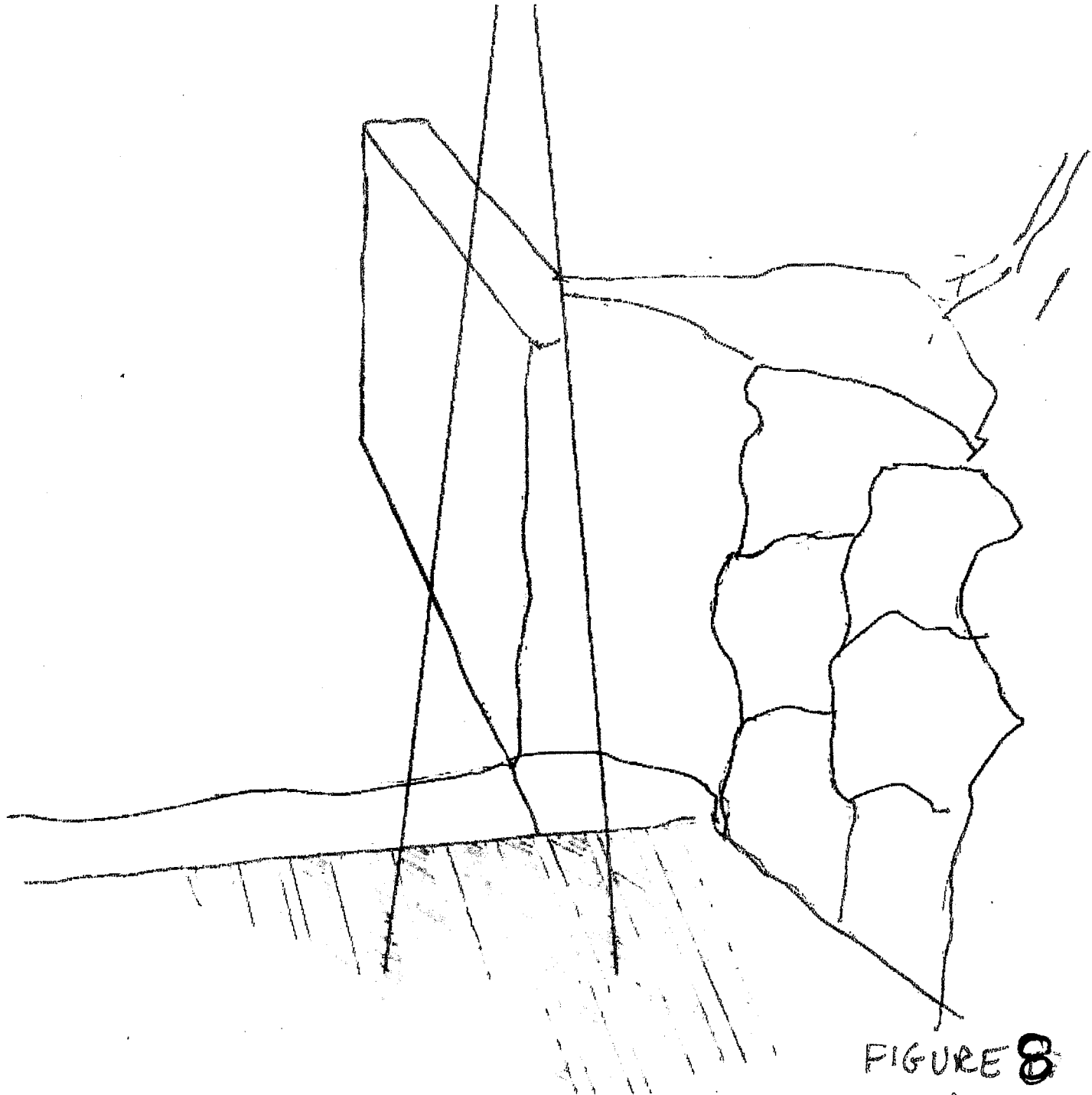


FIGURE 8
(L-7)

Hanehoi at
Haiku Ditch
(Pancho Intake)

East Hanehoi intake (Pancho) - Haiku Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 54' 11.76"	156° 13' 32.38"	459

← LAT/LONG incorrect
(See 4-4)

Diversion Structure Type - Concrete masonry

General Description of Work - Remove sluice gate and bolt steel plates or concrete over diversion intake grate.

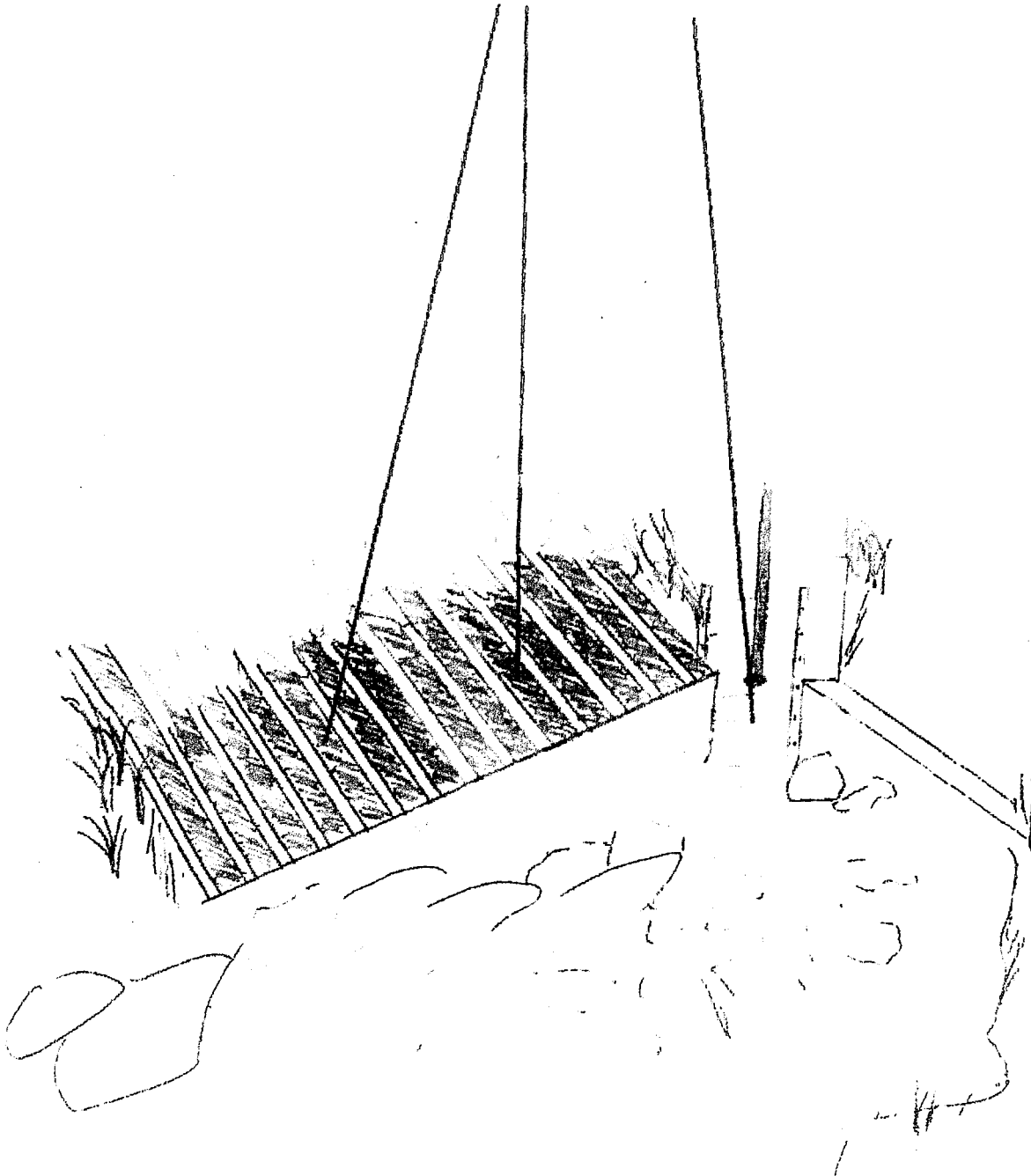


FIGURE 9
(H-3)

Puolva (Huelo) at
Haiku Ditch
(School Intake)

West Hanehoi (School)-Haiku Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 54' 05.34"	156° 13' 26.57"	484

← LAT/LONG incorrect
(see H-3)

Diversion Structure Type - Concrete masonry

General Description of Work - Seal intake opening with rock and concrete and ~~open~~ ^{Remove} sluice gate.

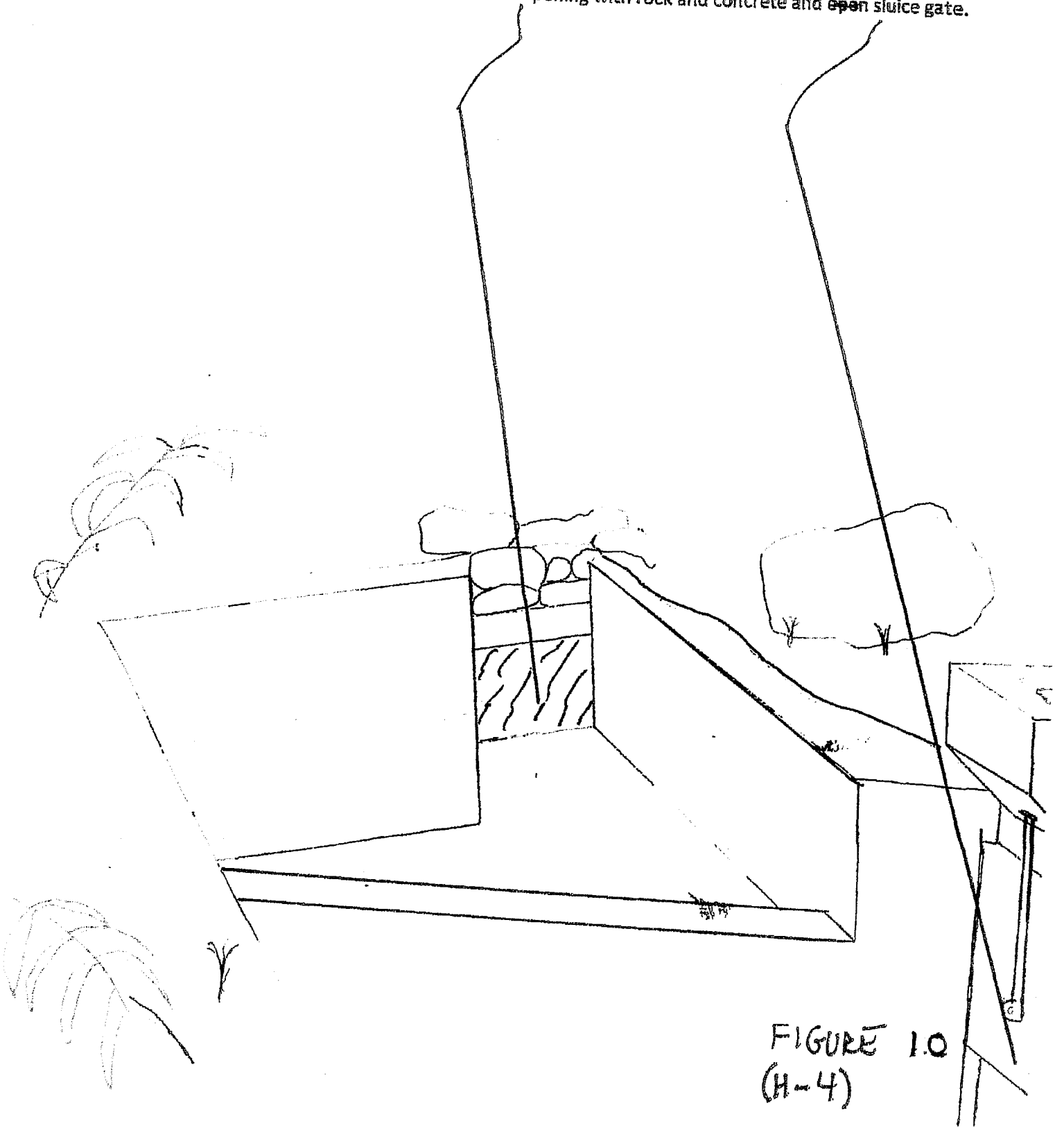


FIGURE 1.0
(H-4)

Stream Flow Restoration in Pi'ina'au (Palauhulu) Stream
Summary of Relevant Information

1. Parties involved in the work:

Organization: East Maui Irrigation Company, LLC
Contact: Sean O'Keefe
Address: P.O. Box 266, Puunene, HI 96784
Telephone: (808) 877-2959

2. Project name or title: Stream Flow Restoration at Koolau Ditch Diversions on Pi'ina'au (Palauhulu) Stream

3. Name of water body: Pi'ina'au Stream, Palauhulu Stream (and tributaries)

4. Project street address: Not applicable

5. Location of project: Keanae/Nahiku (Koolau moku), Maui County, Hawaii

6. Other location descriptions: See attached Table of Pi'ina'au (Palauhulu) Stream Diversions for latitude and longitude, elevation, and Tax Map Key Number of each individual diversion.

7. Directions to the site: Please contact East Maui Irrigation Company for directions.

8. Nature of activity: See Description of Work on attached Table of Pi'ina'au (Palauhulu) Stream Diversions. Except as otherwise noted in the table, all work will be done by hand and no mechanized equipment will be used in the stream. Work will be conducted during low stream flows in order to minimize the potential for any short-term water quality impacts.

9. Project purpose: The purpose of the project is to permanently restore flow in Pi'ina'au Stream, Palauhulu Stream (which joins with Pi'ina'au Stream just above Keanae), and their tributaries.

10. Reason for discharge of dredged and/or fill material: Seal openings in existing diversion structures and/or allow stream to pass over irrigation ditch; see attached Table of Pi'ina'au (Palauhulu) Stream Diversions. The majority of work proposed to be conducted on these diversions is not anticipated to result in a discharge of dredged and/or fill material.

11. Types of material being discharged and the amount in cubic yards: See attached Table of Pi'ina'au (Palauhulu) Stream Diversions. In addition to any materials used to permanently alter the configuration of the diversions, sandbags and/or pipes may be temporarily placed in the stream as necessary to divert stream flow around work

Stream Flow Restoration in Pi'ina'au (Palauhulu) Stream
Summary of Relevant Information
(continued)

areas; any such materials will be removed from the stream upon completion of the work. Alternatively, where feasible, stream rocks may be re-positioned in the stream for this purpose.

12. Surface areas of wetlands or other areas filled: None – this work is intended to restore flow in the stream and will not result in filling of any wetlands

13. Attachments:
 - Pi'ina'au Hyrdologic/Watershed Unit Maps
 - USGS Nahiku Quadrangle Map, Site Locations – Pi'ina'au (Palauhulu) Stream Diversions
 - Table of Pi'ina'au (Palauhulu) Stream Diversions
 - Site Photographs, Pi'ina'au (Palauhulu) Stream Diversions
 - Conceptual Sketches, Pi'ina'au (Palauhulu) Stream Diversions

Piinaau Watershed Unit (Palauhulu to Piinaau)

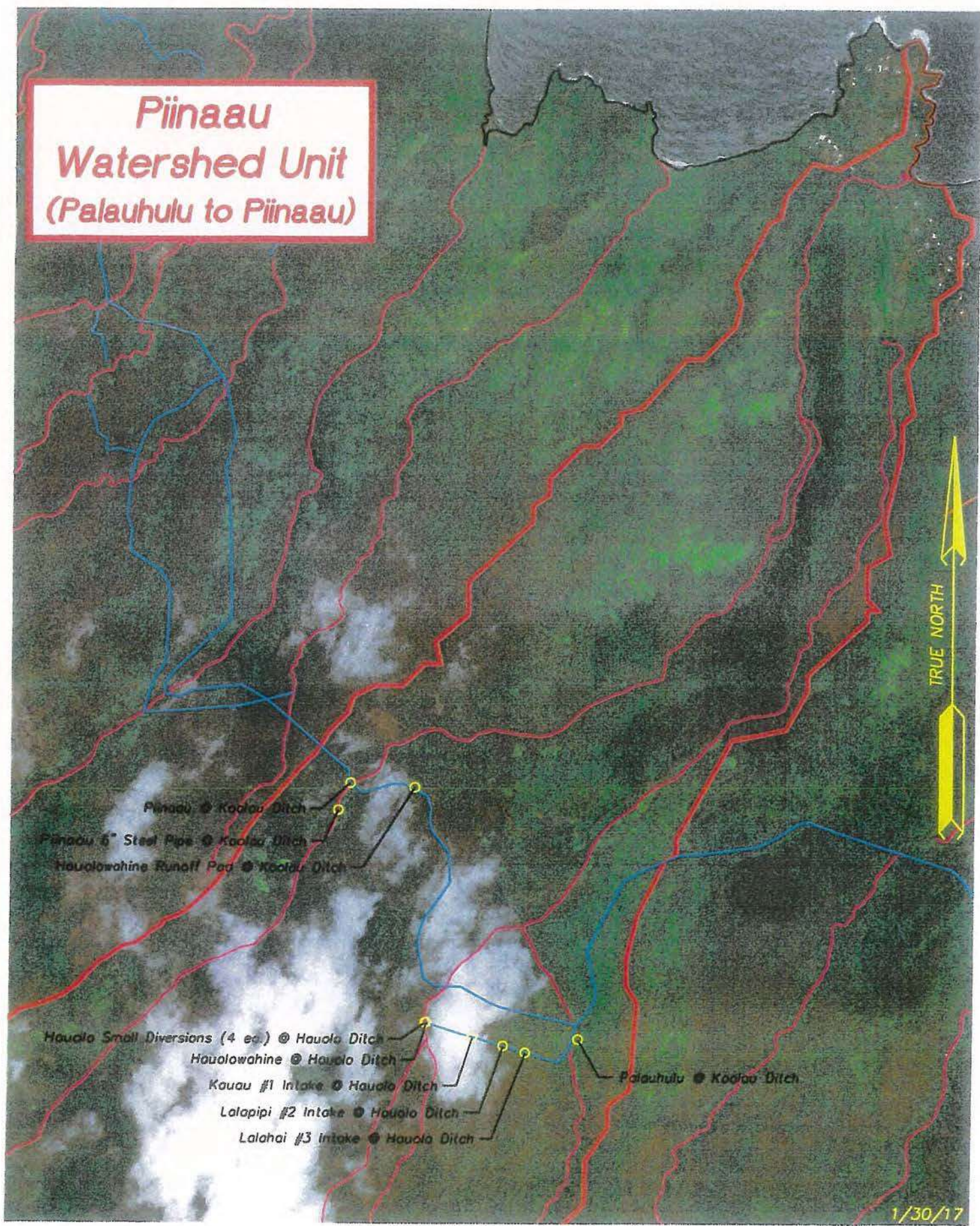


Figure 1-3. Topographic map of the Piinaau hydrologic unit in east Maui, Hawaii (Source: U.S. Geological Survey, 1996).

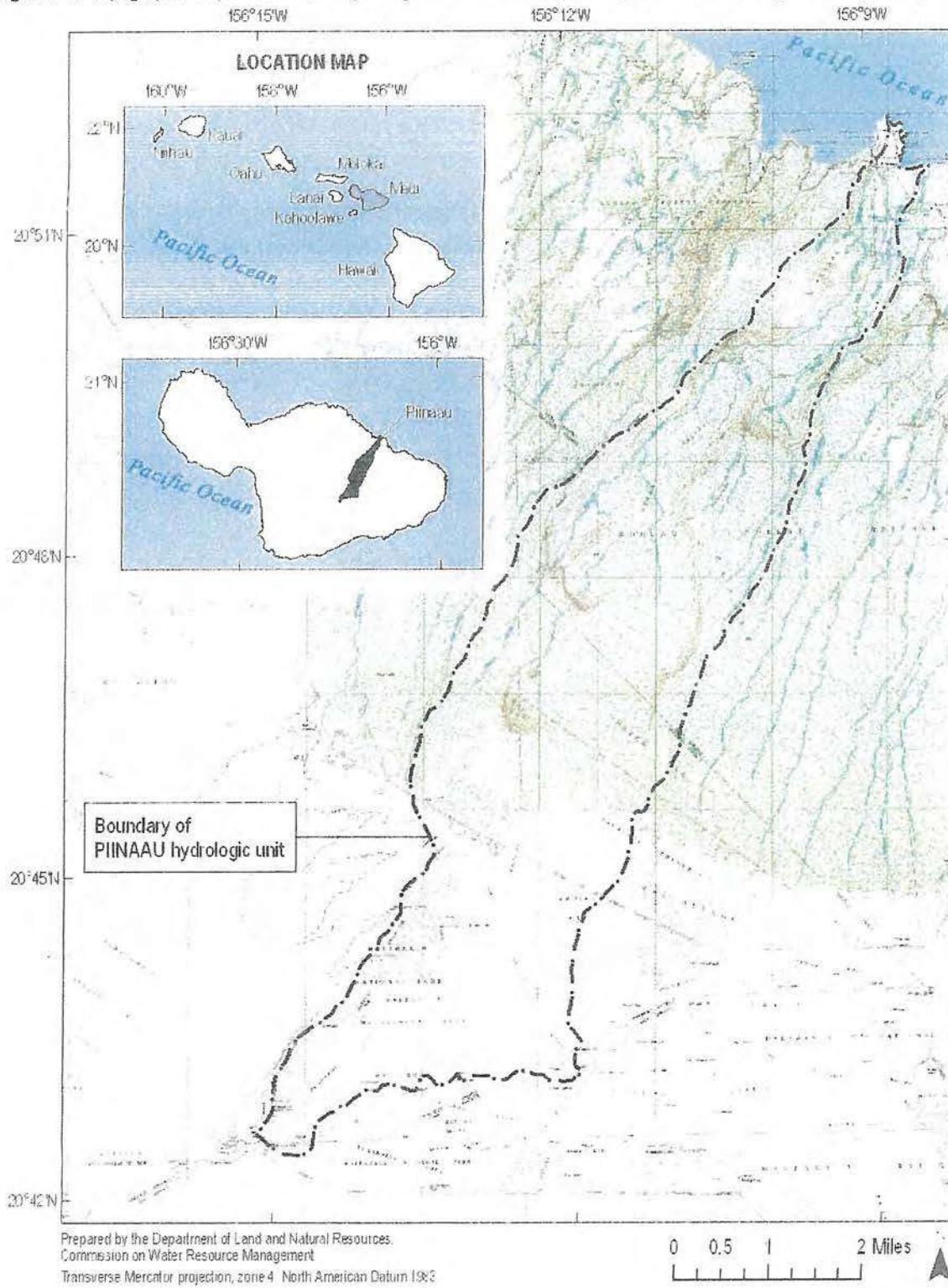


Table of Pi'ina'au (Palauhulu) Stream Diversions

Diversions	EMI Map #	Latitude Longitude Elevation	TMK No. (owner)	Diversions Structure Type	Description of Work and Amount/Type of Fill Material
Pi'ina'au at Koolau Ditch (Pi'ina'au intake at Koolau Ditch)	K-31	20° 49' 42.53" N 156° 10' 27.82" W 1,316 feet	1-1-2:002 (State of Hawaii)	Concrete masonry	In order to prevent flow into the ditch via this diversion, the intake openings will be sealed with stream rocks and concrete. The amount of fill material (concrete and stream rocks) is anticipated to be no more than about one cubic yard in volume. See Photo 11 and Figure 11, attached.

Photographs – Maintenance Work on Pi’ina’au (Palauhulu) Stream Diversions

(Photo 11)

Site Photographs – Pi'ina'au (Palauhulu) Stream Diversions

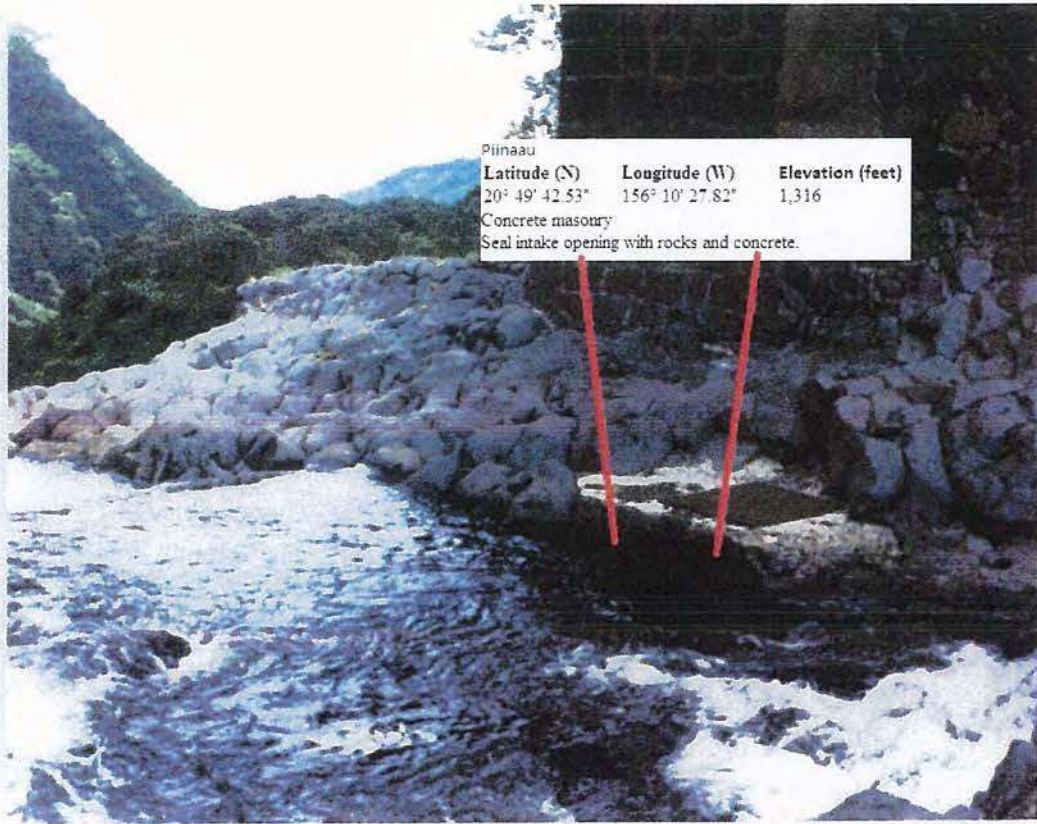


Photo 11 (above): Pi'ina'au at Koolau Ditch (K-31)

Conceptual Sketches – Maintenance Work on Pi’ina’au (Palauhulu) Stream Diversions

(Figure 11)

Piinau- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 49' 42.53"	156° 10' 27.82"	1,316

Diversion Structure Type – Concrete masonry

General Description of Work – Seal intake opening with rocks and concrete.

Piinau at
Koolawi Ditch



FIGURE 11

(K-31)

Stream Flow Restoration in East and West Wailuanui Streams
Summary of Relevant Information

1. Parties involved in the work:

Organization: East Maui Irrigation Company, LLC
Contact: Sean O'Keefe
Address: P.O. Box 266, Puunene, HI 96784
Telephone: (808) 877-2959

2. Project name or title: Stream Flow Restoration at Koolau Ditch Diversions on East and West Wailuanui Streams

3. Name of water body: East and West Wailuanui Streams

4. Project street address: Not applicable

5. Location of project: Keanae/Nahiku (Koolau moku), Maui County, Hawaii

6. Other location descriptions: See attached Table of East and West Wailuanui Stream Diversions for latitude and longitude, elevation, and Tax Map Key Number of each individual diversion.

7. Directions to the site: Please contact East Maui Irrigation Company for directions.

8. Nature of activity: See Description of Work on attached Table of East and West Wailuanui Stream Diversions. Except as otherwise noted in the table, all work will be done by hand and no mechanized equipment will be used in the stream. Work will be conducted during low stream flows in order to minimize the potential for any short-term water quality impacts.

9. Project purpose: The purpose of the project is to permanently restore flow in East and West Wailuanui Streams.

10. Reason for discharge of dredged and/or fill material: Seal openings in existing diversion structures and/or allow stream to pass over irrigation ditch; see attached Table of East and West Wailuanui Stream Diversions. Note that some work proposed to be conducted on these diversions is not anticipated to result in a discharge of dredged and/or fill material.

11. Types of material being discharged and the amount in cubic yards: See attached Table of East and West Wailuanui Stream Diversions. In addition to any materials used to permanently alter the configuration of the diversions, sandbags and/or pipes may be temporarily placed in the stream as necessary to divert stream flow around work areas; any such materials will be removed from the stream upon completion of

Stream Flow Restoration in East and West Wailuanui Streams
Summary of Relevant Information
(continued)

the work. Alternatively, where feasible, stream rocks may be re-positioned in the stream for this purpose.

12. Surface areas of wetlands or other areas filled: None – this work is intended to restore flow in the stream and will not result in filling of any wetlands

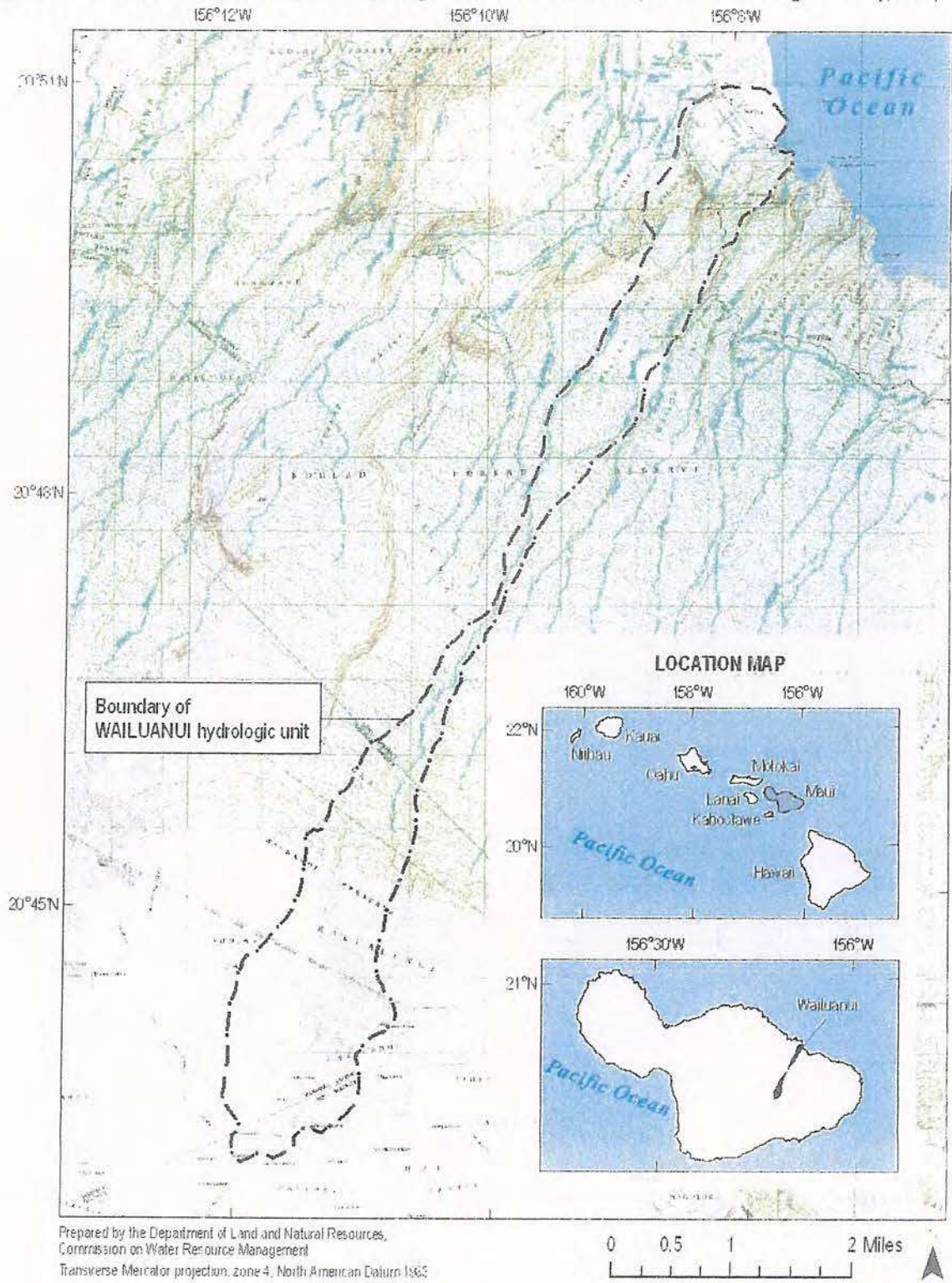
13. Attachments:
 - Wailuanui Hyrdologic/Watershed Unit Maps
 - USGS Nahiku Quadrangle Map, Site Locations – East and West Wailuanui Stream Diversions
 - Table of East and West Wailuanui Stream Diversions
 - Site Photographs, East and West Wailuanui Stream Diversions
 - Conceptual Sketches, East and West Wailuanui Stream Diversions

Wailuanui Watershed Unit



- West Wailuanui @ Koolau Ditch
- 6" Pipe Intake East of #9 @ Koolau Ditch
- Wailuanui #9 Intake @ Koolau Ditch
- Wailuanui #7 Intake @ Koolau Ditch
- East Wailuanui #5 Control Intake @ Koolau Ditch
- 2" Pipe Intake by #5 Control House @ Koolau Ditch
- East Wailuanui @ Koolau Ditch

Figure 1-3. Topographic map of the Wailuanui hydrologic unit in east Maui, Hawaii (Source: U.S. Geological Survey, 1996).





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U.S. GEOLOGICAL SURVEY

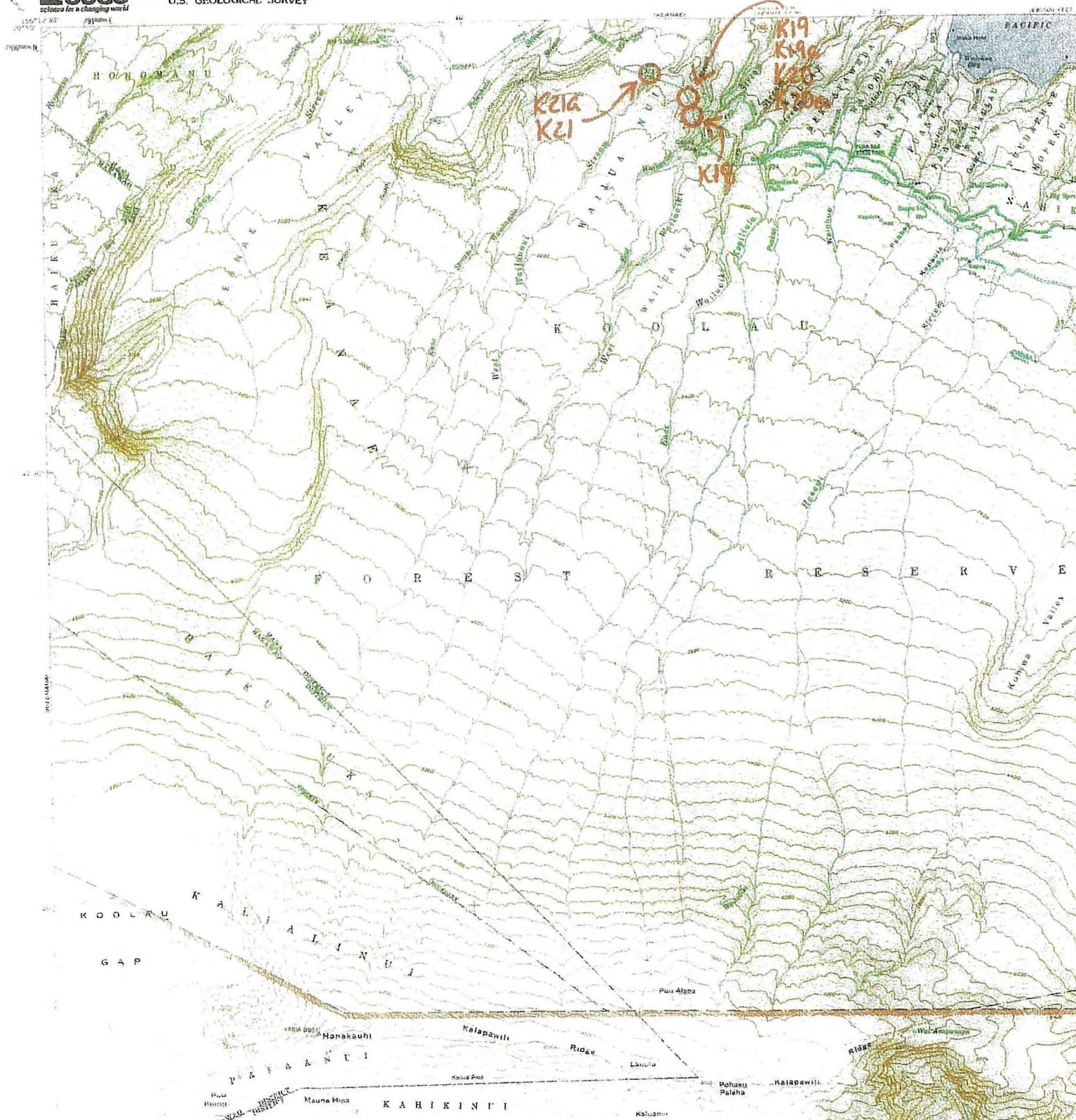


Table of Wailuanui Stream Diversions

Diversion	EMI Map #	Latitude Longitude Elevation	TMK No. (owner)	Diversion Structure Type	Description of Work and Amount/Type of Fill Material
East Wailuanui at Koolau Ditch (East Wailuanui #6 intake and sluice basin at Koolau Ditch)	K-18	20° 49' 14.09" N 156° 8' 26.75" W 1,318 feet	1-1-2:002 (State of Hawaii)	Concrete masonry	In order to prevent flow into the ditch via this diversion, the intake openings will be sealed with stream rocks and concrete. The amount of fill material (concrete and stream rocks) is anticipated to be no more than about one cubic yard in volume. Additionally, a sluice gate will be removed from this diversion. See Photo 12 and Figure 12, attached.
East Wailuanui #6 control (house) intake at Koolau Ditch	K-19	20° 49' 20.42" N 156° 8' 26.61" W 1,280 feet	1-1-2:002 (State of Hawaii)	Concrete masonry (with grate)	In order to prevent flow into the ditch via this diversion, the grate in the diversion must be sealed. This will be accomplished by filling the grate openings with concrete/grout. The amount of fill material (concrete/grout) is anticipated to be no more than about one to two cubic yards in volume and will be installed directly on the existing grate. See Photo 13 and Figure 13, attached.
Wailuanui #7 intake at Koolau Ditch	K-20	20° 49' 22.70" N 156° 8' 28.63" W 1,290 feet	1-1-2:002 (State of Hawaii)	Concrete masonry	In order to prevent flow into the ditch via this diversion, the intake opening will be sealed with stream rocks and concrete. The amount of fill material (concrete and stream rocks) is anticipated to be no more than about one cubic yard in volume. Additionally, a control gate has been removed from this diversion. See Photo 14 and Figure 14, attached.
West Wailuanui at Koolau Ditch (West Wailuanui #9 intake)	K-21	20° 49' 28.71" N 156° 8' 41.71" W 1,273 feet	1-1-2:002 (State of Hawaii)	Concrete masonry	In order to prevent flow into the ditch via this diversion, the intake openings will be sealed with stream rocks and concrete. The amount of fill material (concrete and stream rocks) is anticipated to be no more than about one to two cubic yards in volume. Additionally, a sluice gate will be removed from this diversion. See Photo 15 and Figure 15, attached.

Photographs – Maintenance Work on East and West Wailuanui Stream Diversions

(Photos 12 through 15)

Site Photographs – East and West Wailuanui Stream Diversions



Photo 12 (above): East Wailuanui at Koolau Ditch (K-18)

Photo 13 (below): East Wailuanui #6 control (house) intake at Koolau Ditch (K-19)

(Note: Disregard references to bolted steel plates. Intakes will be sealed with concrete/grout.)



Site Photographs – East and West Wailuanui Stream Diversions

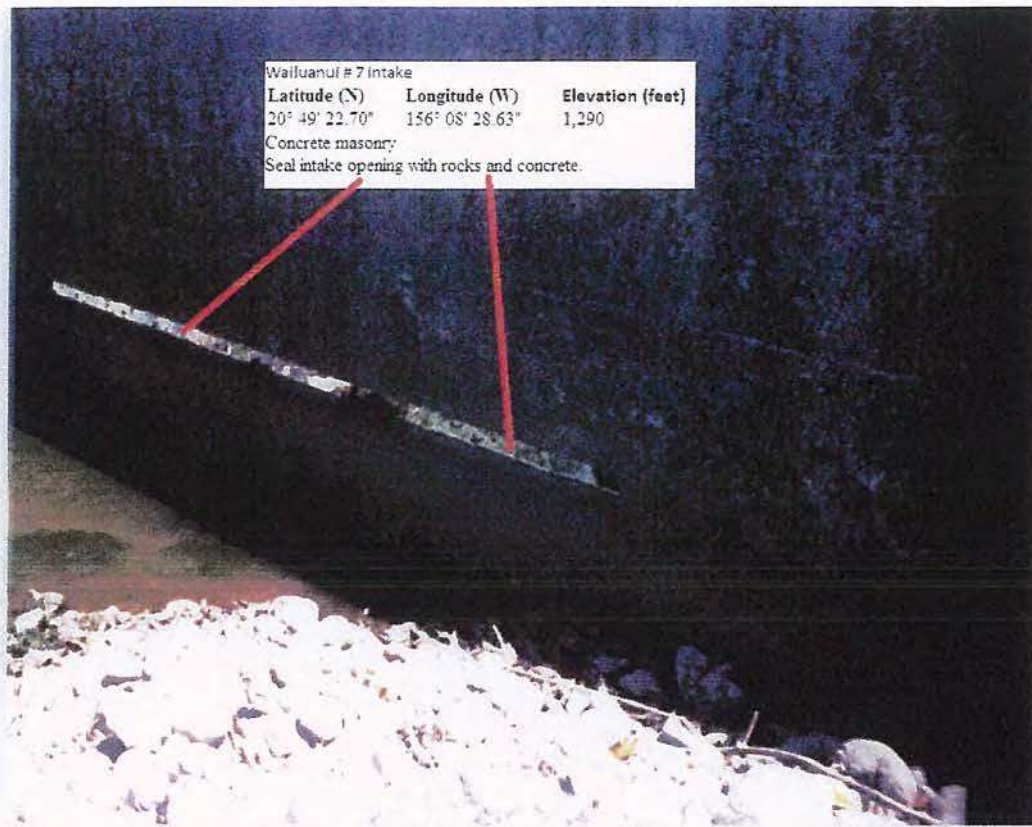


Photo 14 (above): Wailuanui #7 intake at Koolau Ditch (K-20)
Photo 15 (below): West Wailuanui at Koolau Ditch (K-21)



Conceptual Sketches – Maintenance Work on East and West Wailuanui Stream Diversions

(Figures 12 through 15)

East Wailuanui # 6 intake and sluice basin- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 49' 14.09"	156° 08' 26.75"	1,318

Diversion Structure type – concrete masonry

General description of work - Remove sluice gate and seal intake opening with rocks and concrete.

East Wailuanui at
Ko'olau Ditch

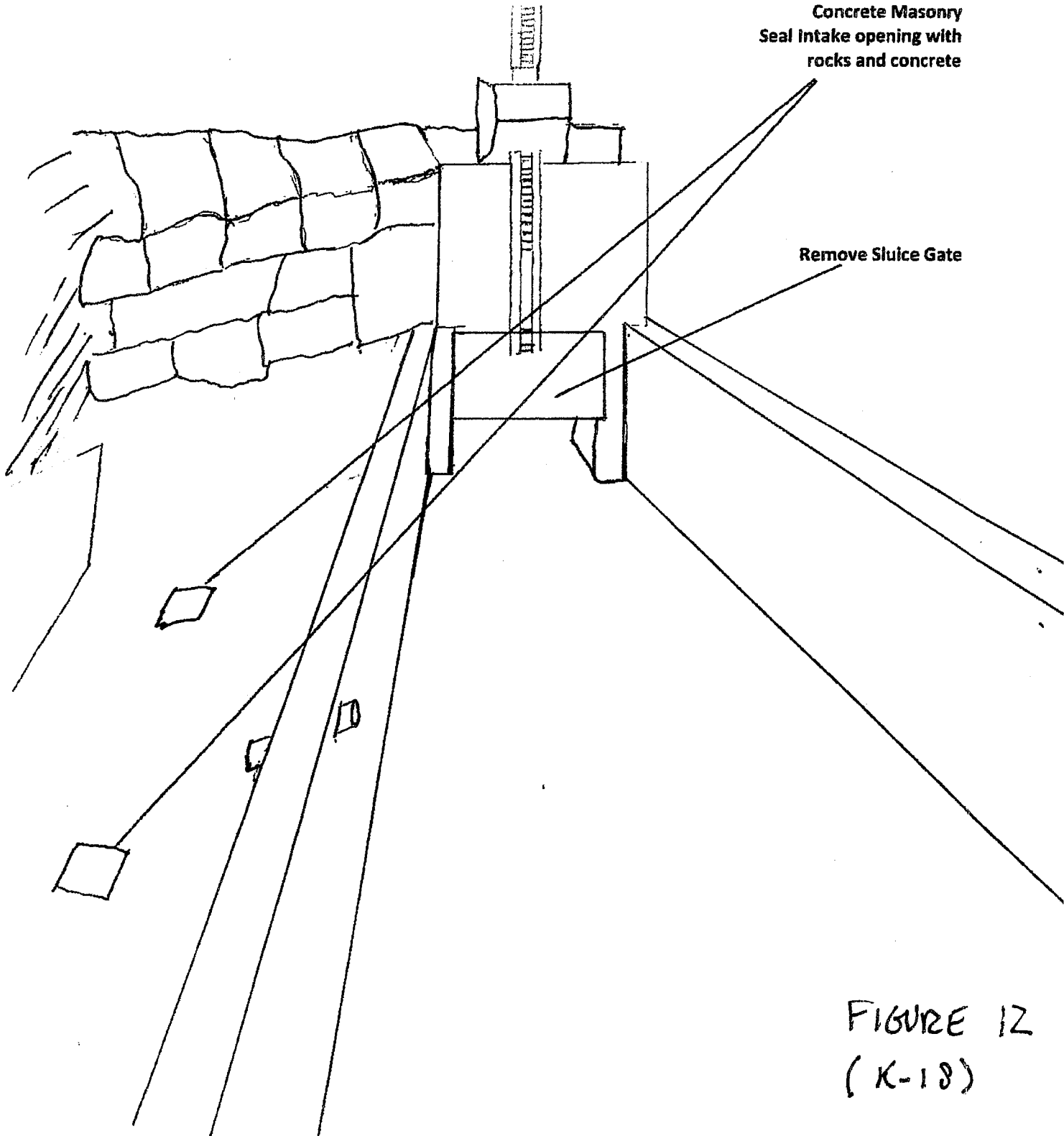


FIGURE 12
(K-18)

East Wailuanui # 6 control house intake- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 49' 20.42"	156° 08' 26.61"	1,280

Diversion Structure Type – Concrete masonry

General Description of Work – Bolt steel plates or concrete over diversion intake grate.

East Wailuanui #6
Control House Intake
at
Koolau
Ditch

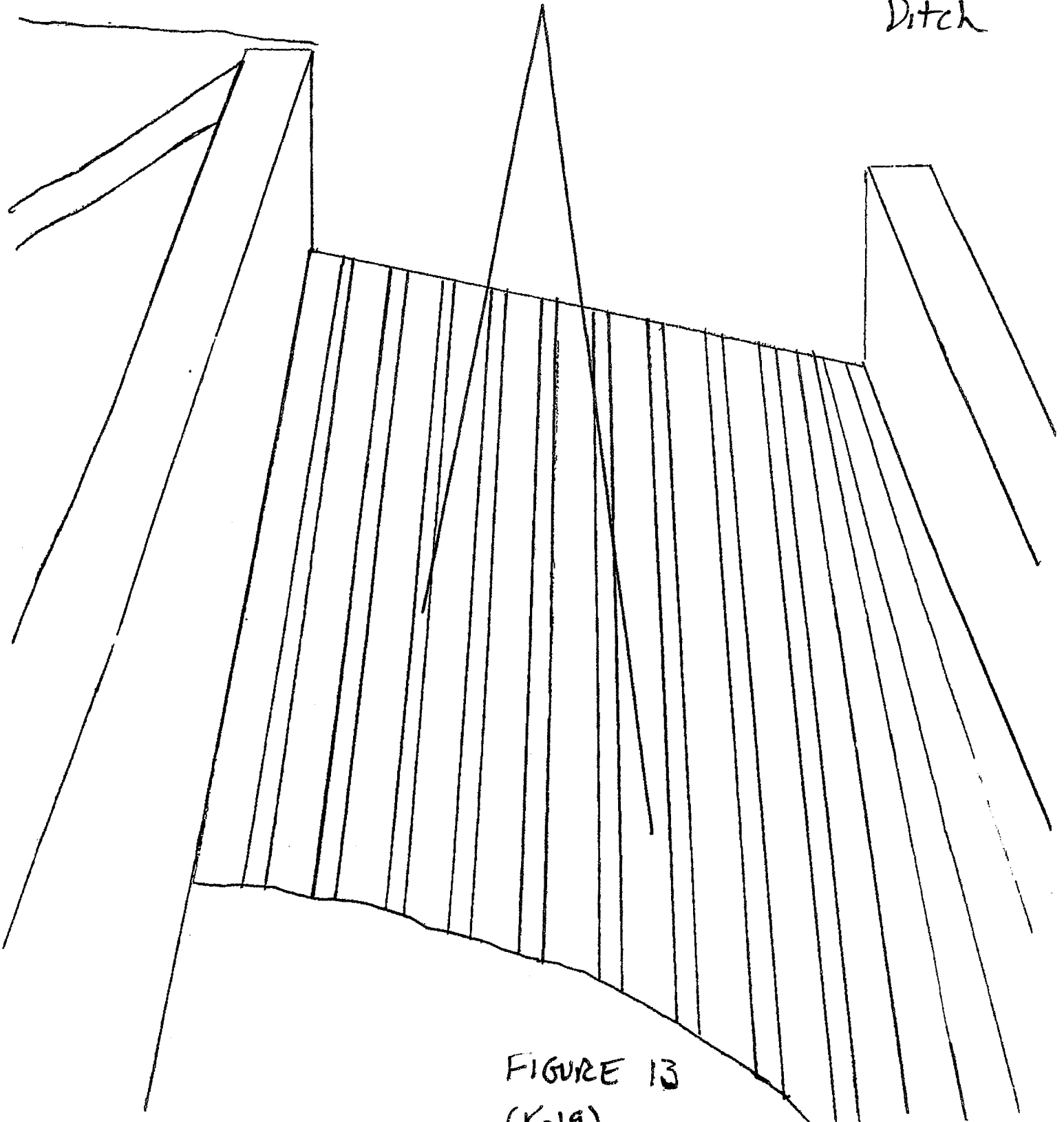


FIGURE 13
(K-19)

Wailuanui # 7 Intake- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 49' 22.70"	156° 08' 28.63"	1,290

Diversion Structure Type – Concrete masonry

General Description of Work – Seal intake opening with rocks and concrete.

Waihanui
#7 intake at
Koolau Ditch

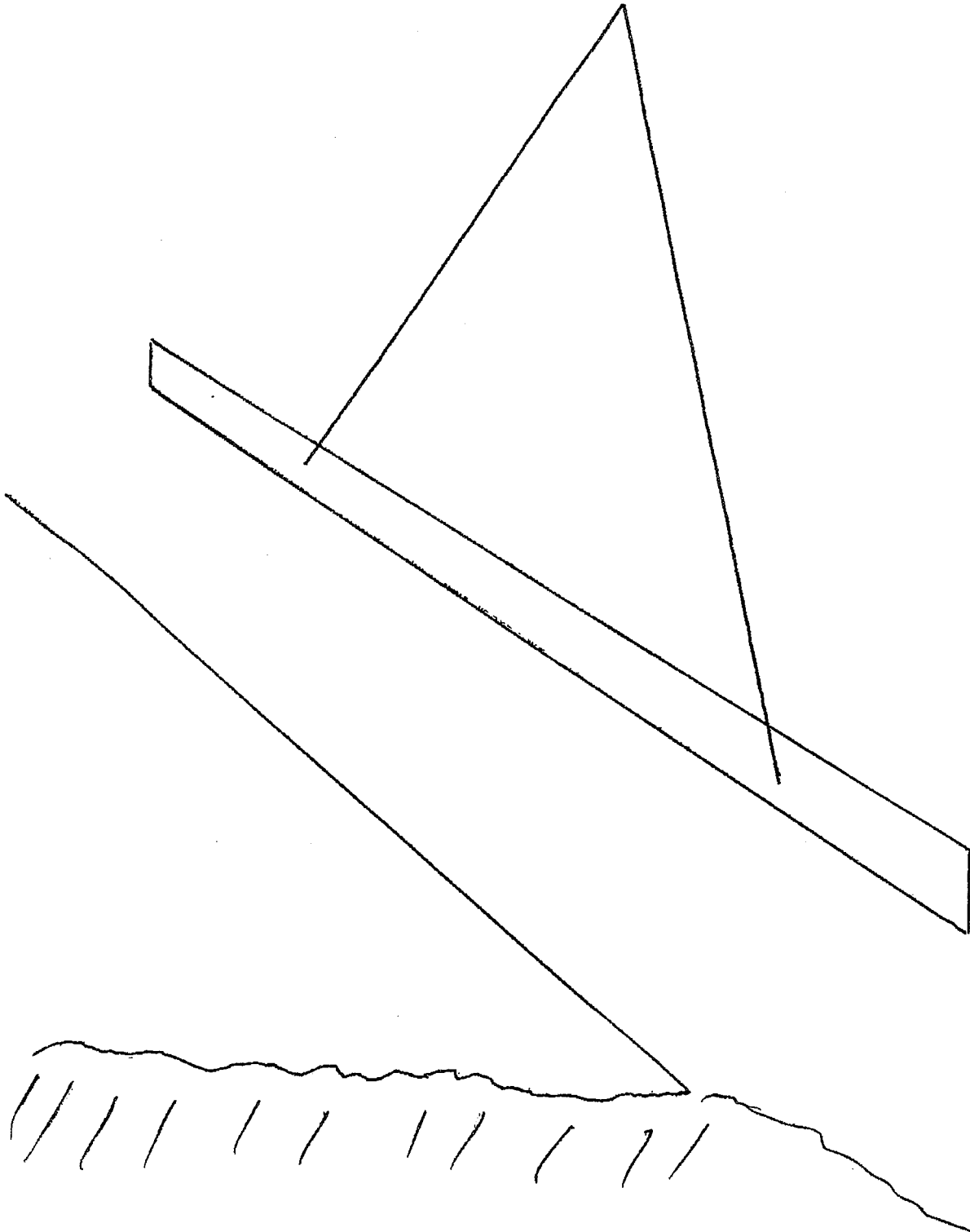


FIGURE 1A
(K-20)

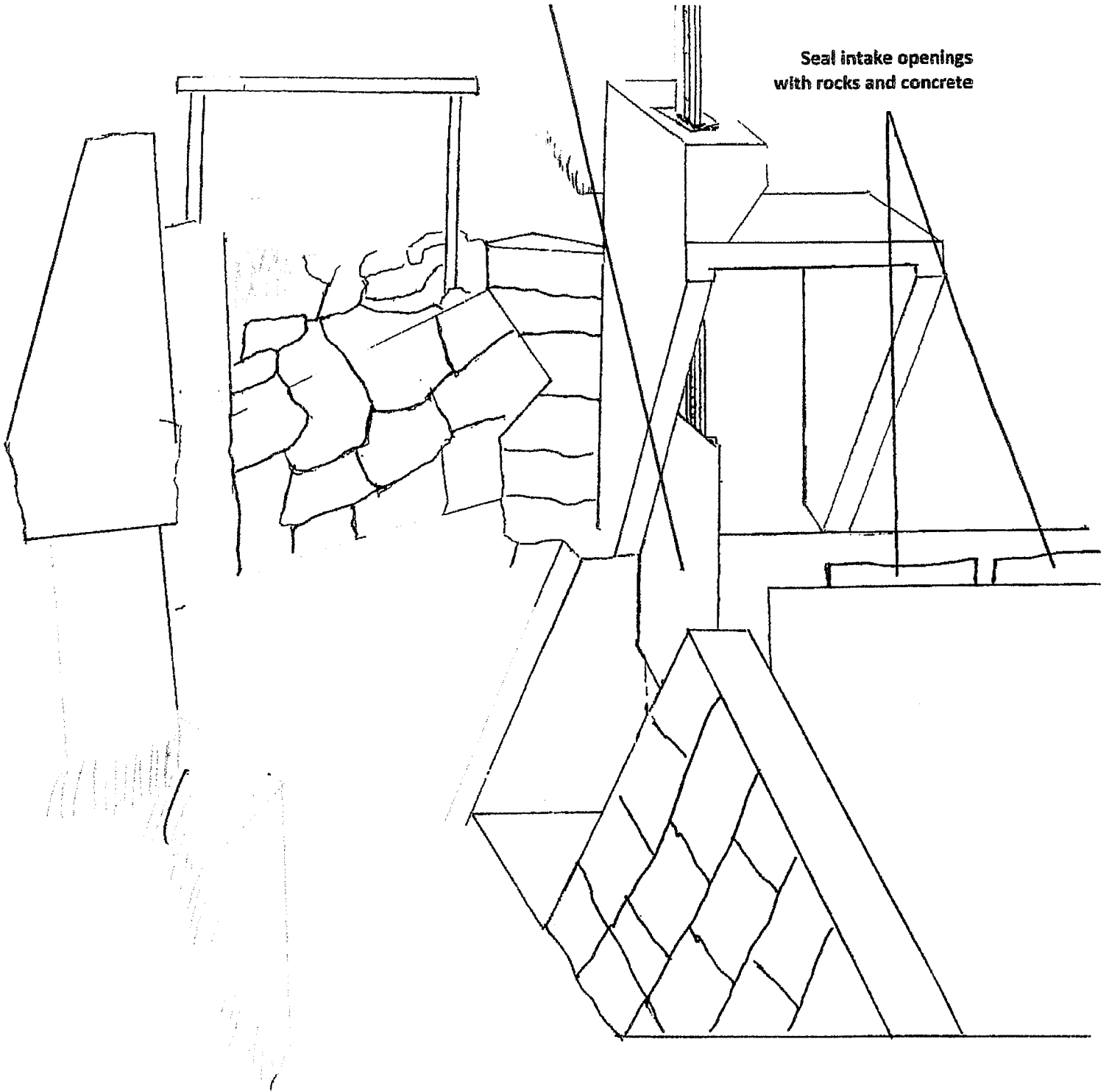
West Waihanui
at Koolau Ditch

West Waihanui #9 intake- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 49' 28.71"	156° 08' 41.71"	1,273

Diversion Structure Type – Concrete masonry

General Description of Work – Remove sluice gate and seal intake opening with rocks and concrete.



Seal intake openings
with rocks and concrete

FIGURE 15
(K-21)