

REVISED
10/16/18



ALEXANDER & BALDWIN
PARTNERS FOR HAWAII

August 17, 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

RECEIVED
COMMISSION ON WATER
RESOURCE MANAGEMENT
2018 DEC -5 AM 9:26

**Subject: Stream Diversion Works Permit Applications ("Category 2" Diversions)
East Maui Irrigation Company "Taro Stream" Diversion Abandonments**

Dear Mr. Pearson:

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 provided by your office, EMI is amending its original SDWPA by splitting it into separate, smaller applications in order to facilitate review and approval of the proposed abandonment work. The first such application, covering abandonment of fifteen diversions, is enclosed, along with the required filing fee. Additional applications will be submitted as they are completed.

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

Sincerely,

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

Enclosures

cc: M. Vaught, M. Ching, N. Chun, Y. Izu

FILE ID: SDWP.4915.6
DOC ID: 20658



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

For Official Use Only:
**COMMISSION ON WATER
 RESOURCE MANAGEMENT**
2010 DEC -5 AM 9:18

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 Mailing Address
 PO Box 791628 Paia, Hawaii 96779

Applicant's Contact Person

Mark Vaught

Applicant's Phone

(808) 579-9516

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

Landowner's Contact Person

Landowner's Phone

Landowner's Mailing Address

Landowner's E-mail Address

5. CONSULTANT'S NAME / COMPANY

N/A

Consultant's Contact Person

Consultant's Phone

Consultant's Mailing Address

Consultant's E-mail Address

6. CONTRACTOR'S NAME / COMPANY

N/A

Contractor's Contact Person

Contractor's Phone

Contractor's Mailing Address

Contractor's E-mail Address

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 (EMI)

11002002, 29014001, 29014017 (State of Hawaii)

9. Stream / Gulch Name(s) List all affected streams and/or gulches.
 Honopou, Pi'ina'au, Palauhulu, Wailuanui

FOR OFFICIAL USE ONLY:

LAT: _____ SWHU ID: _____ FILE ID: _____
 LON: _____ GWHU ID: _____ DOC ID: _____
 REACH ID: _____

GENERAL PROJECT INFORMATION

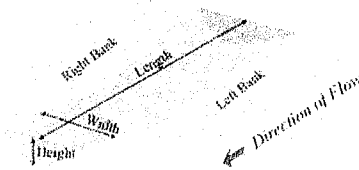
10. Diversion No: (if already assigned) see attached 11. Diversion Name: see attached
 12. Project Site Location(s): Provide site coordinates of downstream-most point of project in degrees, minutes, seconds (NAD83).
 Latitude: see attached° ' " Longitude: see attached° ' " Elevation: see attached ft. 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)
 Provide generalized dimensions for the entire project / structure area. If the project includes a pipe (e.g., culvert, drain, etc.), provide the pipe diameter.
 Width: _____
 Height: _____
 Length: _____
 Diameter: _____



15. Diversion Location:
 Provide the general location of the diversion intake structure in relation to the streambank.
 Left bank (downstream view)
 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 No

19. 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 No

22. 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
 Describe storage facility: _____ Storage capacity: (gallons) _____

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.

	<u>Attached</u>	<u>N/A</u>
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'aia: 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.
See attached.

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

Principally concrete/grout and stream rocks

B. Quantities

To be determined based on work plans for each diversion. See attached.

C. Excavation

None anticipated.

D. Fill

To be determined based on work plans for each diversion. See attached.

E. Disposal

With the exception of stream rocks and boulders, materials removed from diversion structures will be transported off-site for proper disposal.

F. Construction methods

Work will be done primarily by hand. Heavy equipment may be utilized only when absolutely necessary in the interests of safety and practicality. See attached.

G. Temporary facilities

None anticipated except as necessary to divert stream flows around work areas (e.g., using sand bags, pipes).

H. Expected period of time required for construction

Estimated three to six months, dependent upon weather conditions.

I. Liability during construction

None anticipated.

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:

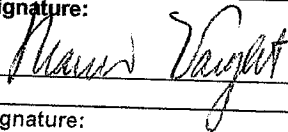
- 1) The proposed work is to be completed within two (2) years from the date of permit approval.
- 2) The permittee shall notify the Commission, by letter, of the actual dates of project initiation and completion.
- 3) The permittee shall submit a set of as-built plans and photographs to the Commission 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:

1/20/18

55. CONSULTANT

Print Name:

NA

Signature:

Date:

56. CONTRACTOR

Print Name:

NA

Signature:

Date:

57. **LANDOWNER** (If multiple landowners, skip Section 53, then complete and attach Form SCAP-LND with appropriate landowner signatures.)

Print Name:

Signature:

Date:



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

For Official **RECEIVED**
COMMISSION ON WATER
RESOURCE MANAGEMENT
2018 DEC -5 AM 10:04

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/cwrm>.

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) (2) 2-8-008:007	Landowner's E-mail Address mvaught@abhi.com
Print Name: Mark Vaught	Signature: <i>Mark Vaught</i>	Date: 7/20/18		
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) (2) 1-1-002:002, (2) 2-9-014:001, (2) 2-9-014:017	Landowner's E-mail Address dlnr@hawaii.gov
Print Name: Suzanne Case	Signature: <i>Suzanne Case</i>	Date: JUL 26 2018		
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:		

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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: One diversion covered by this application is located outside the Conservation District, while the remaining 14 are within the Conservation District. For those located within the Conservation District, no CDUP is required because the planned activities are either exempt from permitting or require only a Site Plan Approval. An application for a Site Plan Approval has been submitted to OCCL.
- Box 33: None of the diversions covered by this application is located within the SMA, therefore no SMA Permit is required.
- 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 has been initiated for this project, 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, will 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: The proposed project 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 as is attached.
- Box 37: A Section 401 Water Quality Certification is not required for the proposed project because EMI is not an applicant for a federal license or permit to conduct these activities. Appropriate Best Management Practices will be implemented during the work.

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

- 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.

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 V. Tsuji
First Deputy

Ken C. Kawahara
Deputy Director - Water

Aquatic Resources
Hunting and Ocean Recreation
Bureau of Forestry
Commission on Water Resource Management
Conservation and Coastal Lands
Conservation and Resources Enforcement
Fishing
Forestry and Wildlife
Historic Preservation
Kauai, Maui and Hawaii State Commission
1999
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'au 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.

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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 McMahan, 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

000013



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

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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.fragers@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**

Digitally signed by
FRAGER.REBECCA.MABLE.1508149111
DN: c=US, o=U.S. Government, ou=DoD,
ou=PKI, ou=USA,
cn=FRAGER.REBECCA.MABLE.1508149111
Date: 2018.01.26 15:57:35 -10'00'



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.

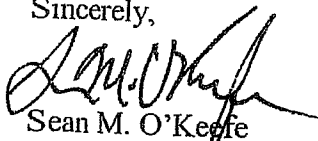
A&B has preliminarily determined that the proposed work is exempt from the Section 404 permitting program under Clean Water Act Section 404(f)(1)(c), which provides that "the discharge of dredged or fill material for the purpose of construction or maintenance of farm or stock ponds or irrigation ditches, 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

Additional Attachments – Description of Work

Stream Flow Restoration in Honopou Stream
Summary of Relevant Information

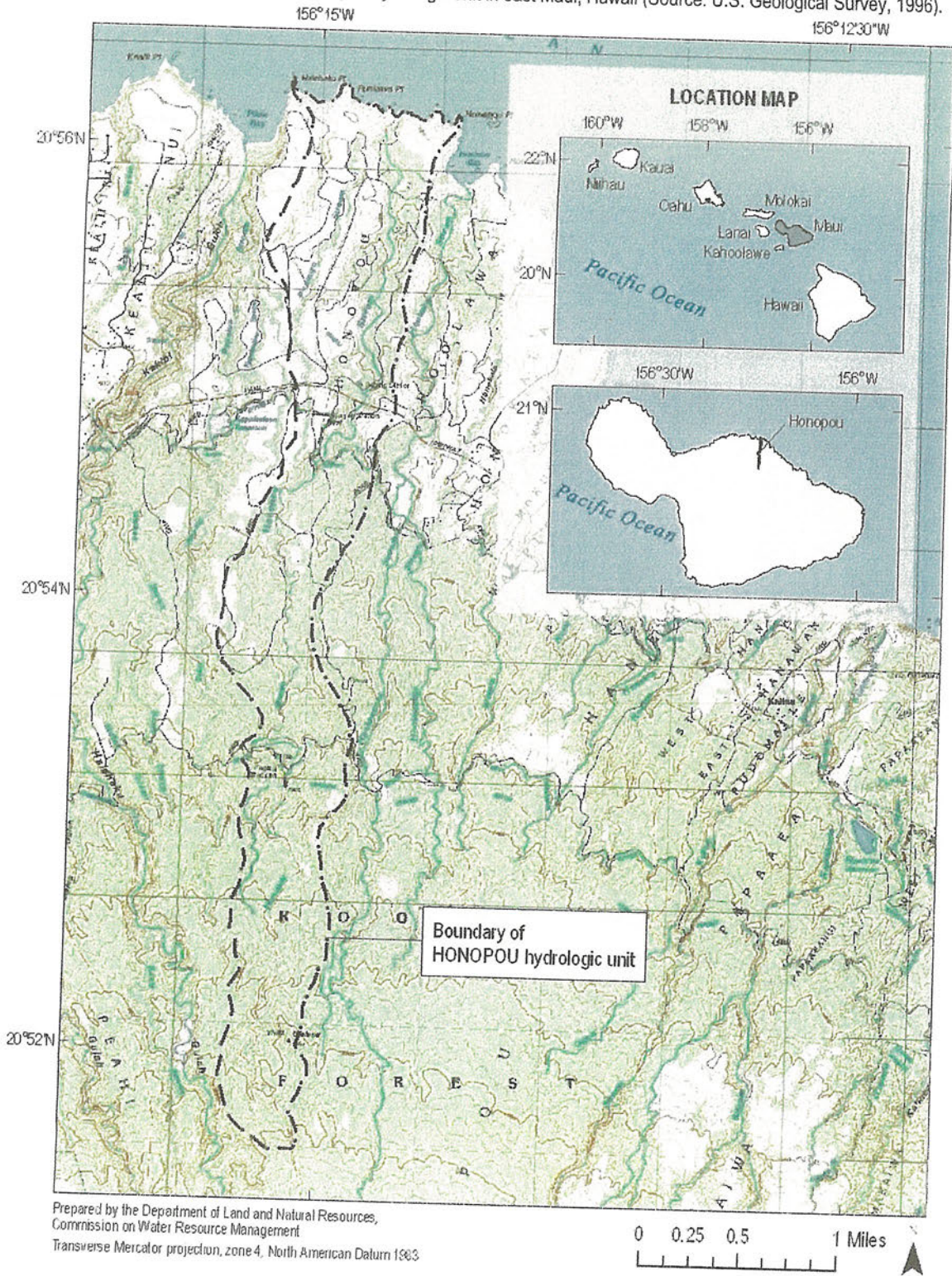
1. Parties involved in the work:
Organization: East Maui Irrigation Company, LLC
Contact: Sean O'Keefe
Address: P.O. Box 266, Puunene, HI 96784
Telephone: (808) 877-2959
2. Project name or title: Stream Flow Restoration at Wailoa, New Hamakua, Lowrie, and Haiku Ditch Diversions on Honopou Stream
3. Name 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

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



Honopou Watershed Unit

TRUE NORTH

Honopou @ Hailu Ditch

Honopou @ Lowrie Ditch

Honopou Siphon @ Lowrie Ditch

Honopou Long Strainer @ Lowrie Ditch

Waiale @ New Hamakua Ditch

Honopou @ New Hamakua Ditch

Lupi Long Intake @ Wailoa Ditch

Honopou @ Wailoa Ditch

Waiale @ Wailoa Ditch

1/30/17

000022

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
Honopou at Wailoa Ditch (Wailoa Ditch intake)	W-22	20° 53' 8.5" N 156° 15' 8.9" W 1,217 feet	2-8-8:007 (EMI) 2-9-14:001 (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, the existing sluice gate will be permanently removed. See Photo 1 and Figure 1, attached.
Wailole at Wailoa Ditch (Wailole intake at Wailoa Ditch)	W-22b	20° 53' 9.03" N 156° 15' 24.54" W 1,239 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. 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 2 and Figure 2, attached.
Honopou at Lowrie Ditch (Honopou side ditch at Lowrie Ditch)	L-17	20° 54' 31.79" N 156° 15' 01.66" W 605 feet	2-9-14:017 (State of Hawaii)	Concrete masonry (with control gate and sluice gate)	Modifications to this diversion will not require the addition of any fill material and are therefore not subject to Section 404. Instead, an existing control gate that allows flow into the ditch will be permanently closed, and an existing sluice gate that allows flow to bypass the diversion will be permanently removed. See Photos 3 and 4 and Figures 3A and 3B, attached.

Photographs – Alterations to Honopou Stream Diversions

(Photos 1 through 4)

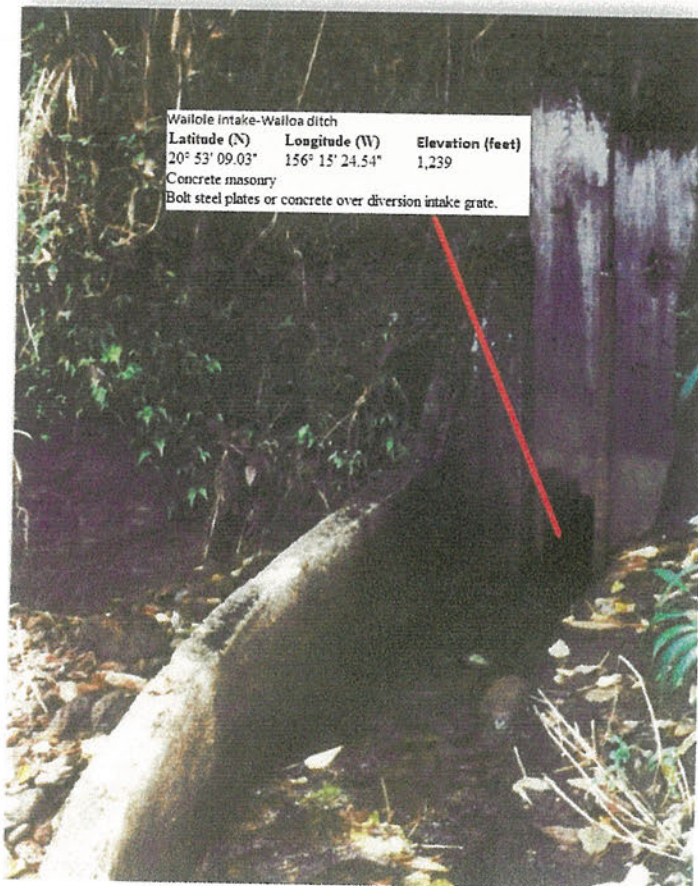
Site Photographs – Honopou Stream Diversions



Photo 1 (above): Honopou at Wailoa Ditch (W-22)

Photo 2 (below): Wailole at Wailoa Ditch (W-22b)

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



Site Photographs – Honopou Stream Diversions



Photo 3 (above): Control gate on Honopou at Lowrie Ditch (L-17)
Photo 4 (below): Sluice gate on Honopou at Lowrie Ditch (L-17)



Conceptual Sketches – Alterations to Honopou Stream Diversions

(Figures 1 through 3)

HONOPOU at
WAILOA DITCH

Honopou- Wailoa Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 53' 08.50"	156° 15' 08.90"	1,217

Diversion Structure Type – Concrete masonry

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

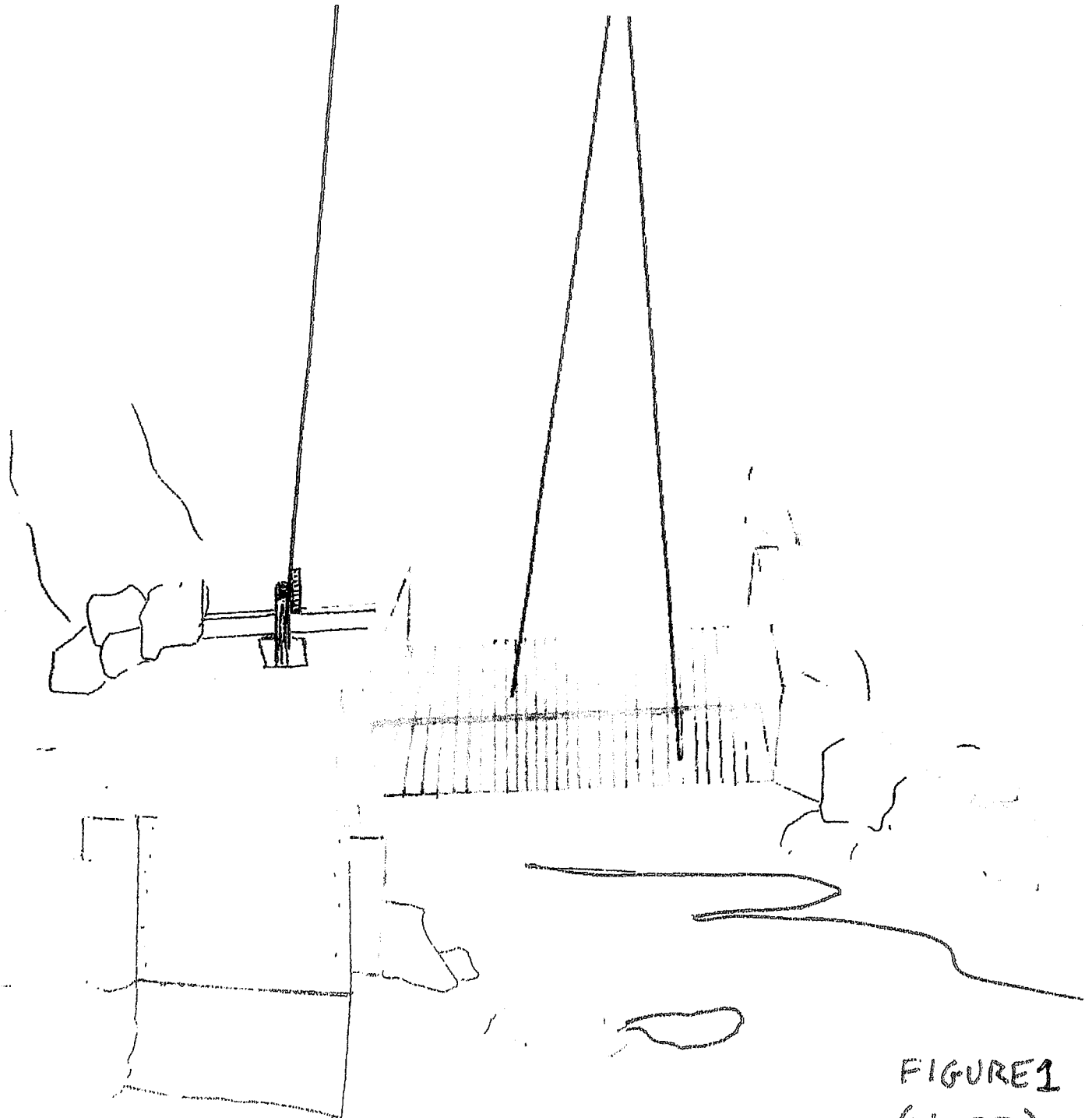


FIGURE 1
(W-22)
000028

WAILOLE at
WAILOA DITCH

Wailole-Wailoa Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 53' 09.03"	156° 15' 24.54"	1,239

Diversion Structure Type – Concrete masonry

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

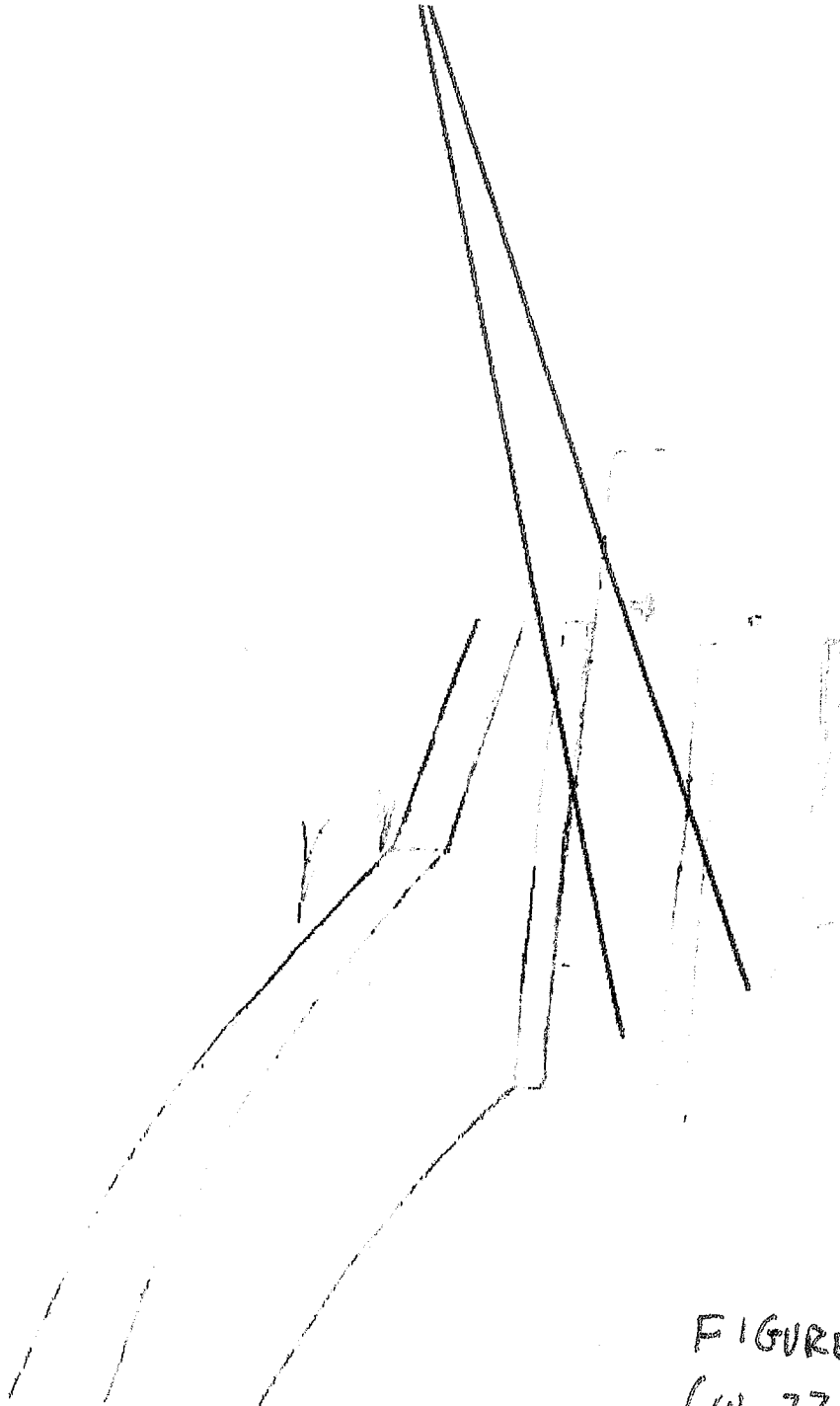


FIGURE 2
(W-22b) 000029

HONOPOU AT LOWRIE DITCH

Honopou side ditch- Lowrie Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 54' 31.79"	156° 15' 01.66"	605

Diversion Structure Type - Concrete masonry

General Description of Work - Close existing control gate.

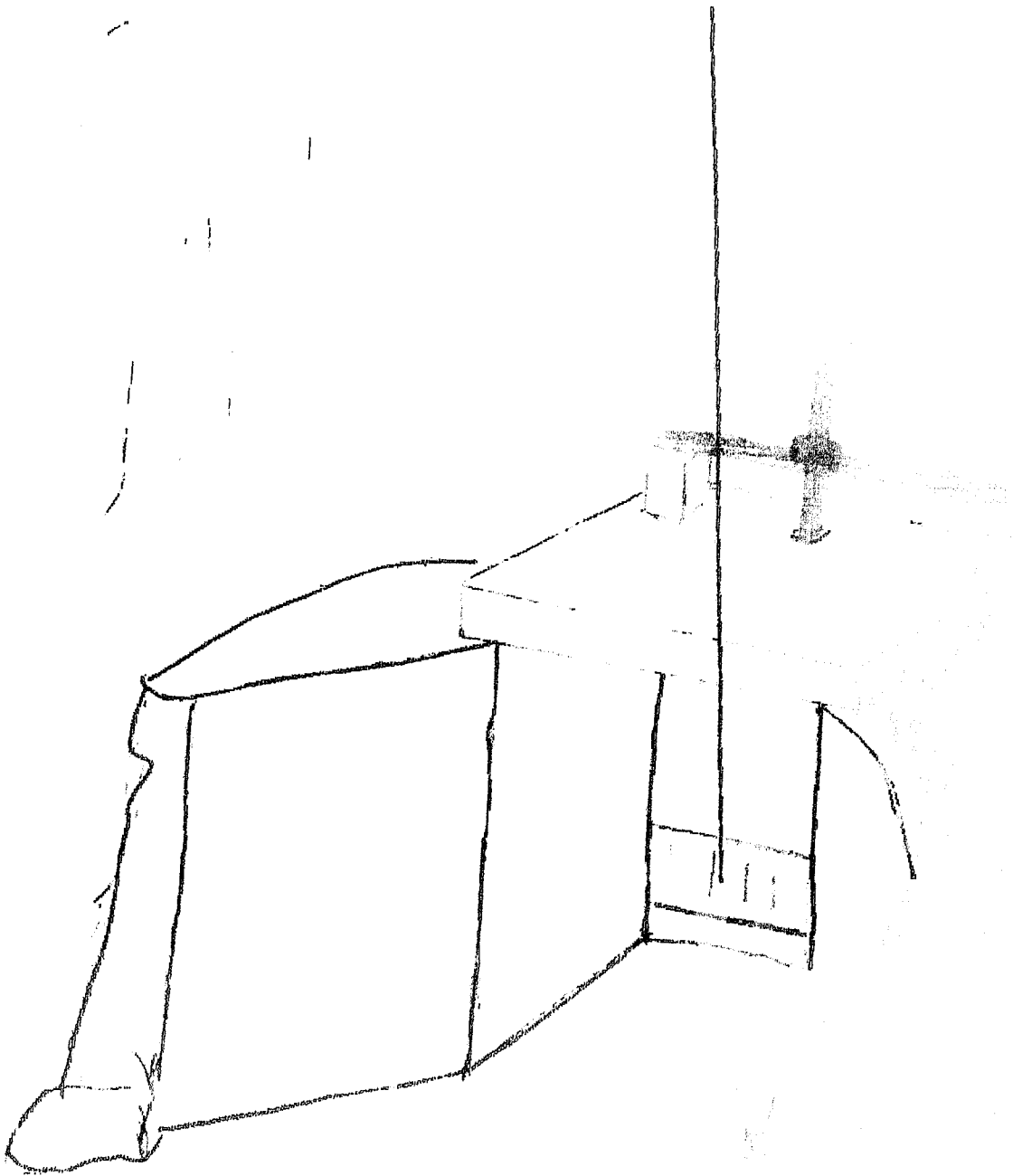


FIGURE 3A
(L-17)

000030

HONOPOU at
LOWRIE DITCH

Honopou side ditch- Lowrie Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 54' 31.79"	156° 15' 01.66"	605

Diversion Structure Type - Concrete masonry

General Description of Work - Remove sluice gate.

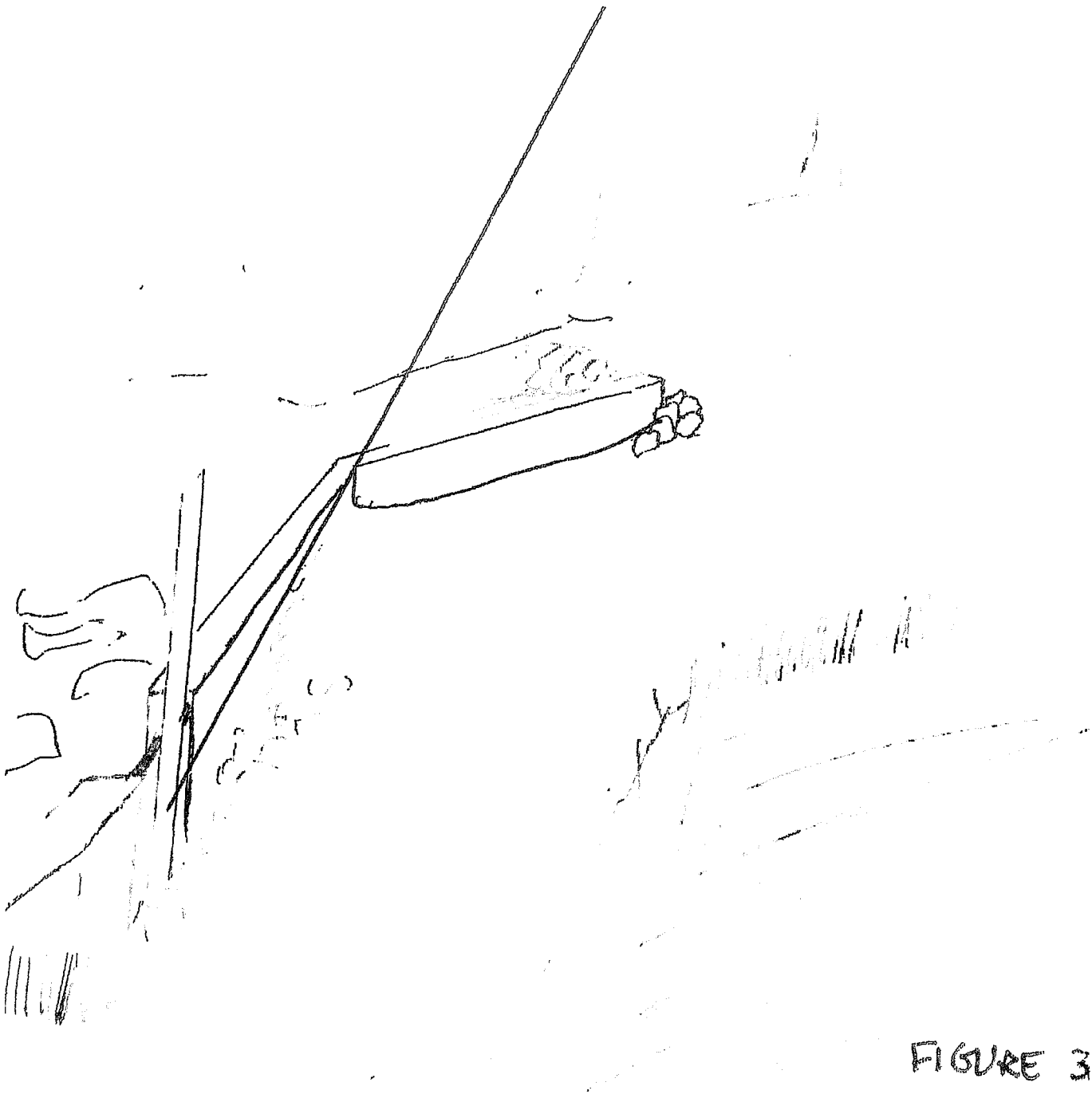


FIGURE 3B

(L-17)

000031

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)**



Piinaau @ Koolau Ditch
Piinaau 6" Steel Pipe @ Koolau Ditch
Hauolowahine Runoff Pad @ Koolau Ditch

Hauolo Small Diversions (4 ea) @ Hauolo Ditch
Hauolowahine @ Hauolo Ditch
Kauau #1 Intake @ Hauolo Ditch
Lalapipi #2 Intake @ Hauolo Ditch
Lalahai #3 Intake @ Hauolo Ditch
Palauhulu @ Koolau Ditch

1/30/17

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

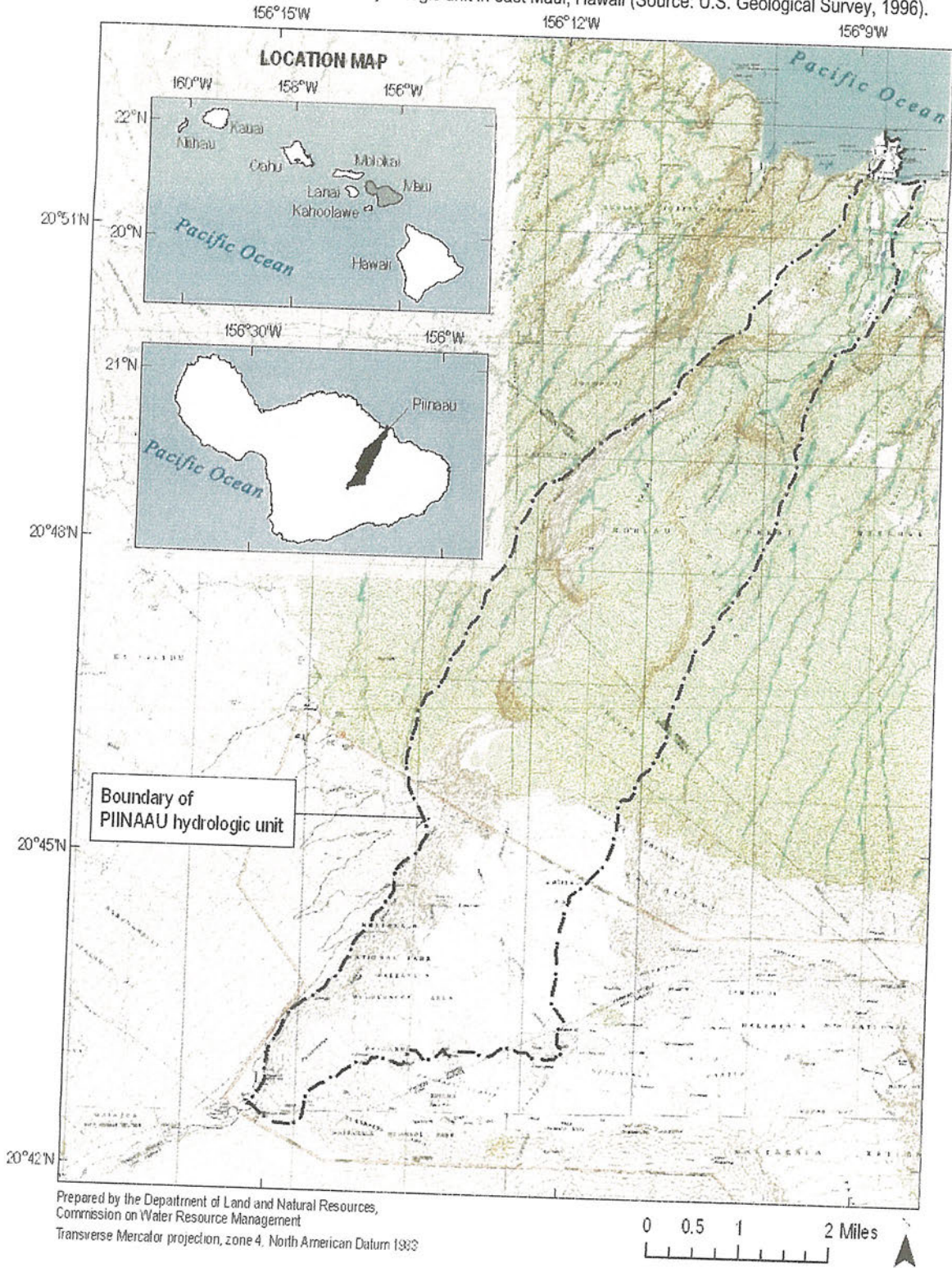


Table of Pi'ina'au (Palauhulu) Stream Diversions

Diversion	EMI Map #	Latitude Longitude Elevation	TMK No. (owner)	Diversion Structure Type	Description of Work and Amount/Type of Fill Material
Palauhulu at Koolau Ditch (Kano intake at Koolau Ditch)	K-26	20° 48' 56.11" N 156° 9' 44.41" W 1,708 feet	1-1-2:002 (State of Hawaii)	Unlined channel (with tunnel)	Most flow will be restored at this diversion by the removal of a sluice gate. While the scope of work for full restoration has not yet been determined, all work is anticipated to be conducted within the diversion tunnel, outside of the stream. Section 404 is not expected to apply to either the gate removal or the work in the tunnel. See Photo 5 and Figure 4.
Lalahai #3 intake at Hauolo Ditch	K-27	20° 48' 53.85" N 156° 9' 54.45" W 1,970 feet	1-1-2:002 (State of Hawaii)	Concrete masonry (with grate and tunnel)	While the scope of work for full restoration at this diversion has not yet been determined, all work is anticipated to be conducted within the diversion tunnel, outside of the stream. Section 404 is therefore not expected to apply. See Photo 6 and Figure 5.
Lalapipi #2 intake at Hauolo Ditch	K-28	20° 48' 55.12" N 156° 9' 58.73" W 2,024 feet	1-1-2:002 (State of Hawaii)	Concrete masonry (with tunnel)	While the scope of work for full restoration at this diversion has not yet been determined, all work is anticipated to be conducted within the diversion tunnel, outside of the stream. Section 404 is therefore not expected to apply. See Photo 7 and Figure 6.
Kaauau #1 intake at Hauolo Ditch	K-29	20° 48' 56.82" N 156° 10' 4.71" W 2,037 feet	1-1-2:002 (State of Hawaii)	Concrete masonry (with tunnel)	While the scope of work for full restoration at this diversion has not yet been determined, all work is anticipated to be conducted within the diversion tunnel, outside of the stream. Section 404 is therefore not expected to apply. See Photo 8 and Figure 7.
Hauolowahine at Hauolo Ditch (Hauolowahine intake at Hauolo Ditch)	K-30	20° 48' 59.61" N 156° 10' 13.63" W 1,964 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 one to two cubic yards in volume and will be installed directly on the existing grate. See Photo 9 and Figure 8, attached.
Hauolo small diversions (one of four) at Hauolo Ditch (Kaauau diversion tunnel to #1 intake)	K-29a	20° 48' 59.58" N 156° 10' 13.85" W 1,964 feet	1-1-2:002 (State of Hawaii)	Unlined channel (with tunnel)	The diversion tunnel will be sealed with rock and concrete. Since all work is anticipated to be conducted within the diversion tunnel, outside of the stream, Section 404 is not expected to apply. See Figure 9, attached (no photo of this diversion is available).
Hauolo small diversions (one of four) at Hauolo Ditch (Hauolowahine small intake)	K-30a	20° 48' 59.58" N 156° 10' 13.85" W 1,964 feet	1-1-2:002 (State of Hawaii)	Concrete masonry (with pipe)	A concrete catchment basin captures seepage and routes it to the Hauolo Ditch via a pipe. The pipe will be removed. Removal of the pipe will not require any amount of fill material and Section 404 therefore does not apply. See Photo 10 and Figure 10.
Hauolo small diversions (one of four) at Hauolo Ditch (Hauolowahine small intake)	K-30c	20° 48' 59.58" N 156° 10' 13.85" W 1,964 feet	1-1-2:002 (State of Hawaii)	Concrete masonry (with pipe)	A concrete catchment basin captures seepage and routes it to the Hauolo Ditch via a pipe. The pipe will be removed. Removal of the pipe will not require any discharge of fill material and Section 404 therefore does not apply. See Photo 11 and Figure 11.
P'ina'au six-inch steel (and PVC) pipe at Koolau Ditch	K-31a	20° 49' 37.77" N 156° 10' 30.19" W 1,359 feet	1-1-2:002 (State of Hawaii)	Pipe	A tributary is diverted and routed to the main Pi'ina'au intake via a pipe. The pipe will be removed. Removal of the pipe will not require any amount of fill material and Section 404 therefore does not apply. See Photo 12 and Figure 12.

Photographs – Alterations to Pi'ina'au (Palauhulu) Stream Diversions

(Photos 5 through 12)

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

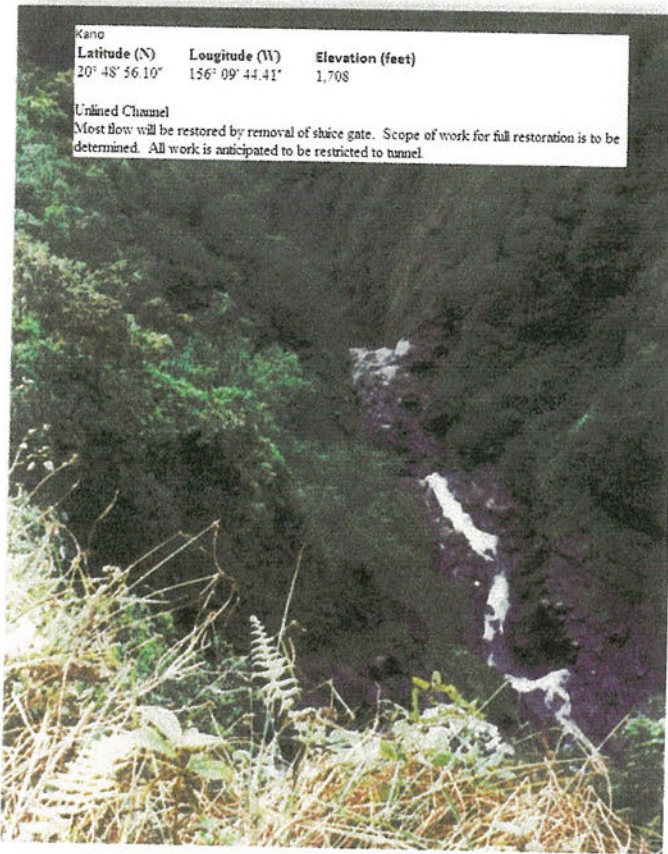
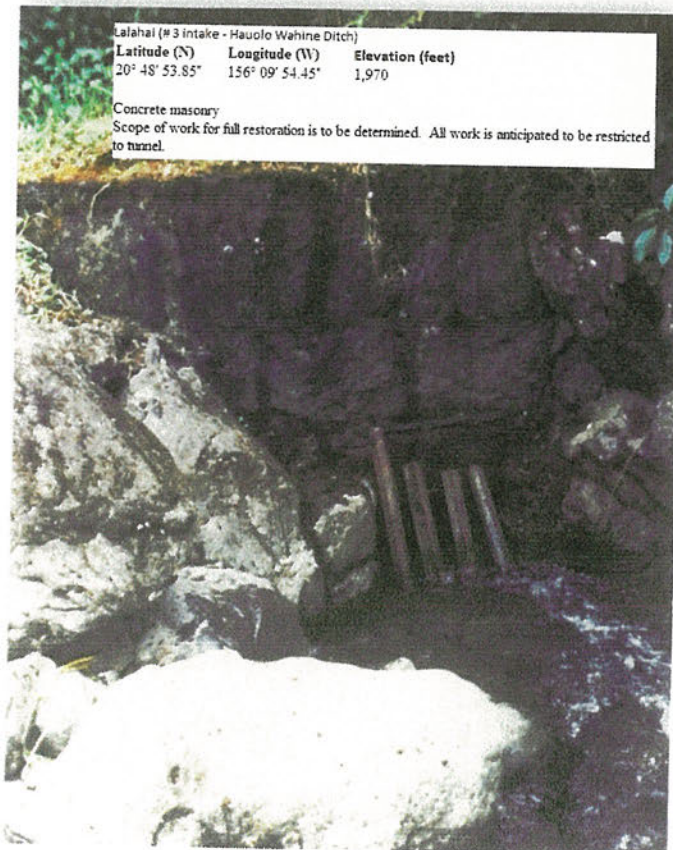


Photo 5 (above): Palauhulu at Koolau Ditch; intake at Kano Stream, tributary to Palauhulu Stream (K-26)
Photo 6 (below): Lalawai #3 intake at Hauolo Ditch; at Lalawai Stream, tributary to Palauhulu Stream (K-27)



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

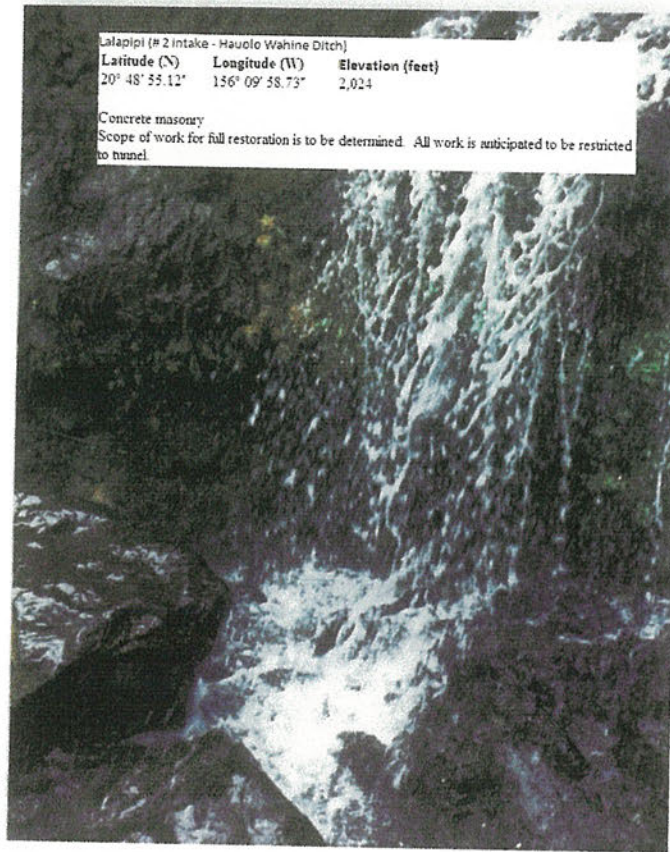
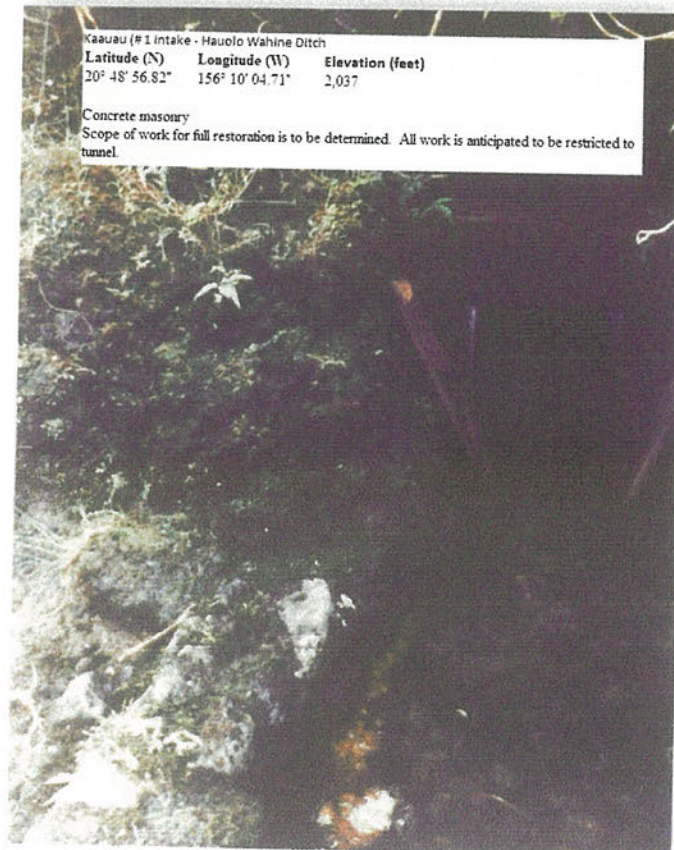


Photo 7 (above): Lalapipi #2 intake at Hauolo Ditch; at Lalapipi Stream, tributary to Palauhulu Stream (K-28)
Photo 8 (below): Kaauau #1 intake at Hauolo Ditch; at Kaauau Stream, tributary to Palauhulu Stream (K-29)



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

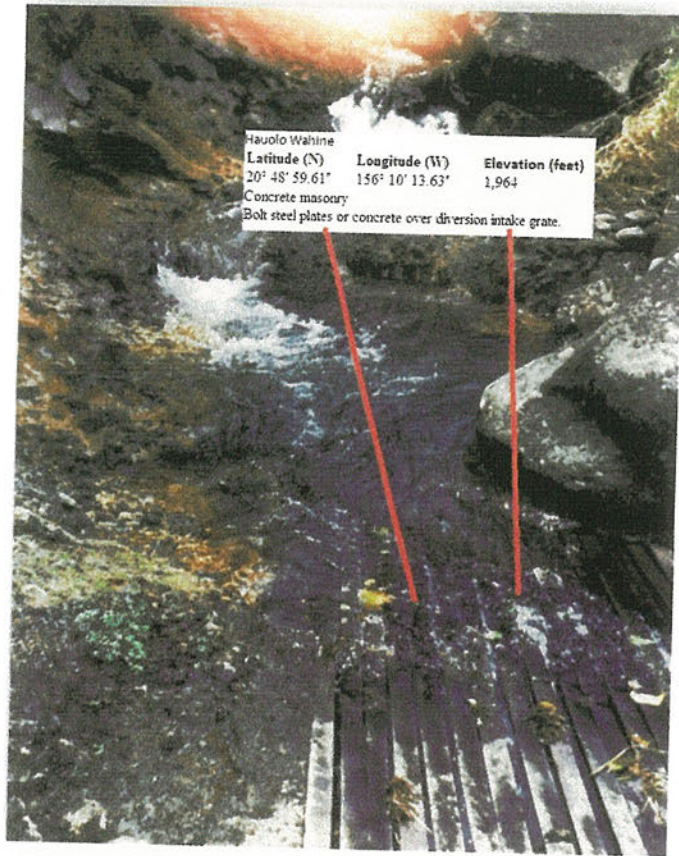
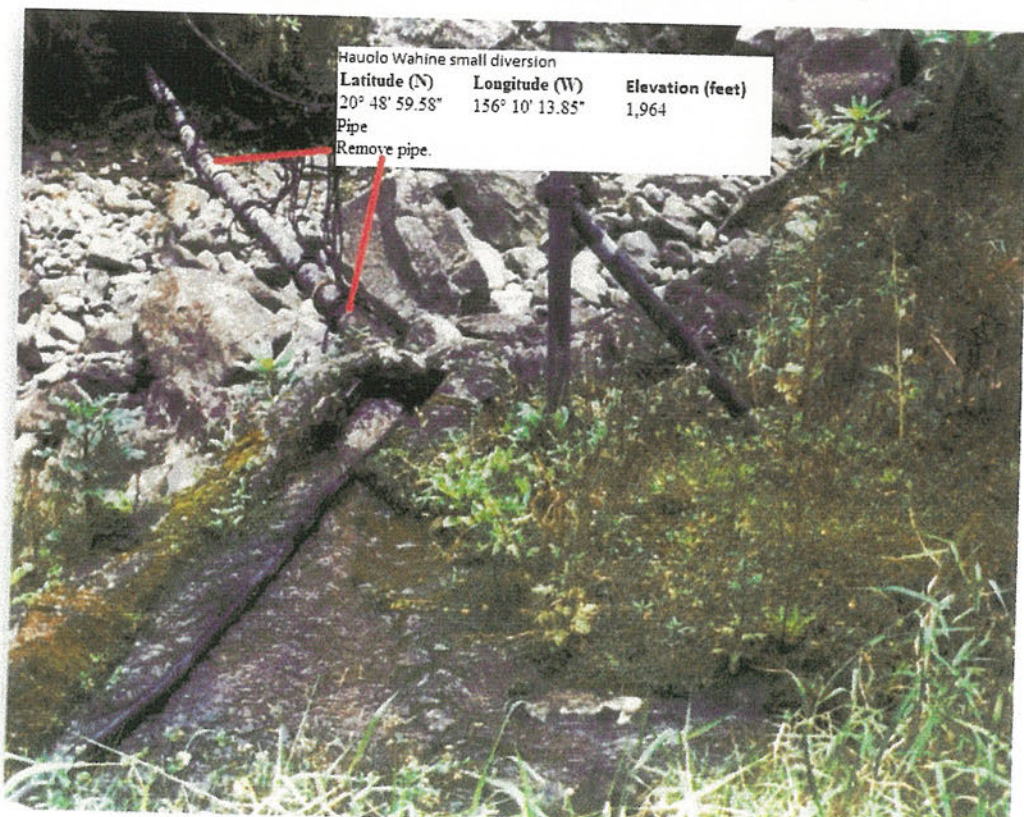


Photo 9 (above): Hauolowahine at Hauolo Ditch; intake at Hauolowahine Stream, tributary to Palauhulu Stream (K-30)

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

Photo 10 (below): Hauolowahine small diversions (one of four) at Hauolo Ditch (K-30a)



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



Photo 11 (above): Hauolowahine small diversions (one of four) at Hauolo Ditch (K-30c)
Photo 12 (below): Pi'ina'au six-inch steel (and PVC) pipe at Koolau Ditch (K-31a)



Conceptual Sketches – Alterations to Pi’ina’au (Palauhulu) Stream Diversions

(Figures 4 through 12)

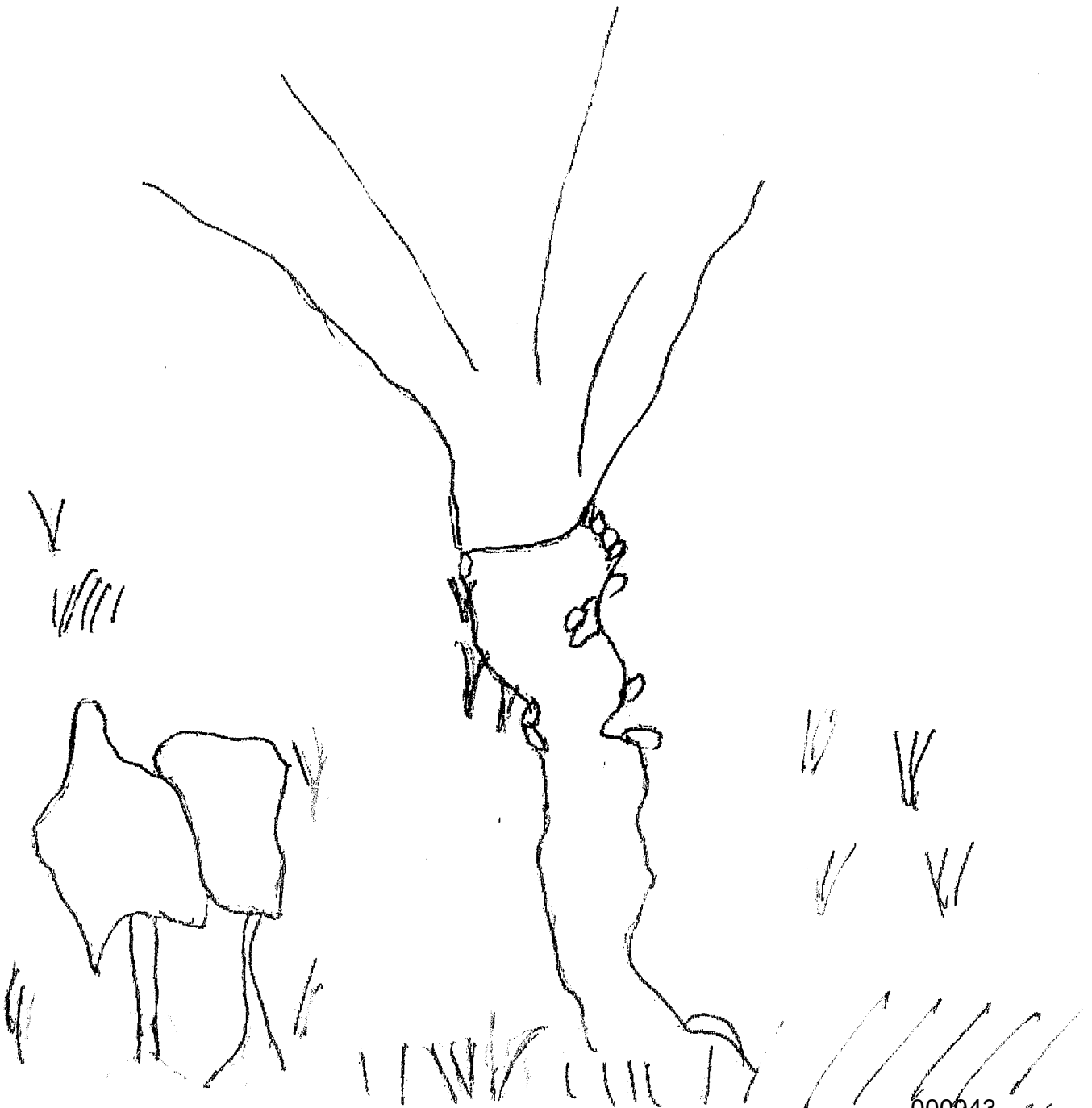
PALAHUHU at
KOOLAU DITCH

Kano- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 48' 56.10"	156° 09' 44.41"	1,708

Diversion Structure Type - Unlined channel

General Description of Work – Most flow will be restored by removal of sluice gate. Scope of work for full restoration is to be determined. All work is anticipated to be restricted to tunnel.



000043
FIGURE 4 (K-26)

LALAHAI #3
Intake at
Havolo Ditch

Lalahai (# 3 intake - Havolo Wahine Ditch)- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 48' 53.85"	156° 09' 54.45"	1,970

Diversion Structure Type - Concrete masonry

General Description of Work - Scope of work for full restoration is to be determined. All work is anticipated to be restricted to tunnel.



FIGURE 5
(K27)

LALAPIPI #2
intake at
HAUOLO DITCH

Lalapii (# 2 intake - Haulo Wahine Ditch)- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 48' 55.12"	156° 09' 58.73"	2,024

Diversion Structure Type - Concrete masonry

General Description of Work – Scope of work for full restoration is to be determined. All work is anticipated to be restricted to tunnel.

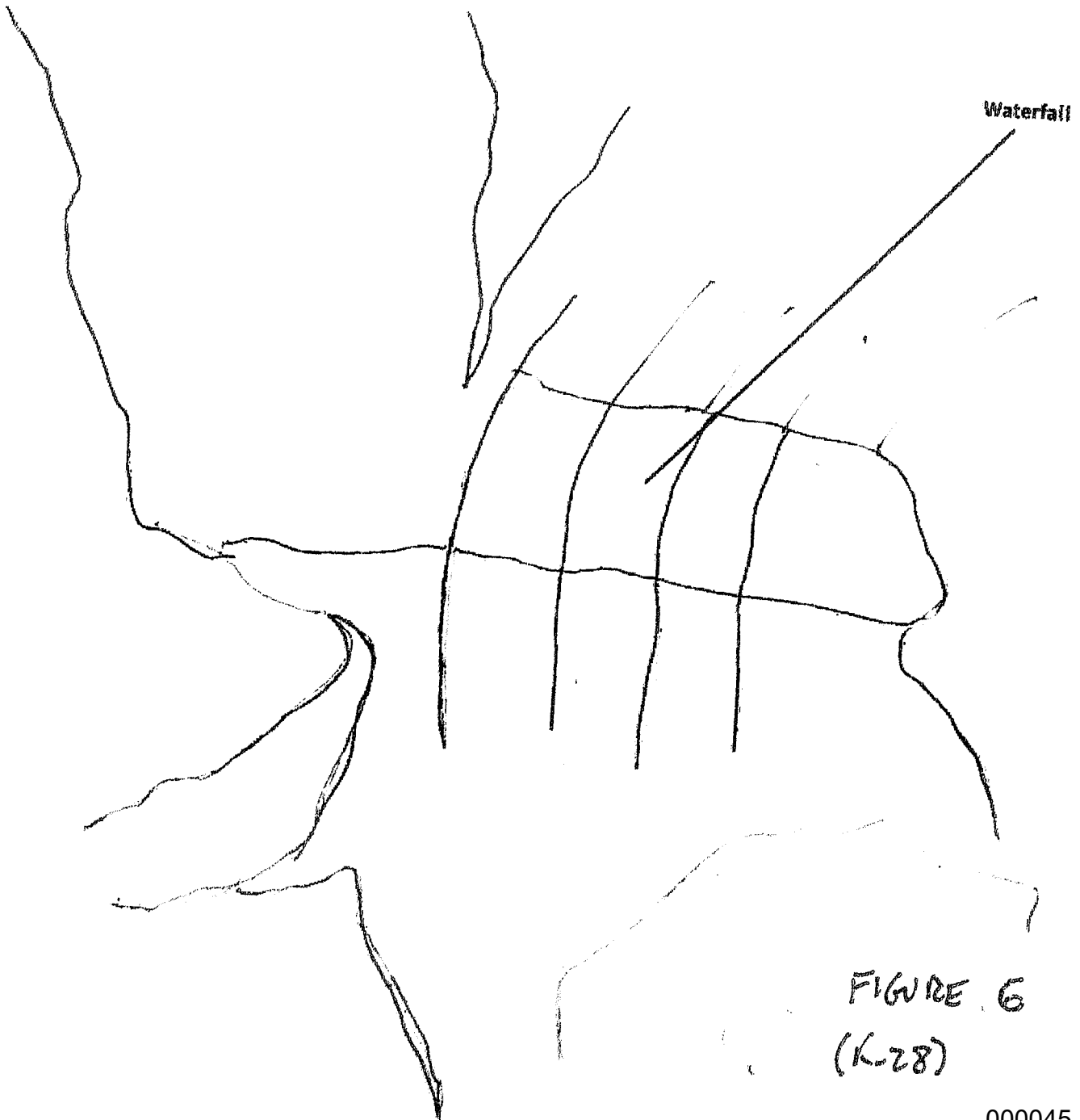


FIGURE 6
(K-28)

KAAVAU # 1
Intake at
HAUOLO DITCH

Kaaau (# 1 intake - Hauolo Wahine Ditch)- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 48' 56.82"	156° 10' 04.71"	2,037

Diversion Structure Type - Concrete masonry

General Description of Work – Scope of work for full restoration is to be determined. All work is anticipated to be restricted to tunnel.

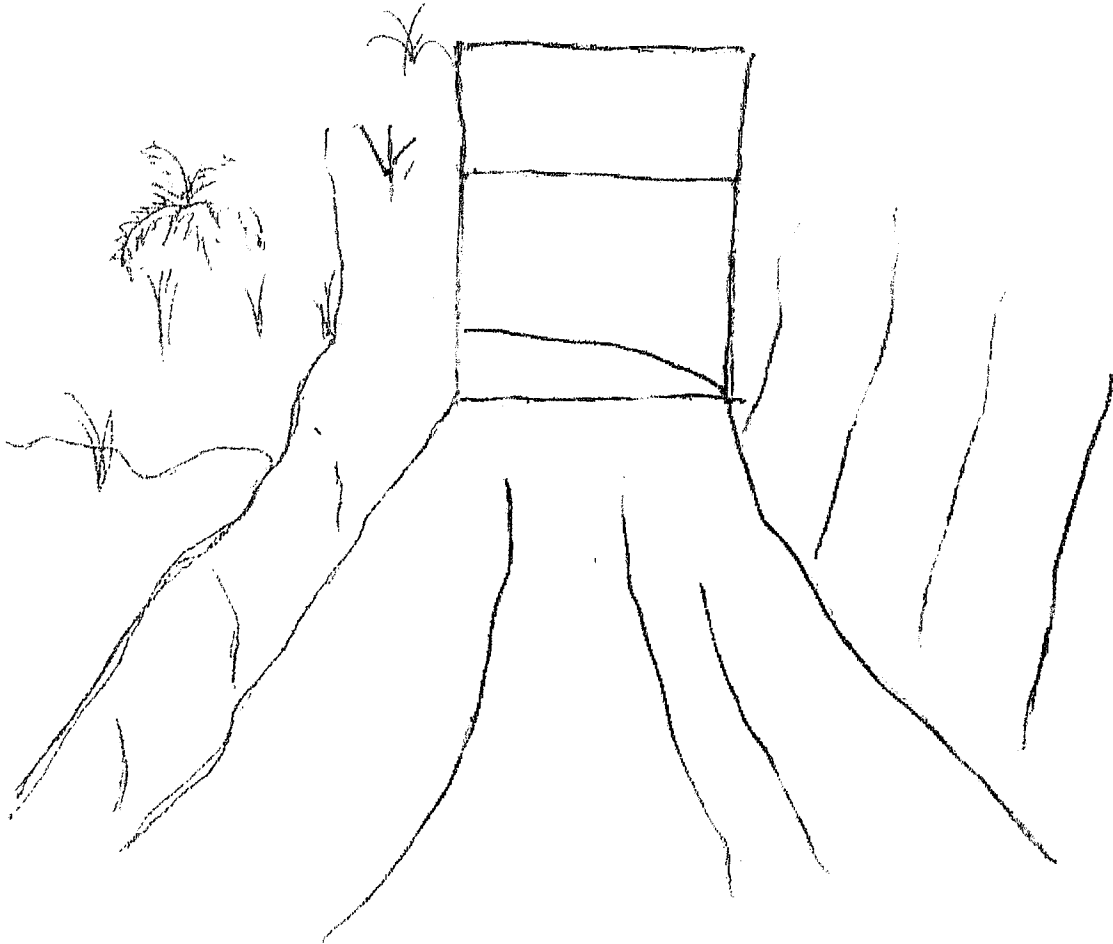


FIGURE 7
(K-29)

Haulo Wahine- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 48' 59.61"	156° 10' 13.63"	1,964

Diversion Structure Type -- Concrete masonry

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

HAULOWAHINE
at
HAULO DITCH

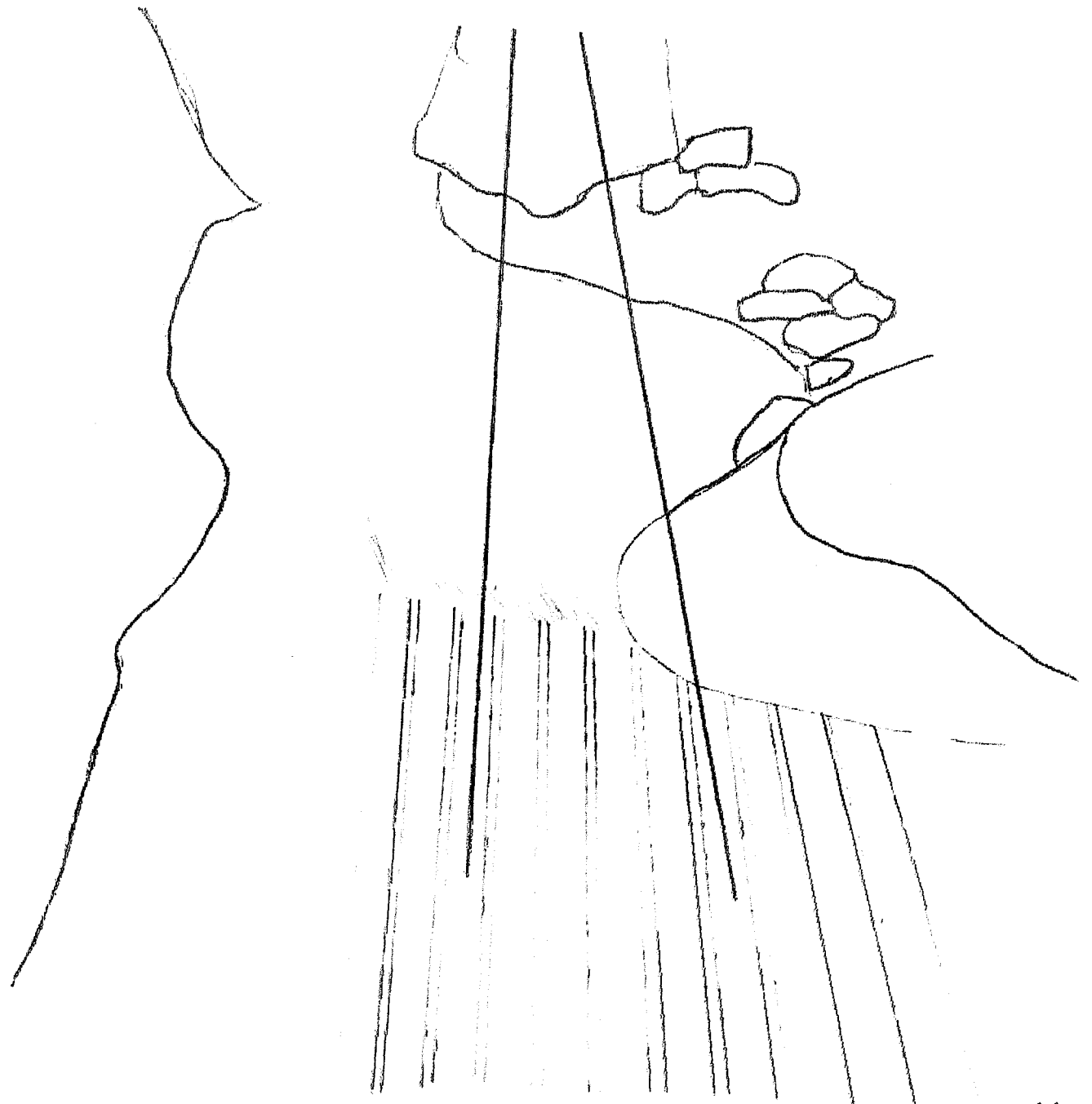


FIGURE 8 (K-30)

HAVOLO small diversion.
 (one of four) at
 HAVOLO DITCH

(KAAUAU diversion
 tunnel to #1 intake)

Kaauau diversion tunnel to #1 intake

Latitude (N)	Longitude (W)	Elevation (feet)
20° 48' 59.58"	156° 10' 13.88"	964

lined channel

Seal diversion tunnel with rock and concrete.

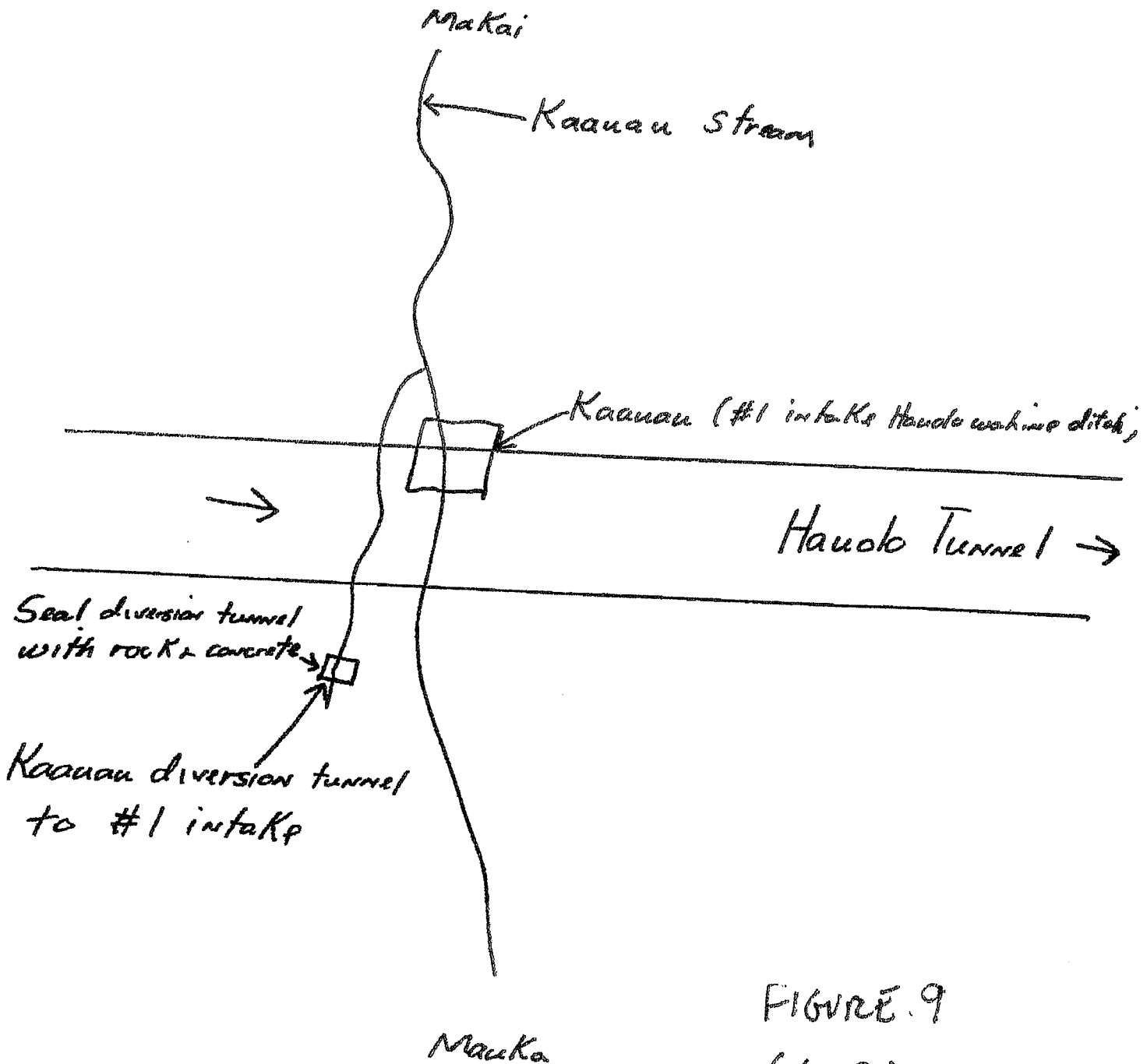


FIGURE 9
 (K-29a)

Hauolo Wahine small diversion-Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 48' 59.58"	156° 10' 13.85"	1,964

Diversion Structure Type - Pipe

General Description of Work - Remove pipe.

HAVOLO SMALL
DIVERSIONS (one
of four) at
HAVOLO DITCH

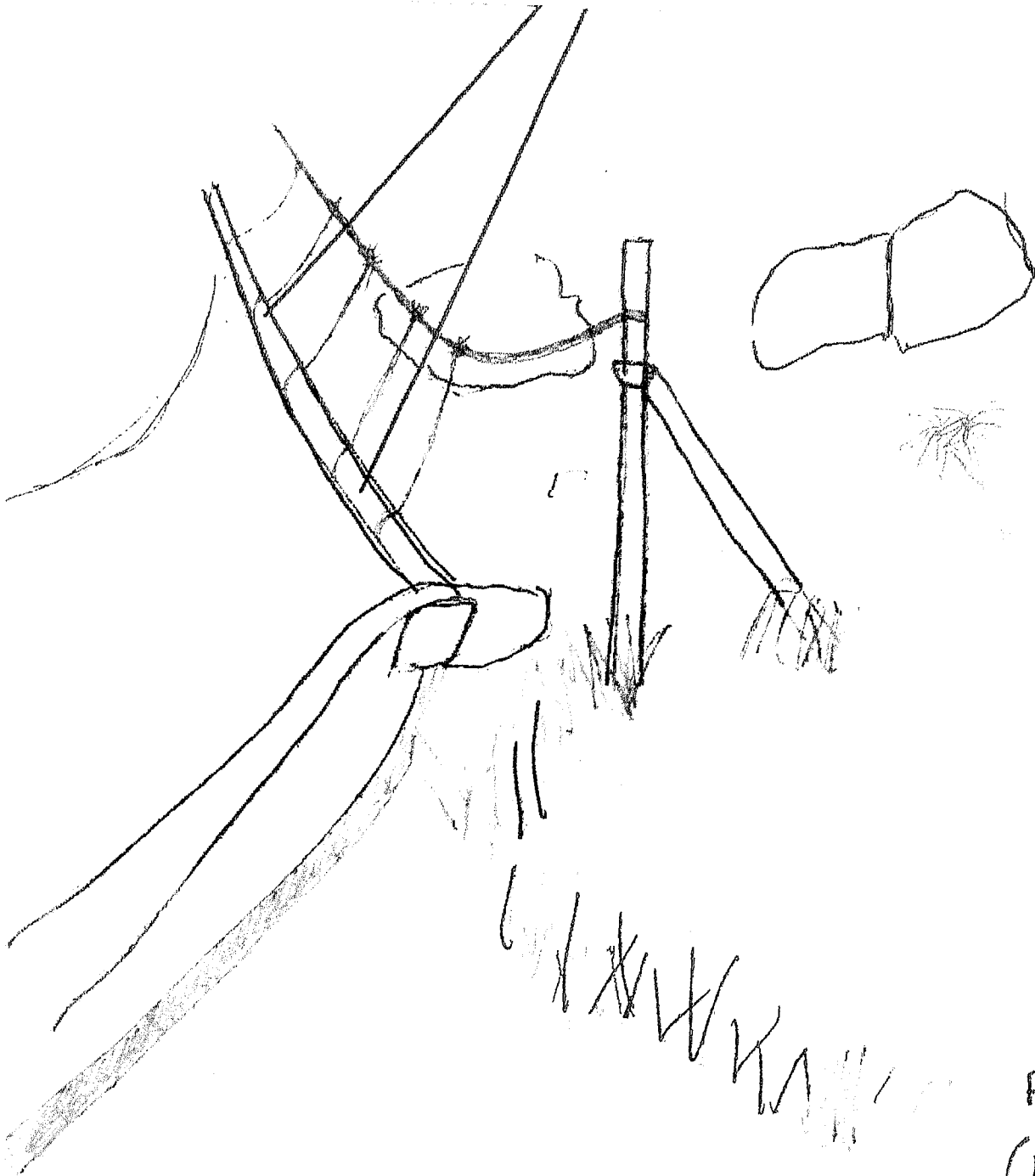


FIGURE 10

(K-30a)

000049

Hauolo Wahine small intake- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 48' 59.58"	156° 10' 13.85"	1,964

Diversion Structure Type - Stone and concrete

General Description of Work - Remove stone and concrete dam.

HAVOLO small
diversions (one
of four) at
HAVOLO DITCH

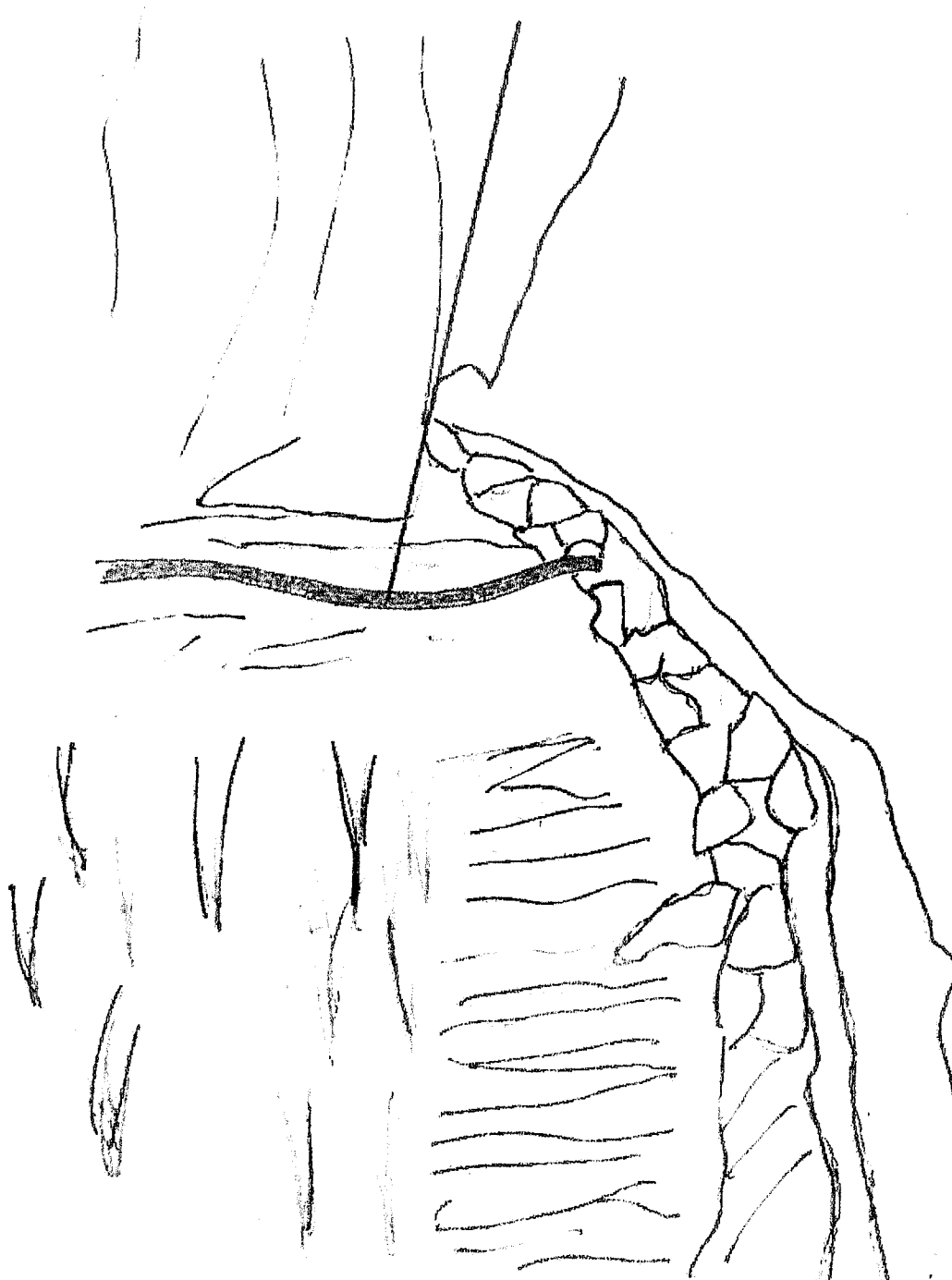


FIGURE II
(K-30c)

Piinaau - 6" steel and pvc pipe intake- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 49' 37.77"	156° 10' 30.19"	1,359

Diversion Structure Type - Pipe

General Description of Work - Remove steel and pvc pipes.

PI'INA'AU 6-inch
Steel (and PVC)
Pipe at
KOOLAU DITCH

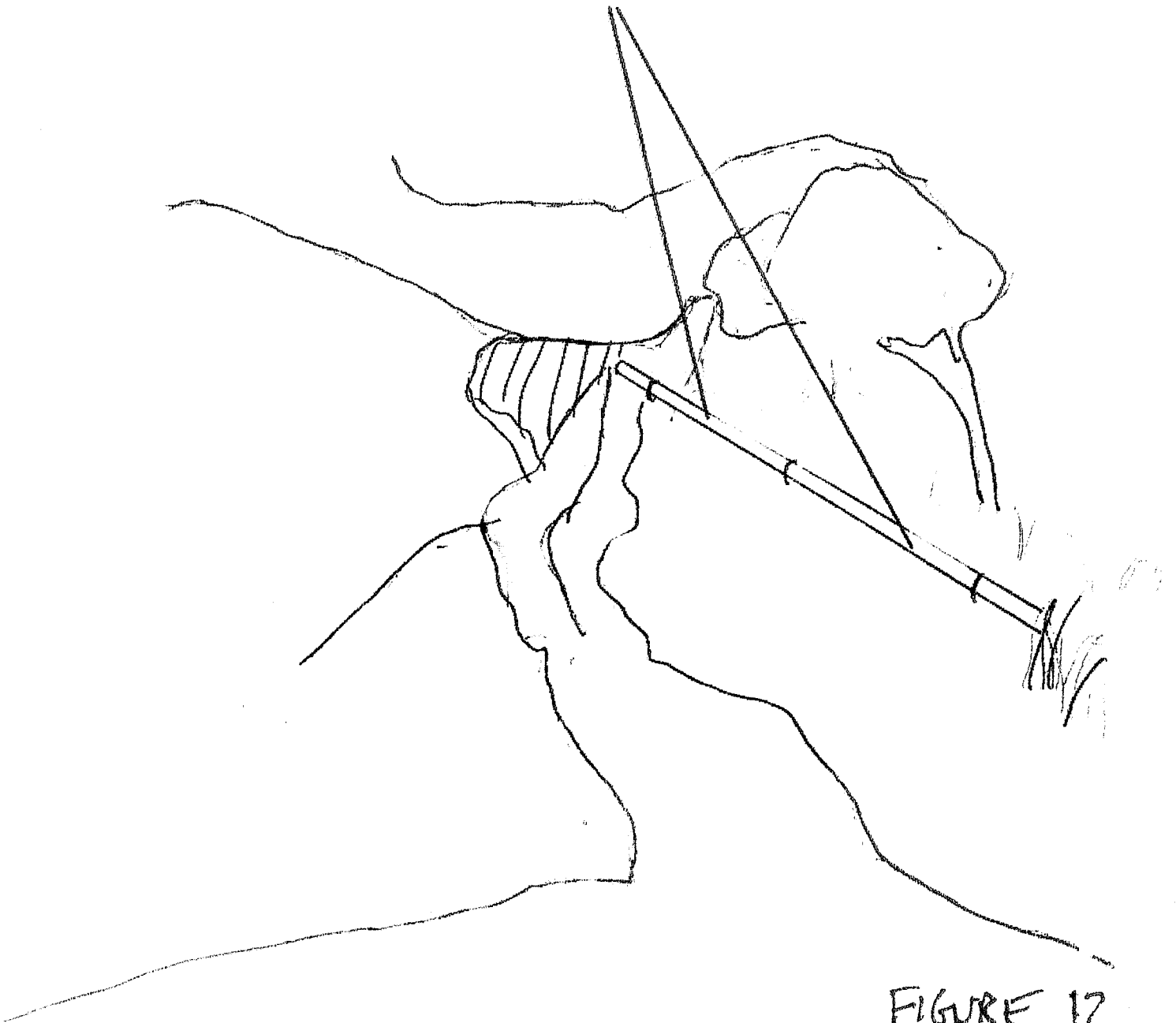


FIGURE 12
(K-31a)00051

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.

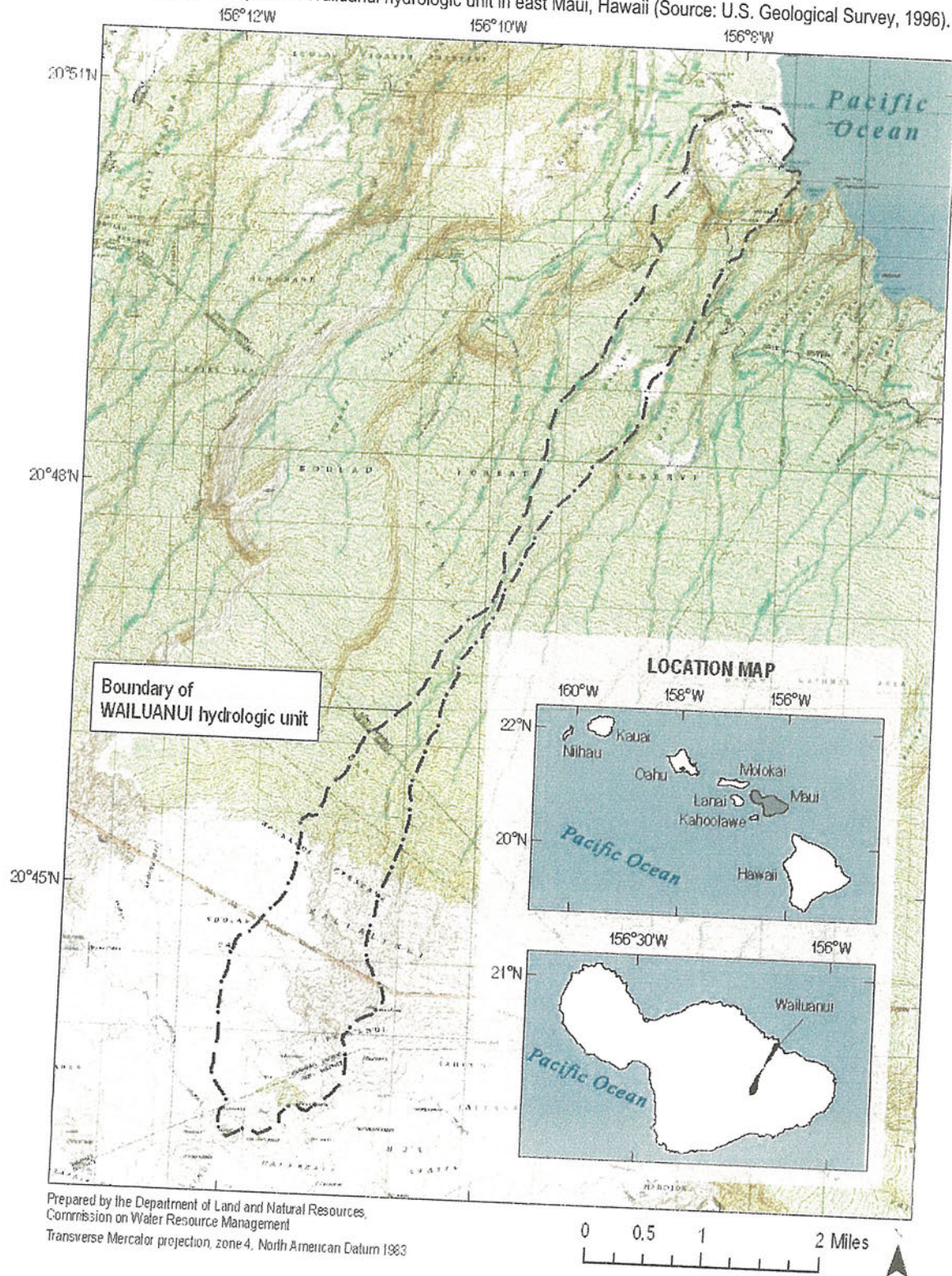
12. Surface areas of wetlands or other areas filled: None – this work is intended to restore flow in the stream and will not result in filling of any wetlands

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

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
Three-inch (aluminum) pipe intake by #6 control house at Koolau Ditch	K-19a	20° 49' 20.14" N 156° 8' 26.8" W 1,287 feet	1-1-2:002 (State of Hawaii)	Concrete masonry (with pipe)	A submerged three-inch aluminum pipe embedded in a diversion dam collects water from a tributary and directs it via a pipe to the control house intake. The pipes will be removed. Removal of the pipes will not require any amount of fill material and Section 404 therefore does not apply. See Photo 13 and Figure 13, attached.
Wailuanui #8 intake at Koolau Ditch	K-20a	20° 49' 26.1" N 156° 8' 29.54" W 1,254 feet	1-1-2:002 (State of Hawaii)	Concrete masonry (with pipe)	This diversion consists of a concrete masonry wall which captures seepage and then pipes it to an access tunnel and into the Koolau Ditch. The pipes will be removed. Removal of the pipes will not require any amount of fill material and Section 404 therefore does not apply. See Photo 14 and Figure 14, attached.
Eight-inch (steel) pipe intake east of #9 (intake) at Koolau Ditch	K-21a	20° 49' 28.58" N 156° 8' 41.45" W 1,280 feet	1-1-2:002 (State of Hawaii)	Pipe	This diversion consists of a rock wall which captures seepage and then pipes it to the Koolau Ditch via the #9 intake. The pipe will be removed. Removal of the pipe will not require any amount of fill material and Section 404 therefore does not apply. See Photo 15 and Figure 15, attached.

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



Wailuanui Watershed Unit



- West Wailuanui @ Koolau Ditch
- 3" Pipe Intake East of #9 @ Koolau Ditch
- Wailuanui #8 Intake @ Koolau Ditch
- Wailuanui #7 Intake @ Koolau Ditch
- East Wailuanui #6 Control Intake @ Koolau Ditch
- 3" Pipe Intake by #6 Control House @ Koolau Ditch
- East Wailuanui @ Koolau Ditch

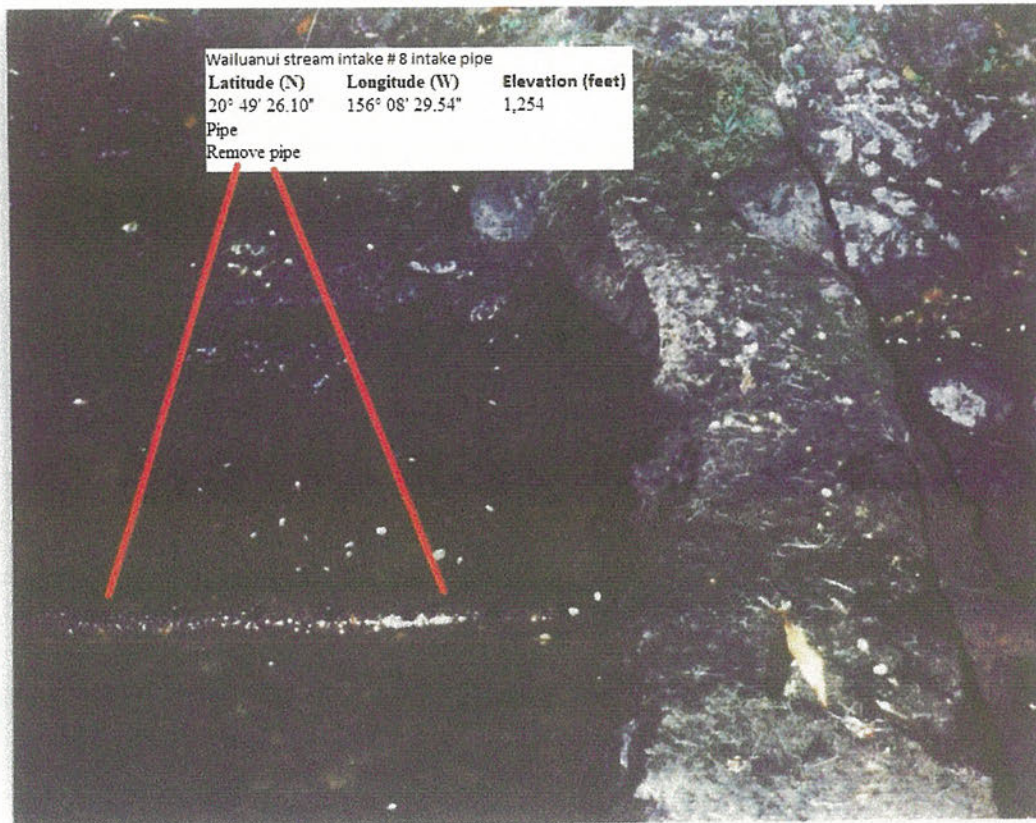
Photographs – Alterations to East and West Wailuanui Stream Diversions

(Photos 13 through 15)

Site Photographs – East and West Wailuanui Stream Diversions



Photo 13 (above): Three-inch (aluminum) pipe intake by #6 control house at Koolau Ditch (K-19a)
Photo 14 (below): Wailuanui #8 intake at Koolau Ditch (K-20a)



Site Photographs – East and West Wailuanui Stream Diversions



Photo 15 (above): Eight-inch (steel) pipe intake east of #9 (intake) (K-21a)

Conceptual Sketches – Alterations to East and West Wailuanui Stream Diversions

(Figures 13 through 15)

3" aluminum pipe intake by #6 control house intake

Latitude (N)	Longitude (W)	Elevation (feet)
20° 49' 20.14"	156° 08' 26.80"	1,287

Pipe
Remove pipe

THREE-INCH
(ALUMINUM)
PIPE INTAKE
BY #6 CONTROL
HOUSE AT
KOOLAU DITCH

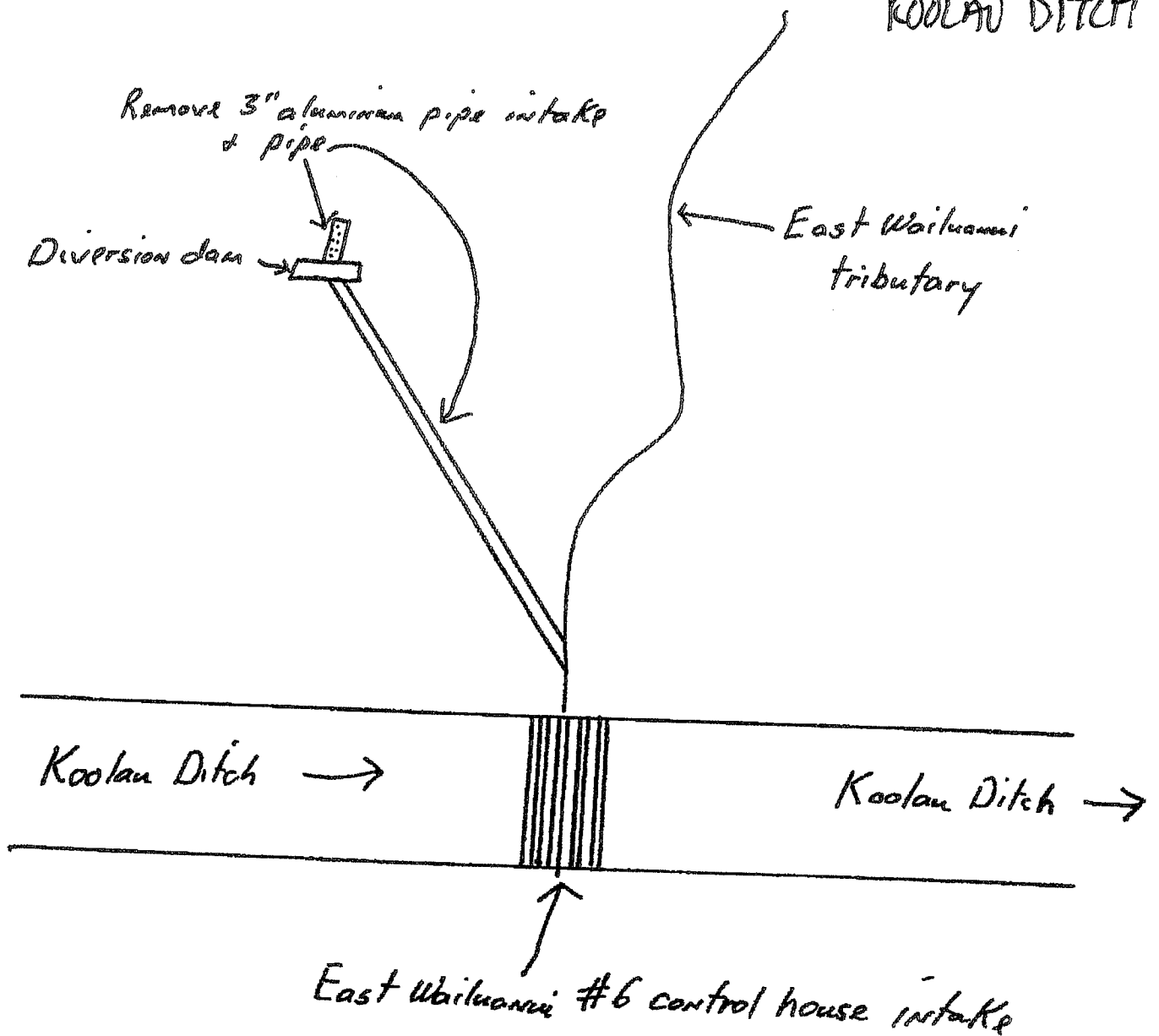


FIGURE 13
(R-19a)

Wailuanui stream intake # 8 intake pipe- Ko'olau Ditch

Latitude (N)	Longitude (W)	Elevation (feet)
20° 49' 28.58"	156° 08' 41.45"	1,280

Diversion Structure Type - Pipe

General Description of Work - Remove pipe

WAILUANUI #8
INTAKE AT
KOOLAU DITCH

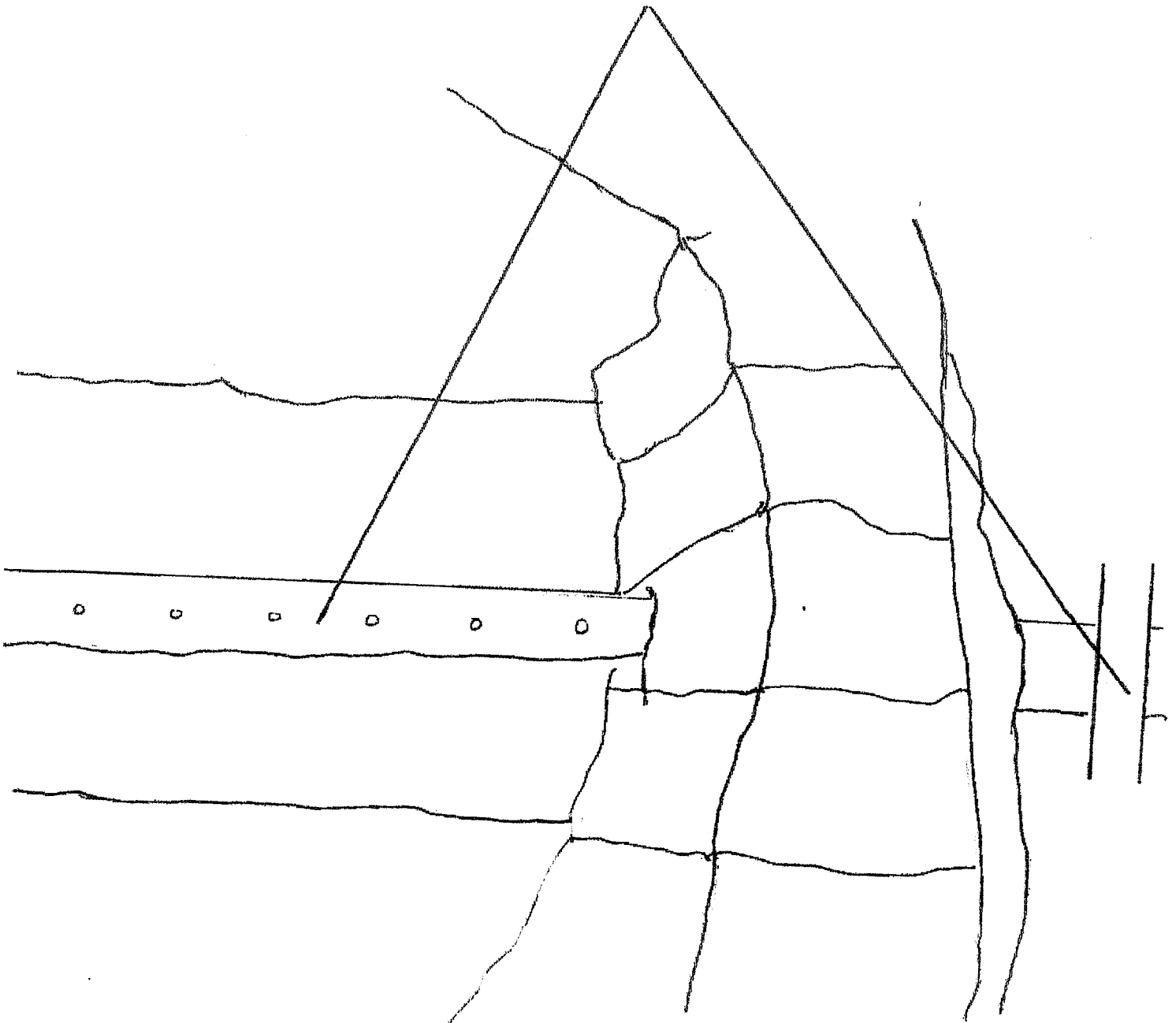


FIGURE 14
(K-20a)

EIGHT-INCH
(STEEL) PIPE
INTAKE EAST
OF #9 (INTAKE)
AT KOOLAU DITCH

8" steel pipe intake East of #9 intake

Latitude (N)	Longitude (W)	Elevation (feet)
20° 49' 28.58"	156° 08' 41.45"	1,280

Pipe
Remove pipe

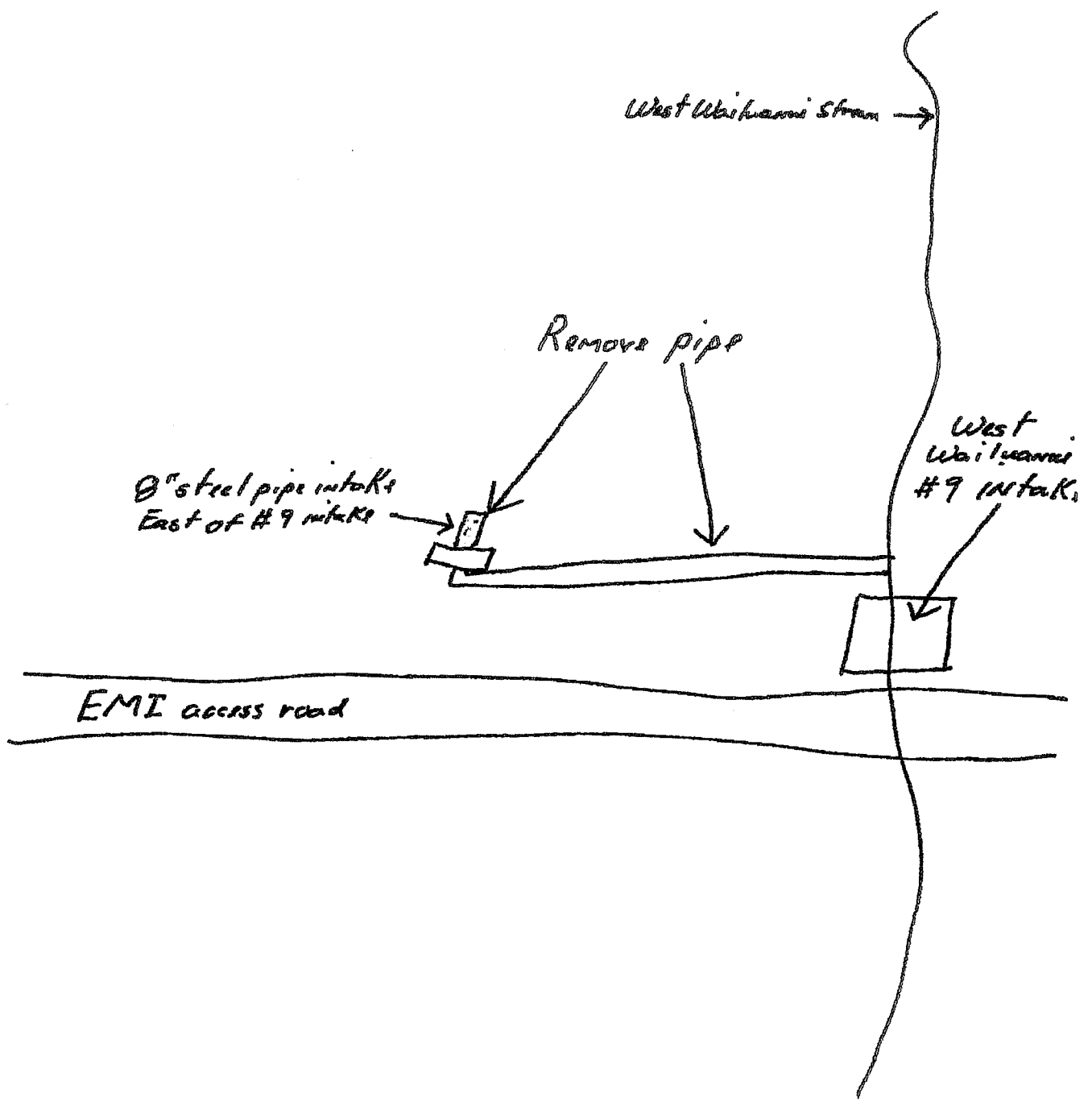


FIGURE 15
(K-21a)⁰⁰⁰⁰⁶³

EMI Taro Stream Diversions

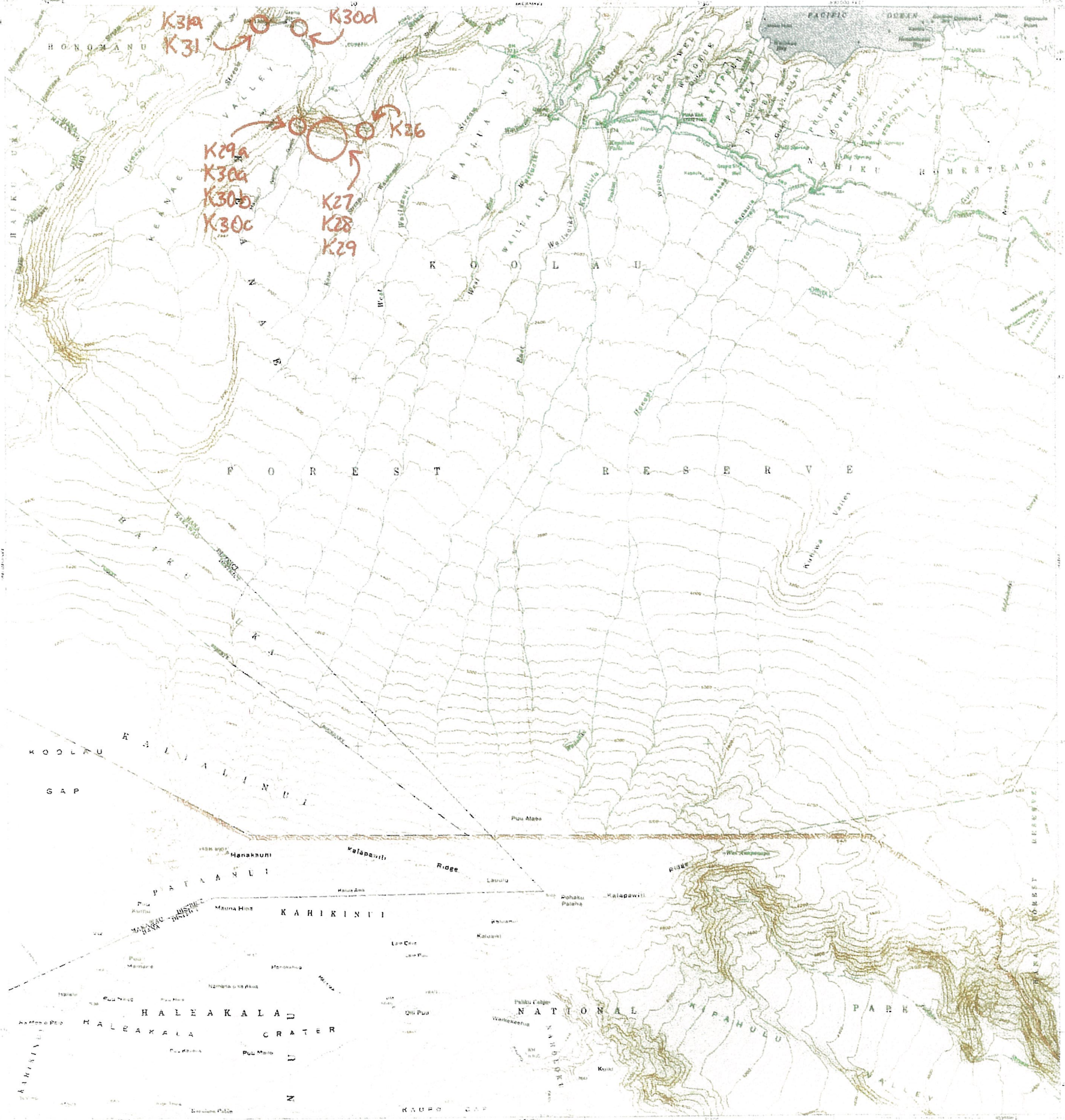
Hydrologic Unit	Stream	Possible Regulatory Approvals Required				CWRM category	DIVERSIONS BY DITCH	EMI Map # REG	Parcel	Owner	Approximate Location and Elevation of Diversion			On Ditch	Diversion Structure Type	General Description of Work
		Army Corps	DLNR-OCCL	SMA							Latitude (N)	Longitude (W)	Elevation (feet)			
Honopou (6034)	Honopou	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P Subzone	Not in SMA	Group Permit - Discontinued Use, Minor Work	Honopou at Wailoa Ditch	W-22 152.6	2-9-014:001	State of HI (FR)	20° 53' 08.50"	156° 15' 08.90"	1,217	NO	Concrete masonry	Concrete over diversion intake grate.	
Honopou (6034)	Honopou	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P/R Subzone	Not in SMA	Group Permit - Discontinued Use, Minor Work	Wailoa at Wailoa Ditch	W-22b minor	2-8-008:007	EMI	20° 53' 09.03"	156° 15' 24.54"	1,239	NO	Concrete masonry	Concrete over diversion intake grate.	
Honopou (6034)	Honopou	No fill required	Not in Conservation District	Not in SMA	Group Permit - Discontinued Use, Minor Work	Honopou at Lowrie Ditch (side ditch)	L-17 210.6	2-9-014:017	State of HI (FR)	20° 54' 31.79"	156° 15' 01.66"	605	NO	Concrete masonry	Close existing control gate.	
Pi'ina'au (6053)	Pi'ina'au	confirmed exempt under CWA 404(f)(1)(c); no fill	Site Plan - P/R subzone (very minor)	Not in SMA	Group Permit - Discontinued Use, Minor Work	Pi'ina'au 6-inch steel (and pvc) pipe at Koolau Ditch	K-31a minor	1-1-002:002	State of HI (FR)	20° 49' 37.77"	156° 10' 30.19"	1,359	NO	Pipe	Remove steel and pvc pipes.	
Pi'ina'au (6053)	Palauhulu	confirmed exempt under CWA 404(f)(1); scope not yet determined, but work will be in tunnel	Site Plan - P Subzone	Not in SMA	Group Permit - Discontinued Use, Minor Work	Palauhulu at Koolau Ditch (Kano)	K-26 318.6	1-1-002:002	State of HI (FR)	20° 48' 56.10"	156° 09' 44.41"	1,708	NO	Unlined channel (with tunnel)	Most flow will be restored by removal of sluice gate. Scope of work for full restoration is to be determined. All work is anticipated to be restricted to tunnel.	
Pi'ina'au (6053)	Palauhulu	confirmed exempt under CWA 404(f)(1); scope not yet determined, but work will be in tunnel	Site Plan - P Subzone	Not in SMA	Group Permit - Discontinued Use, Minor Work	Lalaha # 3 Intake at Hauolo Ditch	K-27 319.6	1-1-002:002	State of HI (FR)	20° 48' 53.85"	156° 09' 54.45"	1,970	NO	Concrete masonry (with grate and tunnel)	Scope of work for full restoration is to be determined. All work is anticipated to be restricted to tunnel.	
Pi'ina'au (6053)	Palauhulu	confirmed exempt under CWA 404(f)(1); scope not yet determined, but work will be in tunnel	Site Plan - P Subzone	Not in SMA	Group Permit - Discontinued Use, Minor Work	Lalapi # 2 Intake at Hauolo Ditch	K-28 312.6	1-1-002:002	State of HI (FR)	20° 48' 55.12"	156° 09' 58.73"	2,024	NO	Concrete masonry (with tunnel)	Scope of work for full restoration is to be determined. All work is anticipated to be restricted to tunnel.	
Pi'ina'au (6053)	Palauhulu	confirmed exempt under CWA 404(f)(1); scope not yet determined, but work will be in tunnel	Site Plan - P Subzone	Not in SMA	Group Permit - Discontinued Use, Minor Work	Kaauuu # 1 Intake at Hauolo Ditch	K-29 311.6	1-1-002:002	State of HI (FR)	20° 48' 56.82"	156° 10' 04.71"	2,037	NO	Concrete masonry (with tunnel)	Scope of work for full restoration is to be determined. All work is anticipated to be restricted to tunnel. Anticipate sealing grate into tunnel with concrete.	
Pi'ina'au (6053)	Palauhulu	confirmed exempt under CWA 404(f)(1)(c)	Site Plan - P Subzone	Not in SMA	Group Permit - Discontinued Use, Minor Work	Hauolowahine at Hauolo Ditch	K-30 309.6	1-1-002:002	State of HI (FR)	20° 48' 59.61"	156° 10' 13.63"	1,964	NO	Concrete masonry (with grate)	Concrete over diversion intake grate.	
Pi'ina'au (6053)	Palauhulu	confirmed exempt under CWA 404(f)(1)(c); work will be in tunnel	Site Plan - P Subzone	Not in SMA	Group Permit - Discontinued Use, Minor Work	Hauolo small diversions at Hauolo Ditch (Kaauuu diversion tunnel to #1 intake)	K-29a minor	1-1-002:002	State of HI (FR)	20° 48' 59.58"	156° 10' 13.85"	1,964	NO	Unlined channel (with tunnel)	Seal diversion tunnel with rock and concrete.	
Pi'ina'au (6053)	Palauhulu	confirmed exempt under CWA 404(f)(1)(c); no fill	Site Plan - P Subzone (very minor)	Not in SMA	Group Permit - Discontinued Use, Minor Work	Hauolo small diversions at Hauolo Ditch (Hauolowahine small intake)	K-30a minor	1-1-002:002	State of HI (FR)	20° 48' 59.58"	156° 10' 13.85"	1,964	NO	Concrete masonry with pipe	Remove pipe.	
Pi'ina'au (6053)	Palauhulu	confirmed exempt under CWA 404(f)(1)(c); no fill	Site Plan - P Subzone (very minor)	Not in SMA	Group Permit - Discontinued Use, Minor Work	Hauolo small diversions at Hauolo Ditch (Hauolowahine small intake)	K-30c minor	1-1-002:002	State of HI (FR)	20° 48' 59.58"	156° 10' 13.85"	1,964	NO	Concrete masonry with pipe	Remove pipe.	
Wailuanui (6056)	Wailuanui (East and West)	confirmed exempt under CWA 404(f)(1)(c); no fill	Site Plan - P Subzone (very minor)	Not in SMA	Group Permit - Discontinued Use, Minor Work	3-inch (aluminum) pipe intake by #6 control house at Koolau Ditch	K-19a minor	1-1-002:002	State of HI (FR)	20° 49' 20.14"	156° 08' 26.80"	1,287	NO	Pipe	Remove pipe.	
Wailuanui (6056)	Wailuanui (East and West)	confirmed exempt under CWA 404(f)(1)(c); no fill	Site Plan - P Subzone (very minor)	Not in SMA	Group Permit - Discontinued Use, Minor Work	Wailuanui #8 Intake at Koolau Ditch	K-20a minor	1-1-002:002	State of HI (FR)	20° 49' 26.10"	156° 08' 29.54"	1,254	NO	Concrete masonry with pipe	Remove pipe	
Wailuanui (6056)	Wailuanui (East and West)	confirmed exempt under CWA 404(f)(1)(c); no fill	Site Plan - P/R Subzone (very minor)	Not in SMA	Group Permit - Discontinued Use, Minor Work	8-inch (steel) pipe intake east of #8 Intake at Koolau Ditch	K-21a minor	1-1-002:002	State of HI (FR)	20° 49' 28.58"	156° 08' 41.45"	1,280	NO	Rock wall with pipe	Remove pipe	



Maplet compiled and published by the Geologic Survey, U.S. Department of the Interior, in cooperation with the Hawaiian Islands Water Resources Commission. The maplet is a derivative of the Hawaiian Islands Water Resources Commission's Maui Water Resources Inventory, which was compiled from a variety of sources, including the Hawaiian Islands Water Resources Commission's Maui Water Resources Inventory, the Hawaiian Islands Water Resources Commission's Maui Water Resources Inventory, and the Hawaiian Islands Water Resources Commission's Maui Water Resources Inventory.

HAWAII, MAUI, MOLOKAI,
ISLAND OF MAUI
1:250,000 SCALE, PHOTOGRAPHIC

SITE LOCATIONS-HONOPOU STREAM DIVERSIONS



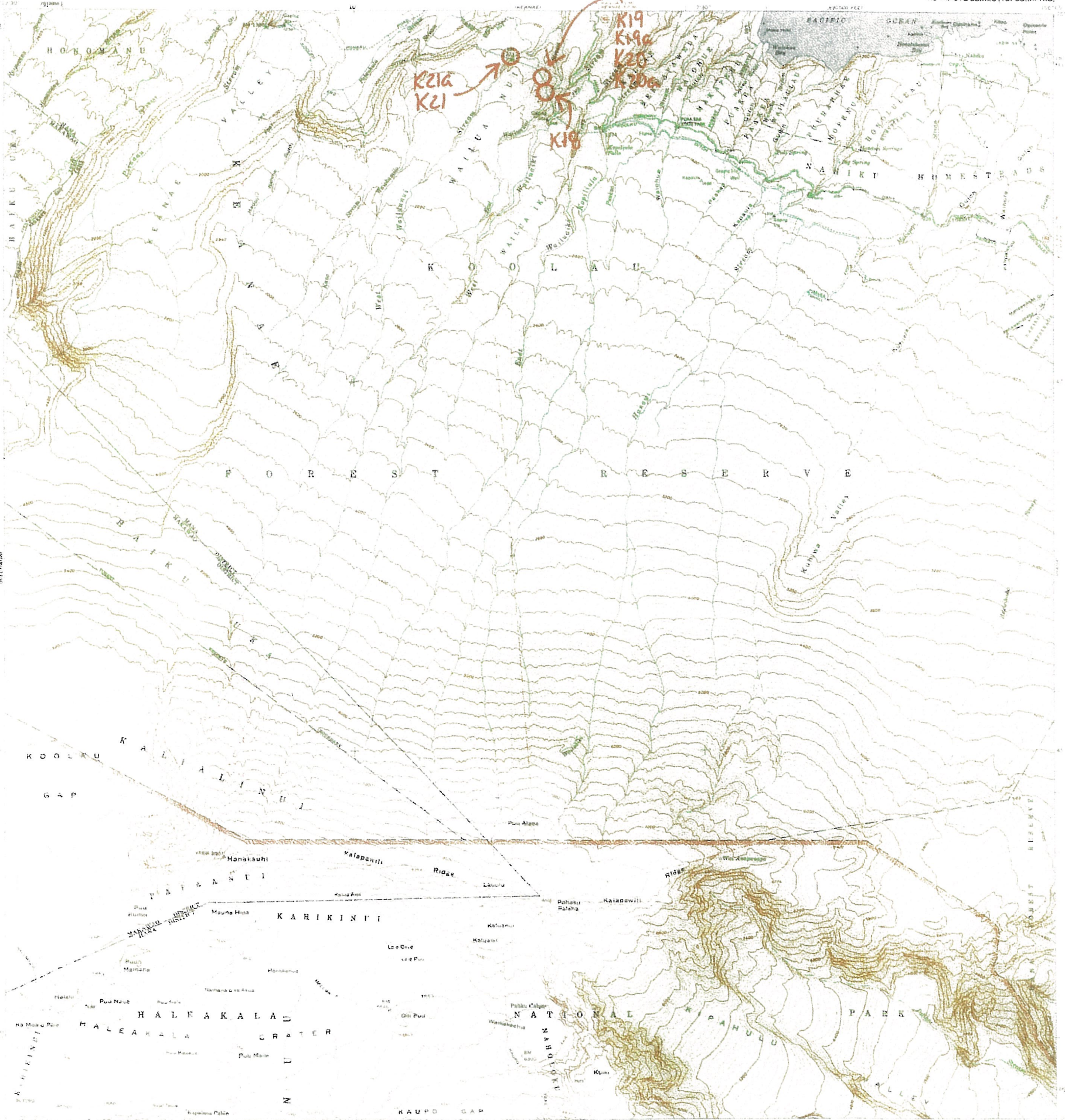
Map prepared and published by the Geological Survey. Revised by cooperation with Hawaii Dept. of Transportation. Contour interval 200 feet. Projection and 10,000-foot grid (NAD 83). Datum: North American Datum 1983. UTM Zone 18Q. Contour interval 20 feet. Scale 1:24,000. Date of publication: 1983. U.S. GEOLOGICAL SURVEY. FOR SALE BY U.S. GEOLOGICAL SURVEY, P.O. BOX 242, DENVER, COLORADO 80225. \$12.00 (including shipping and handling charges). A \$3.00 refund will be given to the purchaser if the map is returned within 90 days of purchase.



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SITE LOCATIONS - PI'INA'AU (PALAUHULU) STREAM DIVERSIONS



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Revised in cooperation with Hawaii Dept. of Transportation
Control by USGS and DNR/HDOA
Topography by photogrammetric methods from aerial photographs
taken 1957. Field checked 1967. Revised from earlier editions
taken 1976. Limited field check 1987. Map issued 1987.
Projection and 10,000 foot grid based on Hawaiian coordinate system
zone 2 Universal Mercator Clarke spheroid 1866. UTM Hawaiian datum
100-meter Universal Transverse Mercator grid zone 4 shown
in blue. International datum. To place on the published Maui
Aeronaut Datum 1983 above the projection less 356 meters north and
292 meters east as shown by dashed corner ticks.
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SITE LOCATIONS - EAST AND WEST WAILUANUI STREAM DIVERSIONS