

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

October 27, 2017

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

**APPROVE ISSUANCE OF A DLNR DAM SAFETY PERMIT AND AUTHORIZE
REMOVAL OF DAM FROM DLNR REGULATORY OVERSIGHT
PERMIT NO. 77 – UKUMEHAME RESERVOIRS (MA-0140)
DAM REMOVAL, MAUI, HAWAII**

The Department of Land and Natural Resources (Department), 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 Permit for the subject application, “Ukumehame Reservoirs (MA-0140) - Dam Removal”, pursuant to Chapter 179D Hawaii Revised Statutes and Administrative Rules, Chapter 13-190.1.

APPLICANT:

Mr. Matthew S. Balven
Gannett Fleming
3838 N. Central Ave., Suite 1900
Phoenix, AZ 85012

OWNER CONTACT:

Mr. Mark Lane
Uka, LLC (West Maui Investors)
468 N. Camden Drive, Suite 300
Beverly Hills, CA 90210

SUMMARY OF REQUEST:

Dam Safety Permit Application for the removal of the Ukumehame Reservoirs, Maui, Hawaii, See Exhibit 1.

LOCATION: Maui, Hawaii, TMK: (2) 4-8-002: 015, 017, 027, 064, 066, 118 See Exhibit 2.

BACKGROUND:

Ukumehame Reservoirs consists of 2 reservoirs. Ukumehame Reservoirs Nos. 2 & 3 are earthen embankment reservoirs constructed along the west side of Ukumehame Gulch on the island of Maui, Hawaii. The total storage capacity of the reservoirs is 35 acre-feet (11.4 million gallons). The reservoirs have not been utilized for water supply to downstream users for many years. The dams are believed to have been constructed from onsite excavated material; however, details about the date of construction and materials used are not available. Reservoir Nos. 2 & 3 are separated by an approximately 30-foot wide earthen embankment. Reservoir No. 2 discharges into Reservoir No.

3 by way of both an uncontrolled concrete emergency spillway and a 24-in equalizer pipe within this embankment. The Reservoir No. 3 emergency spillway is located along the eastern edge of Reservoir No. 3 and discharges uncontrolled into Ukumehame Gulch. The Reservoir No. 3 principal outlet is located along the western edge of the reservoir and is a 24-in x 24-in box conduit, which is controlled at the upstream end by a sluice gate that is currently not operational. Inflow into Reservoir Nos. 2 & 3 comes primarily from the Auwai Ditch, which diverts flow from Ukumehame Gulch approximately 1,000 feet north of Reservoir No. 2. This diversion is controlled by a manually operated gate valve. Auwai Ditch is an earthen and concrete-lined ditch approximately 24-in x 24-in. Each of the two Ukumehame Reservoirs has an independent diversion from Auwai Ditch to control inflows and small contributing watersheds to the north and northwest. In June 2008, an inspection of the dam revealed a high velocity seepage flow, estimated to be greater than 100 gallons per minute (gpm) above the toe on the south side of Reservoir #3. DLNR ordered the owner to lower the reservoir to such a level that seepage from the lower embankment has ceased or is flowing below 20 gpm. Since then, Reservoir #2 was drained and Reservoir #3 was kept at approximately 8 foot level (gage height), which is 10 feet below the normal water level.

PROJECT DESCRIPTION:

The reservoirs will be removed by the removal of the embankment with a bottom width of 20 feet and a side slope of 2H:1V. This will result in a 200-foot-long channel spanning the distance from the original reservoir bottom to the natural gulch downstream. This “new” channel will be lined with grouted riprap to provide erosion control. The completion of this repair will result in lowering the effective height and volume capacity of the dam such that it will fall below the requirements that satisfy the definition of a dam, pursuant to Hawaii Revised Statutes Chapter 179D. The owner of the development will be responsible for the maintenance of the structure after the removal of the embankments. See Exhibit 3

CHAPTER 343 – 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

HAWAII REVISED STATUTES CHAPTER 6E-8 HISTORIC PRESERVATION REVIEW

The Division consulted with the State Historic Preservation Division (SHPD) for compliance with the Chapter 6E-8 requirements. A review of SHPD records indicates that the only historic property identified within the current project area is Site 50-50-0804438, an irrigation ditch slated for preservation, but still in operational use by residents living the Ukumehame Gulch. The dam removal proposal follows protective measures as stipulated in the preservation plan, which will include installation of orange construction fencing to identify a 10-foot buffer zone from the ditch. Based on available information, SHPD’s determination is **no historic properties affected** for the proposed project. SHPD stipulates the following:

- (1) Gannett Fleming Inc., will ensure photos are submitted to SHPD documenting the installation of the temporary protective measures (fencing) along the archaeological preservation buffers identified as Buffer Area 5 and 6 (as recorded in final plan, Subdivision file No. 4.876) prior to initiating other construction activities. Also, the requirement will be added to the plans or specifications (**This is in the construction specification Sheet G-04 under General Notes #23**);
- (2) DLNR Dam Safety includes stipulation #1 in the permit conditions (**Stipulation #1 will be in the special conditions in the Dam Safety Permit**); and

- (3) The following is attached to the permit: *In the event that historic resources; including human skeletal remains, structural remains, cultural deposits, or sand deposits are identified during construction activities, cease work in the vicinity of the find, protect the find from any disturbance, and contact the State Historic Preservation Division at (808) 243-1285. (This note is in the Dam Safety Permit General Conditions note #22)*
See Exhibit 5 and 7.

AGENCY CONSULTATION:

The Division sent out notices to various agencies for their comments on this application. A compilation of the comments from the agencies are posted on Exhibit 6.

REMARKS:

The applicant has completed a basis of design, plans and specification and requests for the approval of a dam safety permit. The Department and its engineering consultant, Kleinfelder West, Inc. has reviewed the documents and concluded that it is sufficient for its intended purposes. The subject reservoirs are off stream, fed by a diversion ditch. The reservoir storage was used to irrigate sugar and pineapple fields and since the closing of sugar and pineapple plantation, water storage in the reservoir has not been used for many years and the ditch was modified by the owner replacing it with an 8-inch HDPE pipe diverting the water directly to current downstream users. /This modified feed satisfies the need of downstream users without the use of stored water from the reservoirs. A 2-inch HDPE line tees off from the 8-inch pipe to supply water to the taro patch situated upstream of the reservoirs. The hydrologic analysis provided by the design engineer, Gannett Fleming, shows the peak inflows during the 100-year, 24-hour storm into Reservoir Nos. 2 & 3 are 62.3 cfs. and 104.5 cfs., respectively. The peak 100-year, 24-hour flow within Ukumehame Gulch is 7,696 cfs. Under existing conditions, this entire flow is contained within the gulch and does not overtop into the reservoirs. The breach is designed to discharge into Ukumehame Gulch at the southeastern corner of Reservoir No. 3. This location and geometry of the breach are designed to reduce diverse impacts to the downstream channel and properties. The design accomplishes this because it maintains historic flow patterns by discharging directly into the gulch and directs discharges away from the downstream residence. Staff recommends approval of this permit application.

SPECIAL CONDITONS:

1. Gannett Fleming Inc. or the owner's representative will ensure photos are submitted to SHPD documenting the installation of the temporary protective measures (fencing) along the archaeological preservation buffers identified as Buffer Area 5 and 6 (as recorded in final plan, Subdivision file No. 4.876) prior to initiating other construction activities

RECOMMENDATIONS:

That the Board:


1. Approve and authorize the issuance of the Dam Safety permit for this project.
2. Authorize the Chairperson to issue a Dam Safety Permit for the Ukumehame Reservoirs (MA-0140), removal (DLNR Dam Safety Permit No. 77) 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 oversee performance of the permitted work and take appropriate action including but not limited to selecting and procuring testing or professional services to verify the integrity of the construction work, approval of minor revisions and changes, issuance of fines and/or revocation of the permit, if necessary.
4. Authorize the Department to remove this dam from dam safety regulatory oversight and the requirements of Hawaii Revised Statutes Chapter 179D, upon satisfactory completion of the construction project and Dam Safety Permit Conditions.

Respectfully submitted,


for CARTY S. CHANG
Chief Engineer

APPROVED FOR SUBMITTAL:


SUZANNE D. CASE, Chairperson
Department of Land and Natural Resources

- Exhibit(s):
1. Owner Permit Application
 2. Location Maps
 3. Construction Drawing pages
 4. Chapter 343 Environmental Assessment Review
 5. HRS Chapter 6E-8 Review
 6. Agency Consultation
 7. General permit conditions

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: 1/19/2016

Applicant:

Contact Name: Matthew S. Balven Firm / Company: Gannett Fleming

Mailing Address 3838 N. Central Ave., Suite 1900, Phoenix, AZ 85012

Telephone: 602-553-8817 Fax: 602-553-8816 Email: mbalven@gfnet.com

The Applicant hereby applies to the Board of Land and Natural Resources for the approval of the attached plans and specification for the Ukumehame Reservoir 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 (to be submitted by owner) | <u>X</u> |
| 2. Two (2) copies of the Detailed Cost Estimate | <u>X</u> |
| 3. Two (2) copies of the Final Design Report | <u>X</u> |
| 4. Two (2) copies of the Plans | <u>X</u> |
| 5. Two (2) copies of the Specifications | <u>(on Plans)</u> |
| 6. Proposed Construction Schedule | <u>X</u> |
| 7. Supporting documents: | <u>X</u> |
| 8. One (1) electronic copy of all the above | <u>X</u> |

NAME OF STRUCTURE: Ukumehame Reservoir Nos. 2 & 3 Removal, NatID HI00140 (StateID MA-0140)

DAM OR RESERVOIR LOCATION: Latitude: -156.5871, Longitude: 20.8099

Island: Maui

Tax Map Key: (2) 4-8-002: 015, 017, 027, 064, 066, 118

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

Removal of Ukumehame Reservoirs 2 & 3 by breaching.

EXHIBIT 1

TECHNICAL INFORMATION:

DLNR-Dam Safety-Sheet 2

1. Drainage Area 0.024 sq. miles or 15.4 acres
2. Classification of Dam (Hazard/Size) High Hazard
3. Type of Structure Earthen Embankment
4. Elevation-Area-Capacity Data:

	Elevation	Surface Area (acres)	Total Storage Volume (acre-feet)
Natural Streambed	NA	NA	NA
Primary Spillway	171.7 ft	~2	35
Secondary Spillway	NA	NA	NA
Top of Dam	174.0 ft	2.3	44
Design Water Level	Unknown		
Invert of Drain	Unknown		
5. Spillway Details (Type, Dimensions, Material) (for Ukumehame Res. 3)
Primary: Ungated concrete structure, 4 cells, 5' wide x 2.5' high (total 20' x 2.5')
Secondary: NA
6. Purpose of Structure Irrigation
(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) Mark Lane
Owner Company or Entity: Uka, LLC (West Maui Investors)
Mailing Address 468 N. Camden Dr., Ste 300, Beverly Hills, CA 90210
Telephone: 310-276-1290 Fax: _____ Email: _____
2. Registered Hawaii Professional Engineer who prepared the plan Stewart Vaghti, PE
Mailing Address 3838 N. Central Ave, Suite 1900, Phoenix, AZ 85012
Registration No. _____
Telephone: 602-553-8817 Fax: 602-553-8816 Email: svaghti@gfnet.com
3. Registered Professional Engineer to be responsible for inspection during construction Stewart Vaghti, PE
4. Contractor (If known) Unknown
Mailing Address _____
Telephone: _____ Fax: _____ Email: _____
5. List all other permits applications submitted to other governmental agencies:

6. Anticipated effect of proposed structure on natural environment: Limited effect expected,
small drainage area previously impounded will now flow into Ukumehame Gulch.

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)

Joseph Daneshgar, Manager

(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)

(Printed Name & Signature of Owner)

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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, Matthew S. Balven, 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.

Matthew S. Balven
(Signature of Applicant & Title)

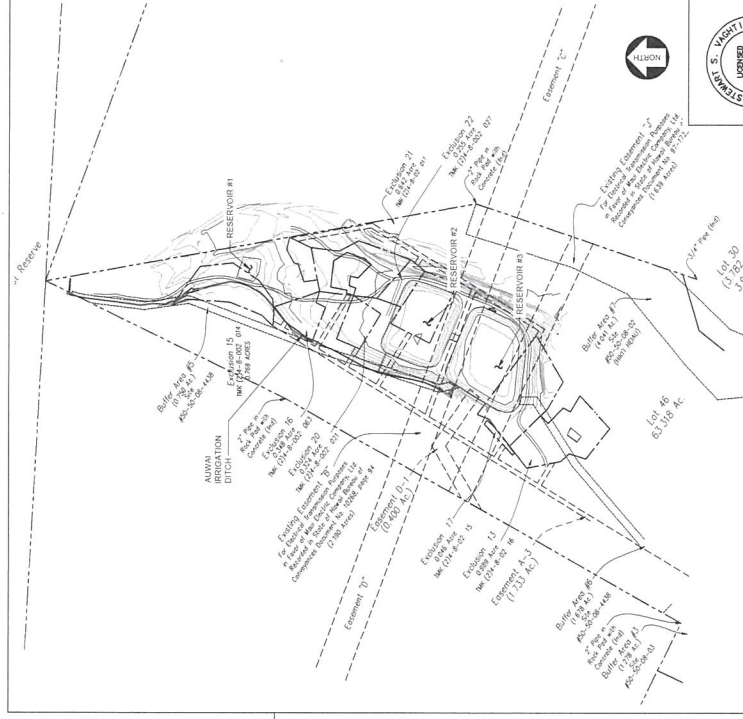
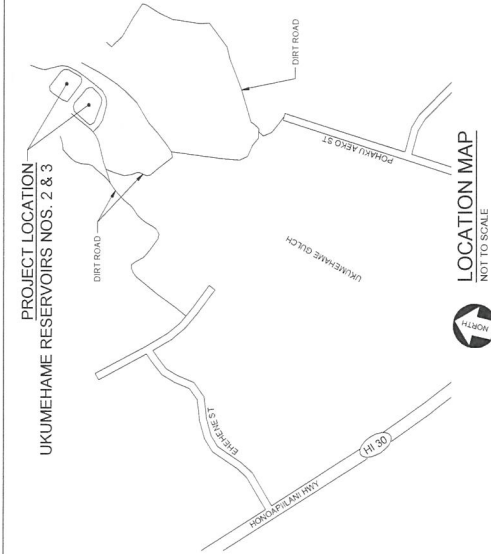
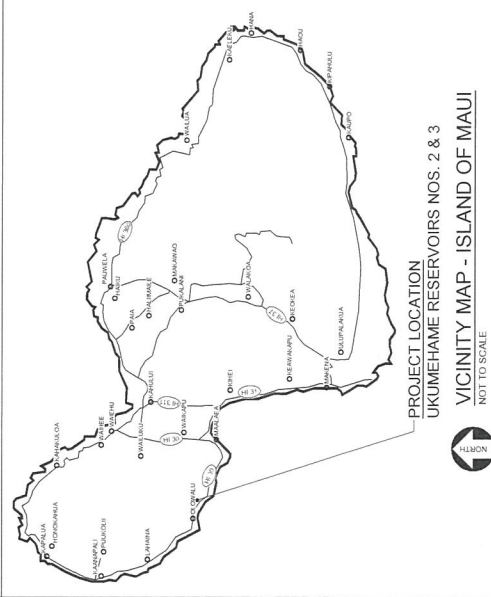
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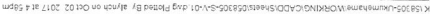
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HAWAII STATE DAM INVENTORY ID: MA-140
OCTOBER 2017
FINAL SUBMITTAL

DESCRIPTION	SHEET INDEX	
	NO	DWG
COVER	1	G-01
GENERAL NOTES (1 OF 3)	2	G-02
SPECIFICATIONS (2 OF 3)	3	G-03
LEGEND, ABBREVIATIONS & SPECIFICATIONS (3 OF 3)	4	G-04
EXISTING CONDITIONS	5	V-01
DEMOLITION PLAN	6	D-01
OVERALL SITE GRADING AND HORIZONTAL CONTROL PLAN	7	G-01
PAVEMENT GRADING PLAN & PROFILE	8	G-02
SECTION CONTROL AND ELEVATION DETAILS	9	E-01

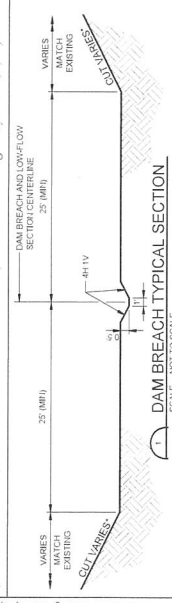
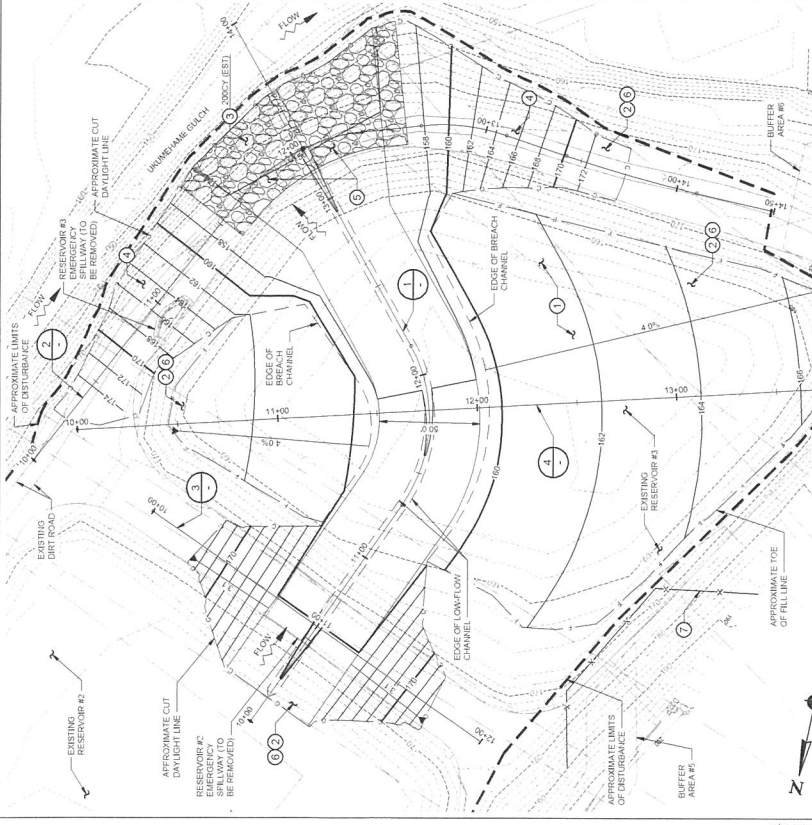


		JOB NO 58305		UKUMEHAME RESERVOIRS NO. 2 & 3 DAM REMOVAL AND GRADING	
DATE OCT 2017		COVER		DESIGNED A.I.L. DRAWN A.I.L. CHECKED SSV SCALE AS NOTED	
<div style="border: 1px solid black; padding: 5px; text-align: center;">  <p>1-800-423-7237</p> <p>FOR PERMIT APPROVAL</p> </div>					
REVISION NO.		DATE		DESCRIPTION	
0		10/02/2015		FOR PERMIT APPROVAL	



CONSTRUCTION
NOTES

-



0	FOR PERMIT APPROVAL	10/02/2017
	DESCRIPTION	DATE

DESIGNED:	AJL
DRAWN:	AJL
CHECKED:	SSV
SCALE:	AS NOTED

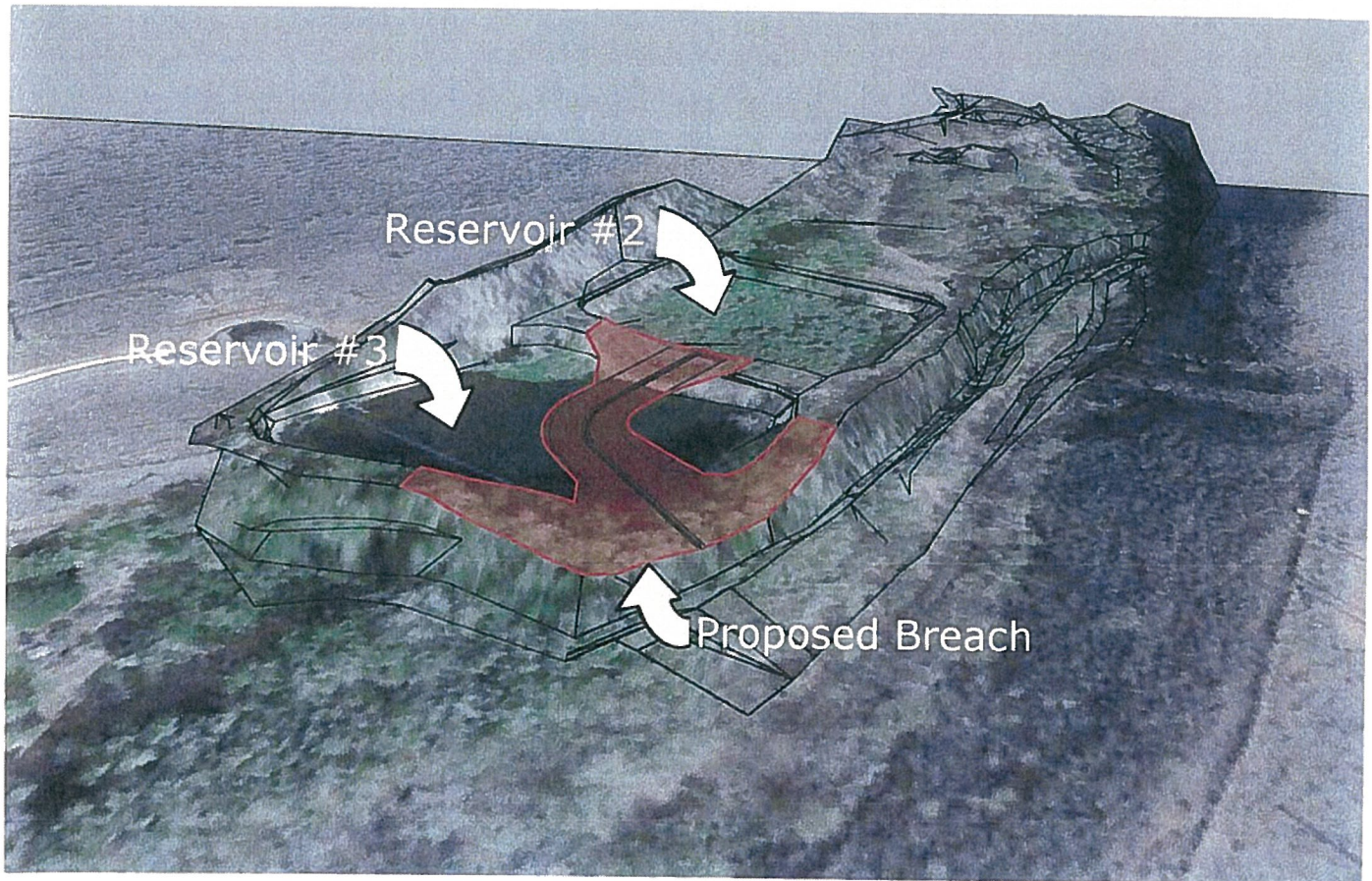
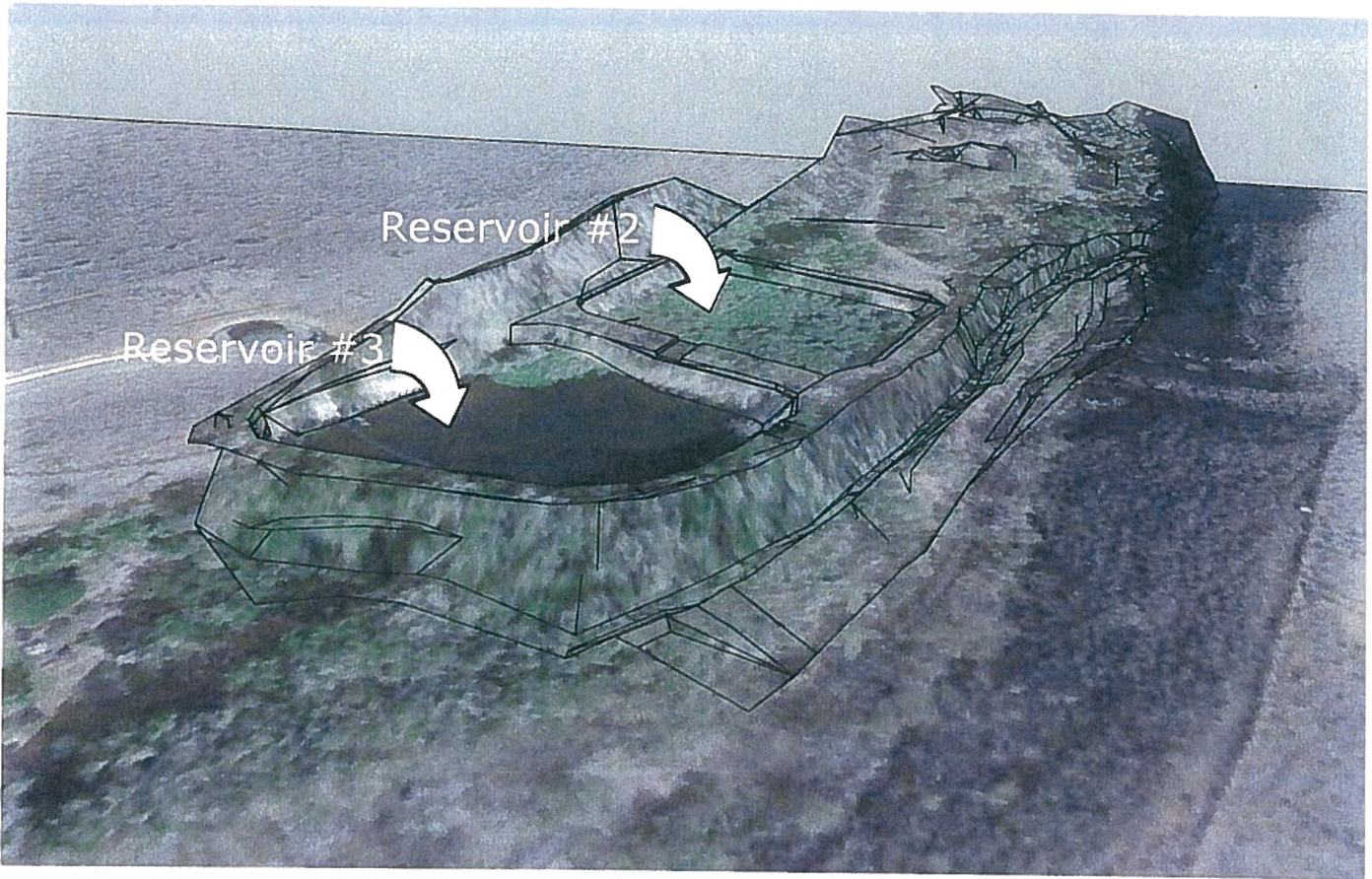
 **Gannett Fleming**
3338 North Central Avenue, Suite 1900, Phoenix, AZ 85015-1937
Phone: (602) 553-8817 Fax: (602) 553-8816 Web: www.gfl.com



THE WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

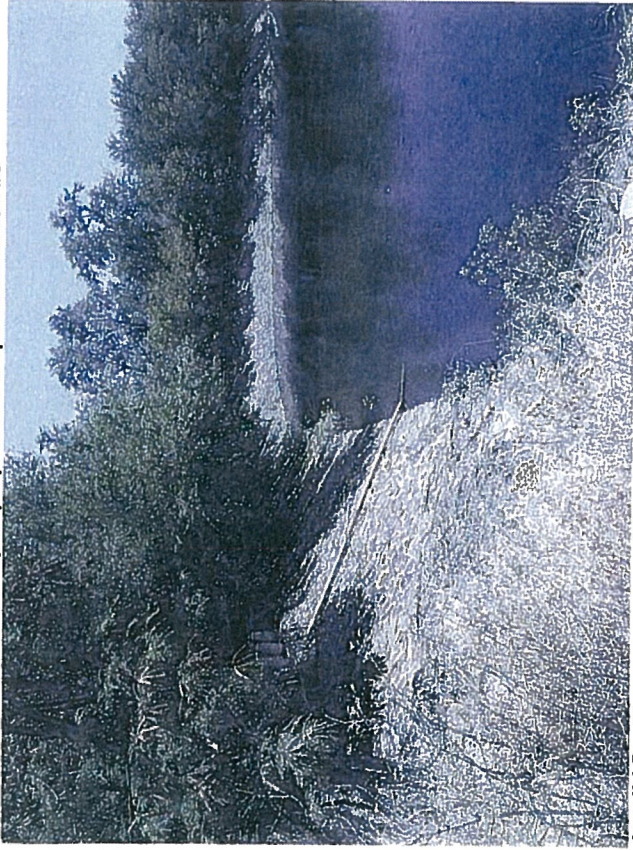
SIGNATURE _____ DATE 4/30/2018

LICENSE EXPIRATION DATE _____



**Ukumehame Reservoirs 2 & 3 Breach
Concept**

Ukumehame Reservoirs (MA-0140)
Grouted Rip Rap Upstream Slope in Reservoir #3



Ukumehame (201).JPG

Invalid Position
Invalid Position

Ukumehame Reservoirs (MA-0140)
Grouted Rip Rap Upstream Slope in Reservoir #2



Ukumehame (202).JPG

W 156.58710°
N 20.81013°
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29/Jun/15

Ukumehame Reservoirs (MA-0140)
Spillway Channel Entrance in Reservoir #3

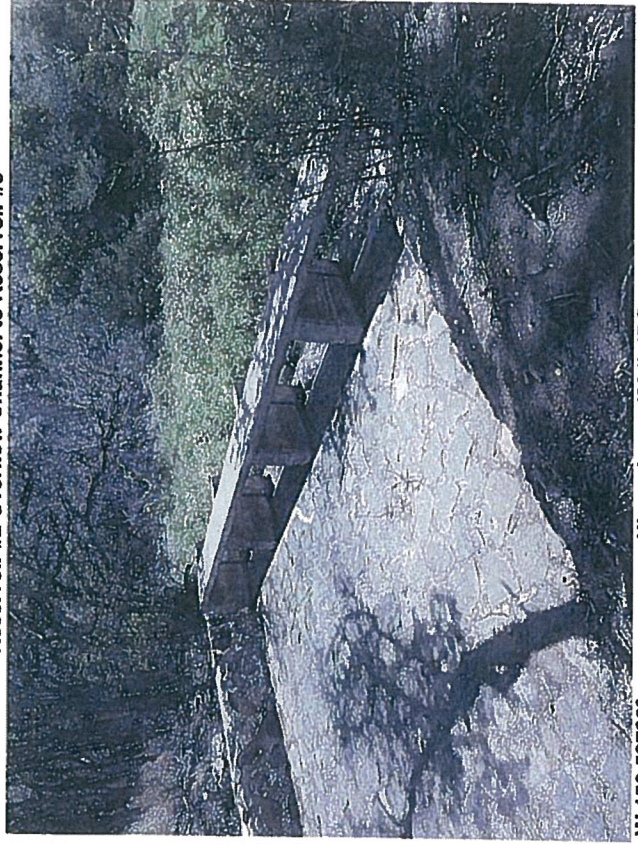


Ukumehame (203).JPG

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12:55:26 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Reservoir #2 Overflow Channel to Reservoir #3

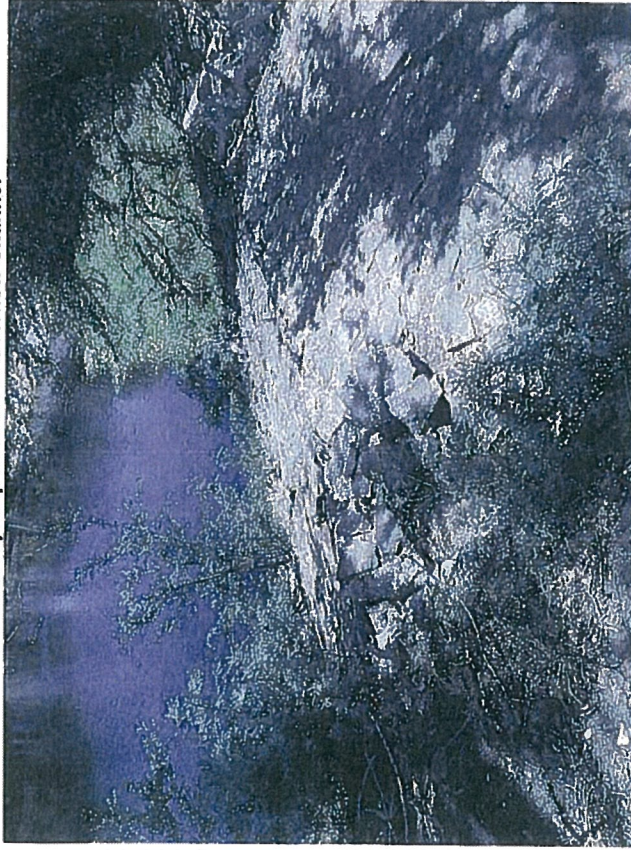


Ukumehame (204).JPG

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29/Jun/15

Ukumehame Reservoirs (MA-0140)
Grouted Rip Rap Defects in Overflow Channel



W 156.58730°
N 20.81019°

Ukumehame (205).JPG

12:57:16 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Residual Pool in Reservoir #3 Kept for Fish

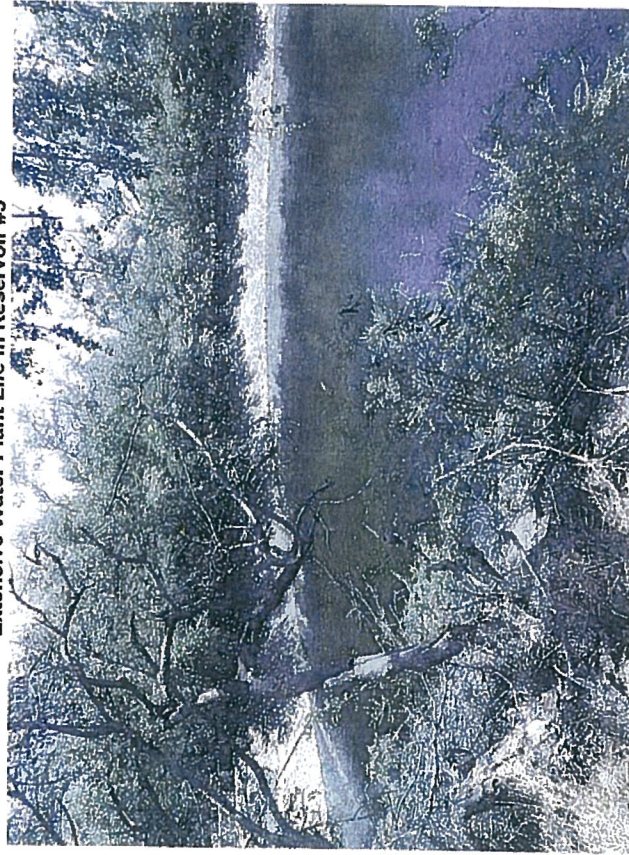


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Ukumehame (206).JPG

12:57:23 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Extensive Water Plant Life in Reservoir #3

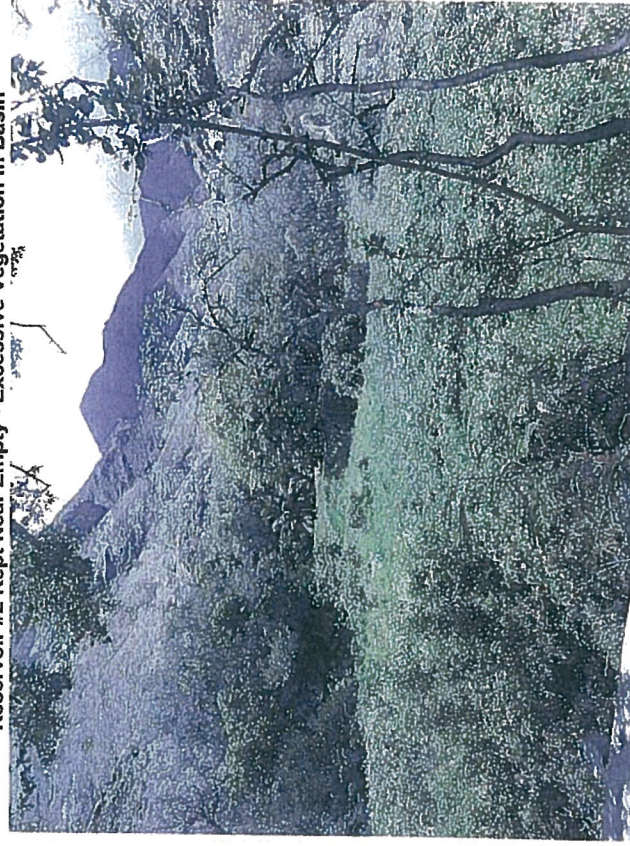


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Ukumehame (207).JPG

12:57:27 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Reservoir #2 Kept Near Empty - Excessive Vegetation in Basin



W 156.58732°
N 20.81019°

Ukumehame (208).JPG

1:00:28 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Hundreds of Trees on the Dike Between the Two Reservoir Basins



W 156.58734°
N 20.81022°

Ukumehame (209).JPG

1:03:18 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Dam Crest Serves as an Access Road



W 156.58683°
N 20.81037°

Ukumehame (210).JPG

1:06:22 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Reservoir #2 - Excessive Vegetation in Reservoir Basin

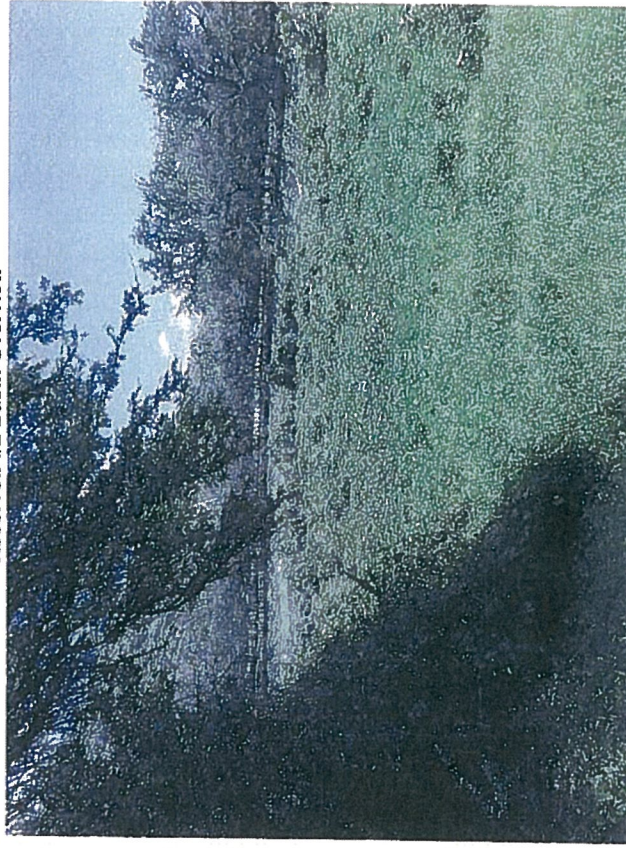


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Ukumehame (211).JPG

1:07:48 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Reservoir #2 Basin Overview



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N 20.81090°

Ukumehame (212).JPG

1:08:13 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
5 Inch PVC Pipe From Taro Patch Flows to Reservoir #2



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N 20.81084°
Ukumehame (213).JPG
1:08:19 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Taro Patch (Lo'i Kalo) Above Reservoir #2



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N 20.81084°
Ukumehame (214).JPG
1:08:31 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Flow Entering the Taro Patch Above reservoir #2



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N 20.81121°
Ukumehame (215).JPG
1:14:28 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Flow Dropped Down From 8 Inch HDPE Pipeline



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N 20.81122°
Ukumehame (216).JPG
1:15:13 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
8 Inch HDPE Pipeline - 2 Inch HDPE Line Tees Off



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N 20.81134°
Ukumehame (217).JPG
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29/Jun/15

Ukumehame Reservoirs (MA-0140)
Lo'i Kalo Above Reservoir #2



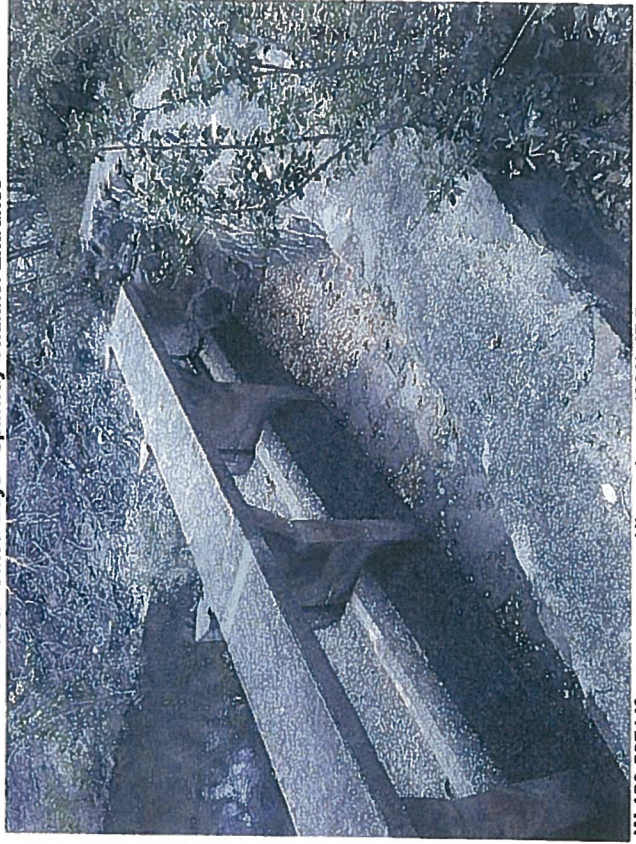
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Ukumehame Reservoirs (MA-0140)
Dam Crest - Hundreds of Trees on Shoulders



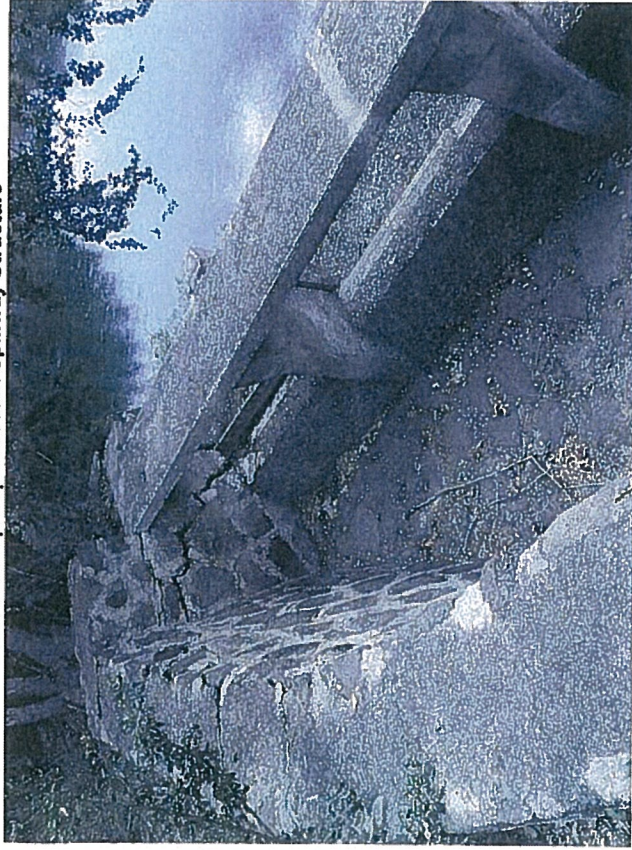
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Ukumehame (219).JPG
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Ukumehame Reservoirs (MA-0140)
Four Gated Bays - Spillway Channel Entrance



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Ukumehame (220).JPG
1:22:02 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Grouted Rip Rap Defect in Spillway Structure



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29/Jun/15

Ukumehame Reservoirs (MA-0140)
Grouted Rip Rap Downstream Slope Below Spillway



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Ukumehame (223).JPG
1:27:29 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Excessive Vegetation on Downstream Slope of Reservoir #3



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N 20.80955°
Ukumehame (224).JPG
1:27:34 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Twin 24 Inch Pipes Convey Spillway Flows to Stream



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N 20.80984°
Ukumehame (222).JPG
1:22:33 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Low Level Outlet Operator in Reservoir #3



W 156.58799°
N 20.80963°

Ukumehame (225).JPG

1:28:44 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Perilous Access to Outlet Operator - Missing Hand Rail



W 156.58806°
N 20.80989°

Ukumehame (226).JPG

1:30:14 PM
29/Jun/15

Ukumehame Reservoirs (MA-0140)
Dead Woody Debris in Reservoir #3 Could Hinder Spillway Flows



W 156.58705°
N 20.81001°

Ukumehame (227).JPG

1:35:42 PM
29/Jun/15



Re: Ukumehame Reservoir Breach RFD

Rebecca.R.Alakai@hawaii.gov <Rebecca.R.Alakai@hawaii.gov>
To: "Richardson, Jacob" <jrichardson@gfnet.com>

Tue, Aug 26, 2014 at 12:48 PM

RFD.4038.6

Jacob M. Richardson
Design Engineer
Gannett Fleming, Inc.
4722 N. 24th Street, Suite 250
Phoenix, AZ 85016
Via email

Request for Determination
Ukumehame Reservoir 2 and 3 Breach
Ukumehame Stream, Maui, TMK (2) 2-4-008:002

Dear Mr. Richardson:

We are responding to your August 19, 2014, request for determination regarding the subject reservoir breach and constructing a channel through the existing reservoir area. Construction activities will include dewatering the reservoirs using best management methods for capturing sediment before the water is discharged into the Ukumehame gulch.

Pursuant to §174C-71(3)(A), Hawaii Revised Statutes, the Commission on Water Resource Management "shall require persons to obtain a permit from the Commission prior to undertaking a stream channel alteration; provided that routine streambed and drainageway maintenance activities are exempt from obtaining a permit. The Commission's Stream Protection and Management Branch, has the responsibility to protect stream channels from alteration whenever practicable to provide for fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses in the State under the authorization of the State Water Code, HRS Chapter 174C, and Hawaii Administrative Rules Chapter 13-169 (Protection of Instream Uses of Water).

Based on the information that you provided, a Stream Channel Alteration Permit will not be required because project activities are outside of the stream channel and instream uses will not be affected.

Please be advised that the project may require other agency approvals regarding wetlands, water quality, grading, stockpiling, and floodways. This letter should not be used for other regulatory jurisdictions or used to imply compliance with other federal, state, or county rules. Work performed without appropriate permits or authorizations may be subject to fines and/or remedial actions.

If you have any questions, contact Rebecca Alakai at 587-0266, or rebecca.r.alakai@hawaii.gov.

Rebecca Alakai
Planner, Stream Protection and Management Branch
Commission on Water Resource Management
Dept. of Land and Natural Resources
1151 Punchbowl St, Rm 227, Honolulu, HI 96813
Ph: 587-0266 Fax: 587-0219
<http://dlnr.hawaii.gov/cwrm/>

9/3/2014

Gannett Fleming Mail - Re: Ukumehame Reservoir Breach RFD

CHAPTER 343 ANALYSIS

Project Name: Ukumehame Reservoirs

Reviewer: Jimmy Leung

Date of Review: 27 September 2017

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

☒ 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)

☐ Statute

☐ Ordinance

☐ Rule

Triggers

Yes No

☐ ☒ Use of state or county lands or funds

☐ ☒ Use of conservation district lands

☐ ☒ Use within shoreline setback area

☒ ☐ Use of historic site designated on the National or Hawaii registers

☐ ☒ Use of land in the Waikiki Special District

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

☐ ☒ Reclassification of conservation lands by the Land Use Commission

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

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

Triggers summary:

Is there a trigger? Yes ☒ No ☐

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

CHAPTER 343 ANALYSIS

- ☒ 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):

Initial review shows that there is a historical site on the property. Upon further review by SHPD, it was "SHPD's determination that no historic properties affected for the proposed project." (See Exhibit 5)

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 ☒

DAVID Y. IGE
GOVERNOR OF
HAWAII



**STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES**

STATE HISTORIC PRESERVATION DIVISION
KAKUHIHEWA BUILDING
601 KAMOKILA BLVD, STE 555
KAPOLEI, HAWAII 96707

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

ROBERT K. MASUDA
FIRST DEPUTY

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

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
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HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

October 3, 2017

Edwin Matsuda, P.E., CFM
Flood Control and Dam Safety Section Head
State of Hawai'i, DLNR
Edwin.Y.Matsuda@hawaii.gov

IN REPLY REFER TO:
Log No. 2016.01884
Doc No. 1710SL01
Archaeology

Dear Mr. Matsuda,

**SUBJECT: Chapter 6E-42 Historic Preservation Review – REVISED
Ukumehame Reservoir MA-0140 Dam Safety Permit No. 77 – Dam Removal
Ukumehame Ahupaua'a, District of Lahaina, Maui Island
TMK: (2) 4-8-002:015, 017, 027, 064, 066, and 118**

This letter clarifies the permit stipulations in our earlier correspondence (August 23, 2017; Log No. 2016.01884, Doc. No. 1708MBF02) for the proposed Ukumehame Reservoir MA-0140 Dam Safety Permit No. 77 project, identified as removal of the Ukumehame Reservoirs 2 and 3 (State ID MA-0140).

Our earlier letter provides the following summary. The dam safety permitting review has been completed and the Department of Land and Natural Resources (DLNR) Engineering Division is awaiting State Historic Preservation Division (SHPD) review and acceptance of the proposed plan prior to submitting the permit for final approval. This SHPD letter addresses three submittals related to this permit provided by Gannett Fleming, Inc., on behalf of the landowner: Log No. 2016.01884 (received 8/3/2016) Log No. 2016.02200 (received 9/12/2016) and Log No. 2017.01457 (received 7/10/2017).

SHPD received additional information regarding this project via email on August 23, 2017 (Stewart S. Vaghti [Gannett Fleming, Inc.] to Susan Lebo [SHPD]). This correspondence included a delegation letter from West Maui Investors, LLC (property owner) to Gannett Fleming, Inc., authorizing them to submit the historic preservation documents and requests to the SHPD on their behalf. The additional information includes clarification that the proposed project scope does not involve a removal of the reservoir/dam structure, but rather the construction of breach sections with a portion of the existing embankment sections such that water can no longer be impounded, thereby removing the safety risk currently posed by the reservoirs. Also, Gannett Fleming will "add a requirement that site photos be sent to SHPD documenting the installation of the temporary protective measures (fencing) [around several archaeological preserves] prior to initiating other construction activities. This requirement will be added to the plans or specifications." Additionally, Gannett Fleming, Inc. recommends that DLNR Dam Safety include this requirement in their permit conditions.

Reservoirs 2 and 3 are located at the downstream end of the Ukumehame Gulch, approximately 8.5 miles southeast of Lahaina. Both reservoirs are currently classified by the DLNR as "high hazard," due to water seepage that could worsen and result in failure of the dams. The property owner is required to address these dam safety concerns as determined by the DLNR. Since 2009, these reservoirs have been managed on an interim basis to avoid and minimize the hazard potential. Receipt of the DLNR Dam Safety permit will allow the property owner to remove the dam safety risks.

An archaeological inventory survey (Devereaux et al. 1999) was conducted in advance of the proposed Ukumehame Subdivision. This survey included a pedestrian survey and subsurface testing of the 440 acres. The survey newly...

EXHIBIT 5

identified 17 sites, of which 3 were recommended for no further work (Sites 50-50-08-3167, 4439, and 4440); a historic cattle wall (Site 50-50-08-3167) previously identified during the Mā'alea to Lahaina transmission line inventory survey (Robins et al. 1994) also was recommended for no further work. Of the newly identified sites, 14 were recommended for preservation (Sites 50-50-08-02, 03, 3165, 3184, 4367, 4381, 4438, 4451, 4452, 4454, 4455, 4456, 4494, and 4828). The SHPD accepted the archaeological inventory survey (AIS) report in a letter dated August 30, 1999 (Log No. 24021, Doc. No. 9908RC71). The agreed-upon mitigation included submittal of a burial treatment plan for 5 of the preservation sites: Site 50-50-08-02, Hiki'i Heiau; Site 50-50-08-03, Ukumehame Heiau; Site 50-50-08-4494, a cemetery; and Site 50-50-08-4828, a burial site; and a preservation plan for 10 of the preservation sites; Site 50-50-08-3184 was included in both plans. The SHPD reported that the Maui/Lāna'i Islands Burial Council voted unanimously to approve in-place preservation of these sites (January 15, 2003; Log No. 3151, Doc. No. 0301KK01).

The ten sites included in the preservation plan are: Site 50-50-08-3165, four enclosures; Site 50-50-08-3184, five enclosures; Site 50-50-08-4367, three terraces; Site 50-50-08-4381, twenty-two petroglyphs; Site 50-50-08-4438, irrigation ditch; Site 50-50-08-4451, habitation; Site 50-50-08-4452, twenty-four terraces; Site 50-50-08-4454, rock shelter with enclosures; Site 50-50-08-4455, nine terraces; and Site 50-50-08-4456, platform, terrace, and an associated petroglyph. The preservation plan for these sites was reviewed and accepted by SHPD (October 2, 2000; Log No. 26200, Doc No. 0008MK12).

The only historic property identified within the current project area is Site 50-50-08-4438, an irrigation ditch slated for preservation, but still in operational use by residents living in the Ukumehame Gulch. The dam removal proposal follows protective measures as stipulated in the preservation plan, which will include installation of orange construction fencing to identify a 10-foot buffer zone from the ditch.

In 2003 (Log No. 2003.2074, Doc. No. 0310CD37), SHPD reviewed the preliminary plat for Phase II (File No.:4.876[County/DSA]) and requested a detailed map be prepared showing the established buffer zones, and with all preservation sites plotted clearly on the submitted plans by a licensed surveyor. In a letter dated December 24, 2003, the SHPD indicates that in meeting held on September 17, 2003, "it was agreed that monitoring was recommended during construction activities, especially on lots adjacent to site buffer areas and LCAs, as artifactual material and cultural deposits have been identified in other agricultural subdivisions." Additionally, the requested map was received, as was a draft archaeological monitoring plan which was reviewed and accepted (December 24, 2003; Log No. 2003.2638, Doc. No. 0312MK16).

Archaeological monitoring newly identified a historic property consisting of a multi-component complex comprised of five features (site 50-50-08-6259). Testing was conducted in Features 1 and 4. The site was interpreted as likely pre-Contact in age; not confirmed by radiocarbon dating. The identified features were a rectangular enclosure (Feature 1); a C-shape abutting two large boulders (Feature 2); a rock- and earth-faced terrace (Feature 3); a similar terrace (Feature 4) with scant shell midden remains present; and a third terrace encircling a small level area south of Feature 2 (Feature 5). In reviewing the letter report documenting this inadvertent find, the SHPD indicated that the site is significant under Criteria d and e, and further discussion is appropriate regarding whether these features should be considered a separate site or be incorporated as components of previously identified Site 50-50-08-5969 (May 21, 2007; No Log No., Doc. No. 0704MK05).

Subsequent studies include an Addendum AIS (Dega 2006), a preservation plan for Sites 50-50-08-5968 and 50-50-08-5969 (Shefcheck and Dega 2006), and a preservation plan for Site 50-50-08-4438 (Dagher and Dega 2010).

The proposed dam removal plans were discussed with the DLNR's Engineering Division. Community members were also consulted. On August 1, 2017, a site visit was conducted by Dr. Matthew Barker Fariss, the SHPD Lead Archaeologist on Maui, to determine the potential for direct and/or indirect impacts on the historic properties listed above.

Based on available information, SHPD's determination is **no historic properties affected** for the proposed project. SHPD stipulates the following:

- (1) Gannett Fleming Inc., will ensure photos are submitted to SHPD documenting the installation of the temporary protective measures (fencing) along the archaeological preservation buffers identified as Buffer Areas 5 and 6 (as recorded on final plat, Subdivision File No. 4.876) prior to initiating other construction activities. Also, this requirement will be added to the plans or specifications;

- (2) DLNR Dam Safety includes Stipulation # 1 in their permit conditions; and
- (3) The following is attached to the permit: *In the event that historic resources; including human skeletal remains, structural remains, cultural deposits, or sand deposits are identified during construction activities, cease work in the vicinity of the find, protect the find from any disturbance, and contact the State Historic Preservation Division at (808) 243-1285.*

The permit issuance process may continue.

Please contact Dr. Susan A. Lebo, Archaeology Branch Chief, at (808) 692-8019 or at Susan.A.Lebo@hawaii.gov for any questions regarding this letter.

Aloha,



Alan S. Downer, PhD.
Administrator, State Historic Preservation Division
Deputy State Historic Preservation Officer

cc: Andy Lynch, P.E.
Sr. Project Engineer
Gannett Fleming, Inc.
alynch@GFNET.com

Stewart S. Vaghti, P.E., CFM
Sr. Project Manager
Gannett Fleming, Inc.
svaght@GFNET.com

West Maui Investors, LLC
468 N. Camden Drive, Suite 300
Beverly Hills, CA 90210

Ukumehame Reservoirs

Agency Consultation:

Agency	Date Sent	Date Returned	No Comments	Comments	No Reply
Division of Aquatic Resources	7/2/16	8/16/16		X	
Commission on Water Resources Management	7/2/16			X	
Division of Forestry and Wildlife	7/2/16				X
Historic Preservation Division	7/2/16	8/23/17		X	
Land Division	7/2/16	8/30/16	X		
Office of Conservation and Coastal Lands	7/2/16	8/11/16	X		
Department of Agriculture	7/2/16				X
Department of Agriculture – ADC	7/2/16				X
County of Maui – NFIP	7/2/16				X
Hawaii EMA	7/2/16	8/22/16	X		
Maui Civil Defense	8/26/16				X

DAVID Y. IGE
GOVERNOR OF HAWAII



RECEIVED

AUG 2 2016

Division of Aquatic Resources

SUZANNE D. CASE
CHIEF, PERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

I. EKOKA K. LUHIWA
FIRST DEPUTY

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

AQUATIC RESOURCES
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KAHOOLAWE ISLAND RESERVE COMMISSION
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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

ENGINEERING DIVISION
POST OFFICE BOX 373
HONOLULU, HAWAII 96809

JUL 27 2016

D/R 5351

TO:

DLNR agencies	Other Agencies
X Division of Aquatic Resources	X Department of Agriculture
X Commission on Water Resource Management	X Department of Agriculture-ADC
X Division of Forestry & Wildlife	County of Kauai - NFIP
X Historic Preservation Division	City & County of Honolulu - NFIP
X Land Division	X County of Maui - NFIP
X Office of Conservation & Coastal Lands	County of Hawaii - NFIP
	X HEMA
	X Hawaii Civil Defense

FROM: Carty Chang, Chief Engineer

SUBJECT: Ukumehame Reservoir (MA-0140)
Dam Safety Permit No. 77
Dam Removal

LOCATION: Maui, TMK: (2) 4-8-002:015, 017, 027, 064, 066, 118

APPLICANT: Matthew S. Balven, Gannett Fleming

Transmitted for your review and information are the attached documents on the subject Dam Safety Permit application.

1. Dam Safety Permit Application
2. Plan set
3. Data sheet

Please return to our office a signed copy of this transmittal with one of the choices below checked along with any comments by August 31, 2016. If no response is received by this date, we will assume your agency has no comments. If you have any questions, please contact Jimmy Leung of my staff at (808) 587-0238 or by email: jimmy.m.leung@hawaii.gov.

- () We have no comments
(X) Comments are attached

Signed: Bruce S. Anderson

Print name: Bruce S. Anderson, Dar Administrator

Date: Aug 16, 2016

16 AUG 17 PM 10:42 ENGINEERING

DAVID Y. IGE
GOVERNOR OF
HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

SUZANNE D. CASE
CHAIRPERSON
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KEKOA KALUHIWA
FIRST DEPUTY

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

AQUATIC RESOURCES
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HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

August 15, 2016

MEMORANDUM:

A handwritten signature in black ink, appearing to read "Skippy Hau".

TO: Bruce S. Anderson, Ph.D.
Administrator, DAR

FROM: Skippy Hau
Aquatic Biologist

SUBJECT: Comments on Ukumehame Reservoir (MA-0140)
Dam Safety Permit No. 77
Dam Removal (DAR5351)

The removal of Ukumehame Reservoir Nos. 2 & 3 will remove the possibility of dam breach and improve safety for downstream locations. It appears that the auwai ditch will still be maintained for existing users.

The return of flow to Ukumehame Stream continues to maintain post larvae recruitment of native stream animals including o'opu (fishes), opae (shrimp) and hihiwai (snail). Recently, I stopped by to check the mouth after we closed the beach after a recent shark incident. The healthy numbers of post larvae fishes was nice to confirm.

DAVID Y. IGE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

ENGINEERING DIVISION
POST OFFICE BOX 373
HONOLULU, HAWAII 96809

JUL 27 2016

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

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CONSERVATION AND RESOURCES ENFORCEMENT
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HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
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TO:

	DLNR agencies		Other Agencies
X	Division of Aquatic Resources	X	Department of Agriculture
X	Commission on Water Resource Management	X	Department of Agriculture-ADC
X	Division of Forestry & Wildlife		County of Kauai - NFIP
X	Historic Preservation Division		City & County of Honolulu - NFIP
X	Land Division	X	County of Maui - NFIP
X	Office of Conservation & Coastal Lands		County of Hawaii - NFIP
		X	HI EMA
		X	Hawaii Civil Defense

FROM: Carty Chang, Chief Engineer

SUBJECT: Ukumehame Reservoir (MA-0140)
Dam Safety Permit No. 77
Dam Removal

LOCATION: Maui, TMK: (2) 4-8-002:015, 017, 027, 064, 066, 118

APPLICANT: Matthew S. Balven, Gannett Fleming

Transmitted for your review and information are the attached documents on the subject Dam Safety Permit application.


1. Dam Safety Permit Application
2. Plan set
3. Data sheet

Please return to our office a signed copy of this transmittal with one of the choices below checked along with any comments by **August 31, 2016**. If no response is received by this date, we will assume your agency has no comments. If you have any questions, please contact Jimmy Leung of my staff at (808) 587-0238 or by email: jimmy.m.leung@hawaii.gov.

(x) We have no comments

() Comments are attached

Above the ordinary high water
mark, not CWRM's jurisdiction

Signed: 
Print name: Jeffrey T. Pearson, P.E.

Date: October 3, 2017

RFD. 4475.6/14168 J

DAVID Y. IGE
GOVERNOR OF HAWAII



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

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 30, 2016

State of Hawaii
Department of Land and Natural Resources
Engineering Division
Attention: Mr. Carty Chang, Chief Engineer
P.O. Box 373
Honolulu, Hawaii 96809

Dear Mr. Chang:

SUBJECT: Ukumehama Reservoir (MA-0140); Dam Safety Permit No. 77
Dam Removal

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Land Division's Maui District for their review and comments.

At this time, the Land Division's Maui District has no comments to offer on the subject matter. If you have any questions, please feel free to call Daniel Ornellas at (808) 984-8117. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell Y. Tsuji".

Russell Y. Tsuji
Land Administrator

cc: Central Files

16 AUG 30 PM 10:45 ENGINEER'S

MA-17-22

DAVID Y. IGE
GOVERNOR OF HAWAII



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AND COASTAL LANDS

2016 JUL 28 A 8:01

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION
POST OFFICE BOX 373
HONOLULU, HAWAII 96809

SUZANNE D. CASE
CHAIRPERSON
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FIRST DEPUTY

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

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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

JUL 27 2016

TO: FROM:

DLNR agencies	Other Agencies
X Division of Aquatic Resources	X Department of Agriculture
X Commission on Water Resource Management	X Department of Agriculture-ADC
X Division of Forestry & Wildlife	County of Kauai - NFIP
X Historic Preservation Division	City & County of Honolulu - NFIP
X Land Division	X County of Maui - NFIP
X Office of Conservation & Coastal Lands	County of Hawaii - NFIP
	X HI EMA
	X Hawaii Civil Defense

TO: FROM: Carty Chang, Chief Engineer

SUBJECT: Ukumehame Reservoir (MA-0140)
Dam Safety Permit No. 77
Dam Removal

LOCATION: Maui, TMK: (2) 4-8-002:015, 017, 027, 064, 066, 118

APPLICANT: Matthew S. Balven, Gannett Fleming

Transmitted for your review and information are the attached documents on the subject Dam Safety Permit application.

1. Dam Safety Permit Application
2. Plan set
3. Data sheet

Please return to our office a signed copy of this transmittal with one of the choices below checked along with any comments by **August 31, 2016**. If no response is received by this date, we will assume your agency has no comments. If you have any questions, please contact Jimmy Leung of my staff at (808) 587-0238 or by email: jimmy.m.leung@hawaii.gov.

- (X) We have no comments
() Comments are attached

NOT IN
CONSERVATION

Signed: [Signature]
Print name: SAM LEUNG
Date: 8.11.16

16 AUG 12 PM 1:52 ENGINEERING

DAVID Y. IGE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

ENGINEERING DIVISION
POST OFFICE BOX 373
HONOLULU, HAWAII 96809

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

REKOA KALUHIWA
FIRST DEPUTY

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

AQUATIC RESOURCES
BOATING AND FISH HATCHERY
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
ELEVATION AND RESOURCES ENVIRONMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAIKOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

JUL 27 2016

TO:

DLNR agencies		Other Agencies
X Division of Aquatic Resources	X	Department of Agriculture
X Commission on Water Resource Management	X	Department of Agriculture-ADC
X Division of Forestry & Wildlife		County of Kauai - NFIP
X Historic Preservation Division		City & County of Honolulu - NFIP
X Land Division	X	County of Maui - NFIP
X Office of Conservation & Coastal Lands		County of Hawaii - NFIP
	X	HLEMA
	X	Hawaii Civil Defense

FROM: Carty Chang, Chief Engineer

SUBJECT: Ukumehame Reservoir (MA-0140)
Dam Safety Permit No. 77
Dam Removal

LOCATION: Maui, TMK: (2) 4-8-002:015, 017, 027, 064, 066, 118

APPLICANT: Matthew S. Balven, Gannett Fleming

Transmitted for your review and information are the attached documents on the subject Dam Safety Permit application.

1. Dam Safety Permit Application
2. Plan set
3. Data sheet

Please return to our office a signed copy of this transmittal with one of the choices below checked along with any comments by **August 31, 2016**. If no response is received by this date, we will assume your agency has no comments. If you have any questions, please contact Jimmy Leung of my staff at (808) 587-0238 or by email: jimmy.m.leung@hawaii.gov.

- (X) We have no comments
() Comments are attached

Signed:

Print name: Vern T. Miyagi

Date: August 22, 2016

DAM SAFETY PERMIT GENERAL CONDITIONS

APPROVAL OF PLANS AND SPECIFICATIONS FOR DAM AND RESERVOIR CONSTRUCTION, ENLARGEMENT, REPAIR, ALTERATION OR REMOVAL

The following General Conditions shall be adhered to for all Dam Safety permits unless otherwise authorized in writing.

1. Actual construction, enlargement, repair, alteration or removal shall be completed within 5 years of issuance of the permit application approval unless an extension authorized in writing by the Board is issued.
2. Prior to the start of work the owner or applicant shall provide a construction engineer to ensure compliance with the approved plans and specifications and who shall have ultimate responsibility for the supervision of all inspection tasks. The construction engineer may assign some inspection tasks to a duly authorized agent under the construction engineer's supervision. The engineer shall be licensed in the State of Hawaii.
3. The construction engineer shall maintain a record of construction that at a minimum, shall include, daily activity, and progress reports, all test results pertaining to construction; photographs sufficient to provide a record of foundation conditions and various stages of the construction through completion, all geologic information obtained; and construction problems and remedies.
4. A construction quality assurance plan shall be prepared and submitted to the Department for approval prior to the start of construction, which details the minimum requirements of the construction engineer's observation of construction.
5. A construction schedule, which includes the notice to proceed date and estimated project duration and a construction emergency action plan shall be submitted prior to the preconstruction meeting.
6. A preconstruction meeting shall be held subsequent to submitting the quality assurance plan, construction schedule and construction emergency action plan, but not later than 14 days prior to the start of construction. All parties actively involved in the construction should be requested to attend, such as the dam owner, the design engineer, the construction engineer, the contractor and the Department.
7. The Department shall be notified 5 calendar days prior to the commencement of construction.
8. Any changes from the approved plans and specifications shall be approved by the design engineer and a change order, including details and supporting calculations, must be provided to the Department. Major changes must be submitted in writing with supporting documentation and approved in writing by the Department. No work shall be initiated until the approval by the Department or Board is received. Minor changes may be transmitted verbally and approved by the Department verbally provided that documentation of the change is provided to the Department within 10 days of the approval.

9. For new dam construction and for dams and reservoirs that have lowered the water level or have been drained to facilitate construction, the construction engineer shall file and obtain approval of a filling plan with the Department. The applicant/owner shall not proceed with the filling of the reservoir until it receives permission from the Department. The construction engineer shall provide documentation of monitoring during the filling operation.
10. Prior to the filling of the reservoir, the construction engineer shall submit one copy each of the approved Operations Manual and the approved Emergency Action Plan for the facility upon completion of the project as applicable.
11. The construction engineer shall give the Department at least ten days advanced notice of initial materials placement of the dam's foundation, in the cutoff trench, outlet backfill, outlet foundation, and any appurtenance requested by the Department in the approval of the plan for construction observation, to allow for observation by the Department.
12. Notice of substantial completion shall be issued by the construction engineer to the Department stating that the permitted improvements are functionally complete such that filling of the reservoir can be initiated with an approved filling plan.
13. The construction engineer shall give the Department fifteen (15) calendar days advance written notice prior to the project's final construction inspection. The construction engineer shall coordinate with the Department to conduct this inspection in the presence of the Department's dam safety personnel.
14. The construction engineer shall provide notice at least ten (10) days prior to initiating filling the reservoir, unless agreed at the final inspection.
15. If conditions are revealed which will not permit the construction, enlargement, repair, alteration, or removal of a safe dam or reservoir, the application for approval for construction, enlargement, repair, alteration, or removal shall be revoked.
16. A topographic survey of completed work including all monuments, inverts, crest alignment, spillways, and significant appurtenant features, when required by the Department shall be completed.
17. The applicant/owner shall utilize appropriate erosion control best management practice measures during construction to minimize turbidity (such as scheduling of work during period of low stream flow) and prevent debris and construction materials, including concrete, petroleum products, and other pollutants from enter the waters of the State. Construction related water and debris should be properly disposed of in a legal and environmentally safe manner and in accordance with the Department of Health and other Federal regulations.
18. The applicant/owner shall submit a copy of the dam safety application and the plans and specifications of the proposed improvements to the County Engineer of the County for which the dam resides for compliance with County codes.
19. Within fifteen (15) calendar days of completing the project, the applicant/owner or its representative shall provide the Department with a confirmation letter of compliance, signed and stamped by the construction engineer, indicating that the construction

was completed in accordance to approved plans and specifications including any field changes. The construction engineer shall submit the remaining construction completion documents which may include, but not be limited to, as-constructed drawing, final construction report, topographic survey, record of the location of permanent monuments, log of recorded water levels and other readings from the refilling operation, long-term instrumentation monitoring plan, and affidavit showing the actual cost of construction including engineering costs, within 60 calendar days of the submittal of the final construction inspection.

20. Construction completion documents and the construction engineer's certification shall be provided to the Department within 60 days of the final construction inspection. The Department will review the submitted items and furnish acceptance or denial within 60 days of receipt of satisfactorily completed construction completion documents and close out the dam safety permit.
21. This permit does not relieve the applicant/owner of their obligations to comply with all applicable Federal, State, and County regulations.
22. In the event that historic resources; including human skeletal remains, structural remains, cultural deposits, or sand deposits are identified during construction activities, cease work in the vicinity of the find, protect the find from any disturbance, and contact the State Historic Preservation Division at (808) 243-1285.
23. Compliance with Hawaii Revised Statutes 179D, and Hawaii Administrative Rules 13-190.1.