

State of Hawaii
DEPARTMENT OF LAND AND NATURAL RESOURCES
Engineering Division
Honolulu, Hawaii 96813

March 14, 2014

Board of Land and Natural Resources
State of Hawaii
Honolulu, Hawaii

**APPLICATION FOR A DAM SAFETY CONSTRUCTION/ALTERATION PERMIT
PERMIT NO. 29 – MORITA RESERVOIR (KA-0029)
DAM REMOVAL, KILAUEA, KAUAI, HAWAII**

The Engineering Division (Division) hereby submits an application for your approval and authorization for the Chairperson and Department to stipulate conditions and issue a Dam Safety Construction/Alteration Permit for the subject application, "Dam removal of the MORITA RESERVOIR", pursuant to Hawaii Revised Statutes Chapter 179D and current Administrative Rules.

APPLICANT:

Charles S. O'Neill
On behalf of Joyce H. Doty Living Trust
4365 Kukui Grove Street, Suite 103
Lihue, Hawaii 96766

LAND OWNERS:

Joyce H. Doty Living Trust
Joyce Doty
(4) 5-1-005:111

Jurassic Kahili Ranch, LLC
Walter Kortschak
(4) 5-2-003:001

SUMMARY OF REQUEST:

Application for a Dam Safety Construction/Alteration Permit for the dam removal of the Morita Reservoir, Kilauea, Kauai, Hawaii. (See Exhibit 1)

LOCATION:

Kilauea, Kauai, Hawaii, TMK: (4) 5-1-005:111 and (4) 5-2-003:001 (See Exhibit 2)

BACKGROUND:

The Morita Reservoir Dam was originally constructed in 1920 to store water for agriculture use by the former Kilauea Sugar Company. The Morita dam and reservoir were damaged on March 14, 2006 by the floodwaters released upstream as a result of the Kaloko dam failure. During the emergency response effort, the dam embankment was mechanically breached as a safety measure to ensure the Morita dam would not catastrophically fail and cause a hazard to the downstream area. Although physically breached, the Morita Reservoir is still listed as a regulated dam on the Dam Safety Program regulated list of dams. This dam safety permit application documents the constructed breach and requests that the Morita Reservoir be removed from dam safety regulation.

DESCRIPTION:

The Morita Reservoir dam was previously listed as being 27-ft high, 200-ft long, having a crest width of 24-ft wide and a storage capacity of about 132 ac-ft. The current breached structure contains two breached channels, one through the left abutment near the original spillway, and the second through the center of the dam embankment, leaving only about 63-ft of the previous embankment. Under normal flow conditions, Wailapa Stream flows through the breach channel at the center of the dam and is contained within a ditch. The previous reservoir is a wetland under normal flow conditions and approximately one acre-foot in area.

A hydrologic and hydraulic analysis was conducted and the maximum hydraulic height of the Morita dam during the Probable Maximum Flood (PMF) was calculated to be 10.6-ft high with a corresponding maximum storage of 33.0 ac-ft volume. In order for a dam to be regulated by the Dam Safety Program, the dam must be greater than 25-ft high (hydraulic height) and hold greater than 50 ac-ft of water volume. The structure as calculated does not meet this criteria.

Additionally for a dam removal, the channel of the breached section shall be of sufficient width to pass the 100-yr, 24-hr flood with a maximum depth of five feet of water anywhere in the channel and have a minimum width of fifteen feet. As calculated, the maximum flow depth in the existing breach channel during the 100-yr, 24-hr storm varies from 5.5 – 5.7 ft. The channel appears to have eroded lower which accounts for a significant increase of the flow depth. Although the measurement flow depth criteria is not met, this breach meets the intent of the dam safety guidelines in that it is sufficiently sized to account for future obstructions and is well maintained.

DLNR staff conducted a site visit on April 17, 2013 and confirmed that the breached section has well established erosion control vegetation on the 4H:1V side slopes and within the channel section, a channel width around 20-ft wide, and the former reservoir site has been rehabilitated into a shallow wetland marshy area with a meandering stream through the breached section. The site has been landscaped, cleared and manicured. The immediate upstream is free from large debris, and the breach and surrounding areas are being maintained.

CHAPTER 343-HRS – ENVIRONMENTAL ASSESSMENT:

The project is entirely on privately owned lands and does not trigger the requirement for completion of an environmental assessment. (See Exhibit 4 for evaluation)

REMARKS:

DLNR contracted with Oceanit to conduct a Phase I Dam Safety Inspection Report and Phase II hydrologic and hydraulic analysis for the Morita Reservoir. The Program has reviewed the documents and concluded that it is sufficient for its intended purposes. Staff recommends approval of this permit application.

RECOMMENDATION:

That the Board:

1. Authorize the approval and issuance of the Dam Safety Construction/Alteration Permit for this project; and

March 14, 2014

2. Direct the Chairperson to issue a dam safety permit for the removal of the Morita Reservoir (DLNR Dam Safety Construction/Alteration Permit No. 29) subject to such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State.
3. Authorize the Department to remove this dam from the Hawaii Dam Inventory of Regulated Dams and the requirements of Hawaii Revised Statutes Chapter 179D.

Respectfully submitted,



CARTY S. CHANG
Chief Engineer

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR.
Chairperson

- Exhibit(s):
1. Owner Permit Application
 2. Location map
 3. Photos and cross section
 4. Chapter 343-HRS Review

State of Hawaii
BOARD OF LAND AND NATURAL RESOURCES
Department of Land and Natural Resources
Engineering Division

DAM SAFETY PERMIT
APPLICATION FOR APPROVAL OF PLANS AND SPECIFICATIONS FOR CONSTRUCTION,
ENLARGEMENT, REPAIR, ALTERATION, OR REMOVAL OF A DAM

Date of Application: _____

Applicant: Joyce H. Doty Living Trust
Contact Name: Charles S. O'Neill Firm / Company: O'Connor Playdon & Guben LLP

Mailing Address 4365 Kukul Grove Street, Suite 103, Lihue, Hawaii 96766

Telephone: 808-245-3450 Fax: 808-245 1857 Email: cso@opglaw.com

The Applicant hereby applies to the Board of Land and Natural Resources for the approval of the attached plans and specification for the removal (construction, etc.) in accordance with Chapter 179D HRS (as amended by Act 262, SLH 2006), and subject to the provisions, conditions, and limitations of the current Hawaii Administrative Rules and various DLNR dam safety guidelines.

Accompanying this application are: (please check)

- 1. Filing fee equal to 2% of the Detailed Cost Estimate + Eng costs w/ calculation _____
 - 2. Two (2) copies of the Detailed Cost Estimate _____
 - 3. Two (2) copies of the Final Design Report _____
 - 4. Two (2) copies of the Plans _____
 - 5. Two (2) copies of the Specifications _____
 - 6. Proposed Construction Schedule _____
 - 7. Supporting documents: X _____
 - 8. One (1) electronic copy of all the above _____
- _____

NAME OF STRUCTURE: Morita Reservoir (KA-0029)

DAM OR RESERVOIR LOCATION: Kilauea, Hawaii

Island: Kauai Tax Map Key: (4)5-2-031:001 and (4)5-1-005:111

Attach USGS topographic map (scale 1" = 2000') and property tax map (showing location access to site, proposed work)

State Land Use District: X Agriculture Urban Rural Conservation

BRIEF DESCRIPTION OF WORK TO BE PERFORMED

See letter attached hereto and the Final Engineering Report Morita Dam Analysis prepared by OCEANIT Laboratories, Inc., dated December 2012

TECHNICAL INFORMATION:

1. Drainage Area See OCEANIT Report sq. miles or _____ acres
2. Classification of Dam (Hazard/Size) N/A
3. Type of Structure Remnants of an earthen dam
4. Elevation-Area-Capacity Data:

	Elevation	Surface Area (acres)	Total Storage Volume (acre-feet)
Natural Streambed	<u>See OCEANIT Report</u>		
Primary Spillway	_____	_____	_____
Secondary Spillway	_____	_____	_____
Top of Dam	_____	_____	_____
Design Water Level	_____	_____	_____
Invert of Drain	_____	_____	_____
5. Spillway Details (Type, Dimensions, Material)
Primary: _____
Secondary: _____
6. Purpose of Structure _____
(water supply, irrigation, recreation, real estate development, etc.)
7. Attach rainfall and stream flow records, and flood-flow records and estimates (as accurately as may be readily obtained)

ADDITIONAL INFORMATION

1. Primary Owner Contact (if different from applicant) See attached letter
Owner Company or Entity: _____
Mailing Address _____
Telephone: _____ Fax: _____ Email: _____
2. Registered Hawaii Professional Engineer who prepared the plan N/A
Mailing Address _____
Registration No. _____
Telephone: _____ Fax: _____ Email: _____
3. Registered Professional Engineer to be responsible for inspection during construction N/A
4. Contractor (If known) N/A
Mailing Address _____
Telephone: _____ Fax: _____ Email: _____
5. List all other permits applications submitted to other governmental agencies:
N/A
6. Anticipated effect of proposed structure on natural environment: None

DLNR-Dam Safety-Sheet 3

7. List all other parties that have ownership or other interest on the parcels where the dam and reservoir are located and identify their interest in the property. The Owners herein listed below concur with the work proposed within this application by the applicant and by his/her signing hereto, the owner of the land extends to the Board of Land and Natural Resources, and its designated representatives, a right-of-entry onto the project site to conduct any investigations or inspections required in compliance with the provisions of Chapter 13-190.1, Hawaii Administrative Rules. (Submit additional copies of this sheet should there be more owners)

Jurassic Kalihl Ranch LLC
(Printed Name & Signature of Owner)

(4) 5-2-03:001
(Address / TMK/Interest in Dam or Reservoir)

(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

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(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

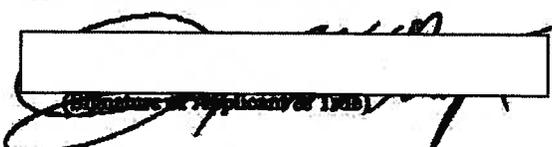
(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

I, Joyce H. Doty, Trustee, the applicant, hereby certify that the information herein is true and factual to the best of my knowledge. Signing below indicates that the applicant understands that, if the permit requested is granted by the Board of Land and Natural Resources, the proposed work is to be initiated and completed within five (5) years of the approval date, unless specifically permitted in the approved permit terms and conditions.



(Signature of Applicant or Trust)

Date: 12/27/13

DLNR-Dam Safety-Sheet 3

7. List all other parties that have ownership or other interest on the parcels where the dam and reservoir are located and identify their interest in the property. The Owners herein listed below concur with the work proposed within this application by the applicant and by his/her signing hereto, the owner of the land extends to the Board of Land and Natural Resources, and its designated representatives, a right-of-entry onto the project site to conduct any investigations or inspections required in compliance with the provisions of Chapter 13-190.1, Hawaii Administrative Rules. (Submit additional copies of this sheet should there be more owners)

Jurassic Kaihi Ranch LLC
(Printed Name & Signature of Owner)

(4) 5-2-031001
(Address / TMK/Interest in Dam or Reservoir)

(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

(Printed Name & Signature of Owner)

(Address / TMK/Interest in Dam or Reservoir)

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(Signature of Applicant & Title)

Date: _____

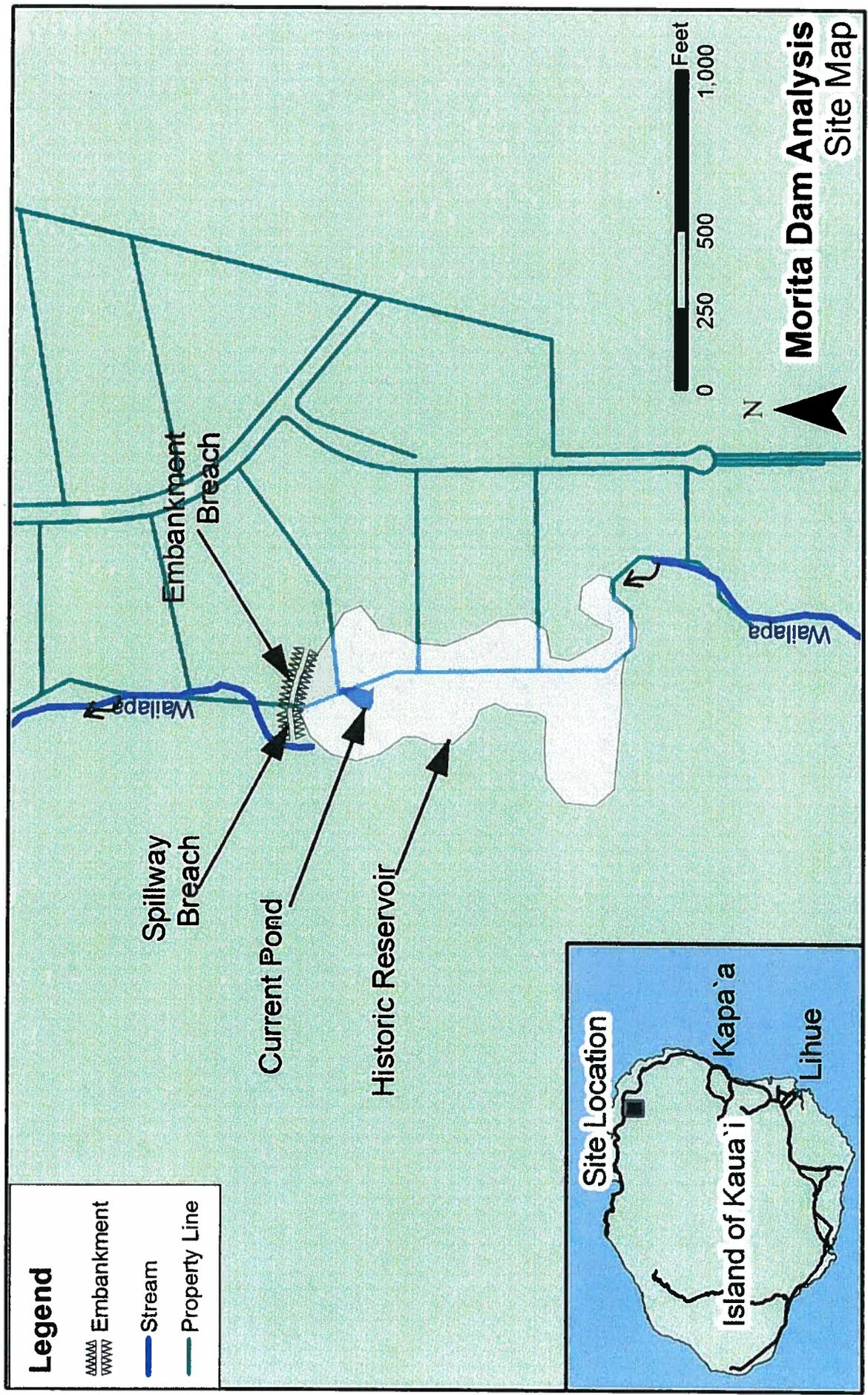


Figure 2-1: Morita Dam site map

Morita Reservoir (KA-0029)
Samil Residual Pond in Old Reservoir Basin



W 159.38876°
N 22.19892°

17/Apr/13
11:13:36 AM

File: Morita (111).JPG

Morita Reservoir (KA-0029)
Samil Residual Pond in Old Reservoir Basin



W 159.38887°
N 22.19891°

17/Apr/13
11:12:20 AM

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Morita Reservoir (KA-0029)
Channel Through Dam Breach

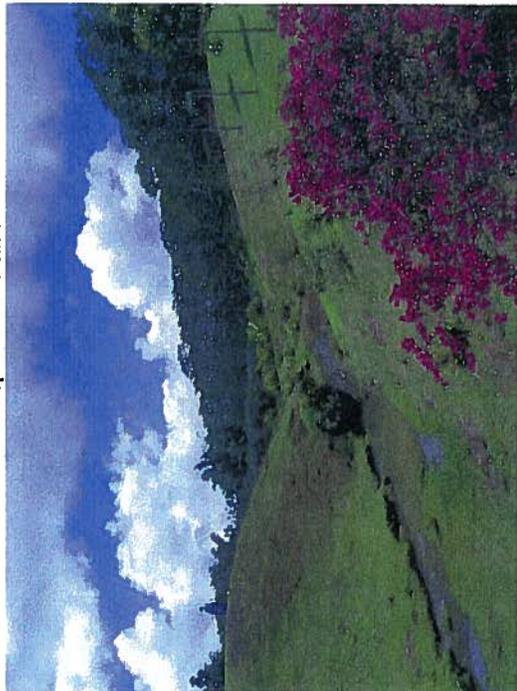


W 159.38902°
N 22.19986°

17/Apr/13
11:16:11 AM

File: Morita (113).JPG

Morita Reservoir (KA-0029)
Short Drop at End of Breach



W 159.38895°
N 22.20015°

17/Apr/13
11:26:32 AM

File: Morita (127).JPG

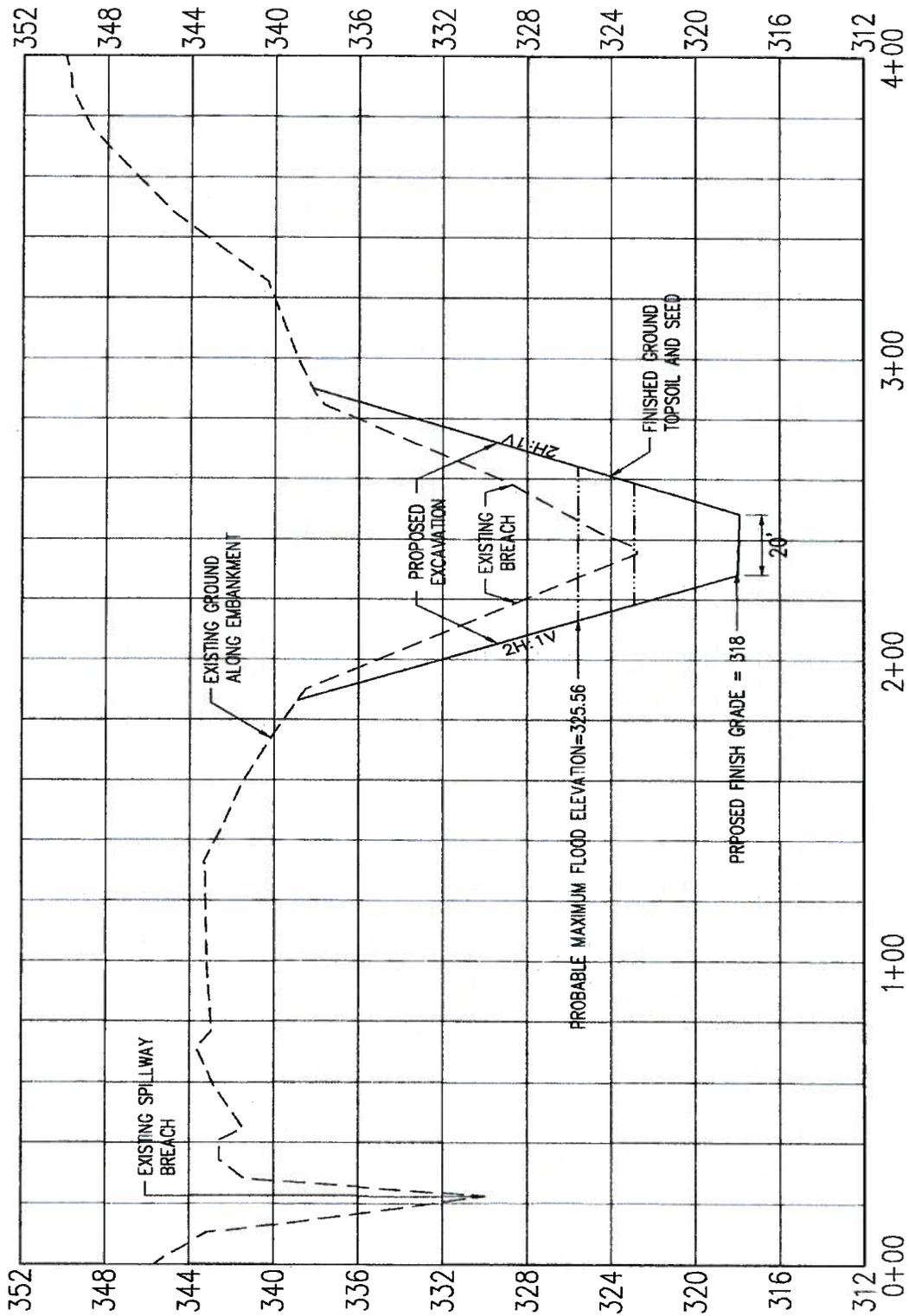


Figure 1-2: Cross-section of existing and proposed breach conditions

CHAPTER 343 ANALYSIS

Project Name: Morita Reservoir (KA-0029) – Dam Removal
Dam Safety Construction/Alteration Permit No. 29
Reviewer: Denise Manuel Date of Review: February 7, 2014

TRIGGERS (HRS §343-5(a))

Is there an "action" that triggers the need for an EA?

Action

An "action" is a program or project:

 Initiated by an agency

 X Initiated by an "applicant"

Any person who, pursuant to statute, ordinance, or rule, officially requests "approval" for a proposed action (discretionary consent required from an agency prior to actual implementation of an action, distinguished from a ministerial consent)

 HRS 179D Statute

 Ordinance

 Rule

Triggers

Yes No

 X Use of state or county lands or funds

 X Use of conservation district lands

 X Use within shoreline setback area

 X Use of historic site designated on the National or Hawaii registers

 X Use of land in the Waikiki Special District

 X Amendment to county general plan which would result in designations other than agriculture, conservation, or preservation unless initiated by a county

 X Reclassification of conservation lands by the Land Use Commission

 X Construction or modification of helicopter facilities that may affect conservation district lands, a shoreline setback area, or a historic site

 X Wastewater facilities, waste-to-energy facility, landfill, oil refinery, or power-generating facility

Triggers summary:

Is there a trigger? Yes No X

If Yes, Go to Exemptions

If No, Environmental Assessment is NOT required. Go to Summary.

EXEMPTIONS

Two sources of exemptions: exemption lists or exemptions contained in HAR §11-200-8(a)

1. Exemption Lists

 Division exemption lists

 Department-wide exemption list

Explain (which exemption list, which exemption, how it applies):

CHAPTER 343 ANALYSIS

2. HAR §11-200-8(a) exemptions

- ___ 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

- ___ Replacement or reconstruction of existing structures and facilities where the new structure will be located generally on the same site and will have *substantially the same purpose, capacity, density, height, and dimensions* as the structure replaced

- ___ Construction and location of a single, *new, small facilities* or structures and the alteration and modification of the same and installation of new, small, equipment and facilities and the alteration and modification of same, including, but not limited to:
 - (a) *Single family residences less than 3,500 square feet* not in conjunction with the building of two or more such units;
 - (b) Multi-unit structures designed for *not more than four dwelling units* if not in conjunction with the building of two or more such structures;
 - (c) Stores, offices, and restaurants designed for total occupant load of *twenty persons or less* per structure, if not in conjunction with the building of two or more such structures; and
 - (d) Water, sewage, electrical, gas, telephone, and other essential public utility services extensions *to serve such structures* or facilities; accessory or appurtenant structures including garages, carports, patios, swimming pools, and fences; and acquisition of utility easements

- ___ *Minor alterations* in the conditions of land, water, or vegetation

- ___ Basic data collection, research, experimental management, and resource evaluation activities that *do not result in a serious or major disturbance* to an environmental resource

- ___ Construction or placement of *minor structures accessory* to existing facilities

- ___ *Interior alterations* involving things such as partitions, plumbing, and electrical conveyances

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- Demolition of structures, *except* those structures located on any *historic site* as designated on the National or Hawaii registers
- Zoning variances *except shoreline* set-back variances
- Continuing administrative activities including, but not limited to purchase of supplies and personnel related actions; and
- Acquisition of land and existing structures, including single or multi-unit dwelling units, for the provision of *affordable housing*, involving *no material change of use* beyond that previously existing, and for which the *legislature has appropriated* or otherwise authorized *funding*

Explain (how the exemption indicated above applies):

Exemptions summary:

Does the Project qualify for an exemption? Yes No

If Yes, Exemption noted above, No Environmental Assessment required

If No, Project does not qualify for exemption and requires an Environmental Assessment

CUMULATIVE IMPACT

Exemptions are inapplicable when the cumulative impact of planned successive actions in the same place, over time, is significant, or when an action that is normally insignificant in its impact on the environment may be significant in a particularly sensitive environment.

SUMMARY

Is Environmental Assessment required?

Yes
No