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

September 26, 2014

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

AUTHORIZE THE APPROVAL & ISSUANCE OF  
DAM SAFETY CONSTRUCTION/ALTERATION PERMIT NO. 69 –  
DAM REMOVAL OF THE HAPPY VALLEY FLOOD PREVENTION DAM  
(MA-0125) FROM THE BOARD OF LAND AND NATURAL RESOURCES’ JURISDICTION  
WAILUKU, MAUI, HAWAII

The Engineering 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 Happy Valley Flood Prevention Dam,” Pursuant to Hawaii Revised Statutes  
Chapter 179D.

APPLICANT:  
Ms. Rowena Dagdag-Andaya  
Deputy Director of Public Works  
County of Maui  
Department of Public Works  
200 South High Street  
Wailuku, Maui, Hawaii 96793

LANDOWNERS:  
Wahi Hoomalu LP  
c/o John A. Russell  
P.O. Box 351  
Kula, Hawaii 96790  
TMK: (2) 3-3-002:001

Frederick K. Kaya Trust  
2557 Kamaile Street  
Wailuku, Hawaii 96793  
TMK: (2) 3-3-017:145

James & Denise Goodfellow Main Trust  
James Goodfellow, Trustee  
P.O. Box 220  
Kihei, Hawaii 96753  
TMK: (2) 3-3-017:143

Sook Cha No Self-Trusted Trust  
2557 Kamaile Street  
Wailuku, Hawaii 96793  
TMK: (2) 3-3-017:145

Lucy Thi Pham  
2552 Kamaile Street  
Wailuku, Hawaii 96793  
TMK: (2) 3-3-017:144

ITEM L-2
SUMMARY OF REQUEST:
Application for a Dam Safety Construction/Alteration Permit for the Dam Removal of the Happy Valley Flood Prevention Dam in Wailuku, Maui. (See Exhibit 1)

LOCATION: Wailuku, Maui, Hawaii
TMK: (2) 3-3-002:001 – Wahi Hoomalu LP
TMK: (2) 3-3-017:143 – James & Denise Goodfellow Main Trust
TMK: (2) 3-3-017:144 – Lucy Thi Pham
TMK: (2) 3-3-017:145 – Frederick K. Kaya Trust & Sook Cha No Self-Trusteed Trust

(See Exhibit 2)

BACKGROUND:
The Happy Valley Flood Prevention Dam was constructed in 1980 to provide flood protection for the anticipated development of the area. The basin was designed by the Soil Conservation Service (SCS) and the County of Maui, and is currently maintained by Maui County, Department of Public Works. The project consisted of a small earthen dam and a 4000-foot-long channel to the Laol Stream. (See Exhibit 3)

The dam is an earthen embankment built across a natural swale. The crest of the dam from the right abutment to the spillway wing wall is approximately 140 feet. The spillway is an 8-foot-wide rectangular concrete channel with wing walls 11 feet high along the crest of the dam. Downstream the spillway channel narrows to four (4) feet wide, before it passes under the road. The upstream embankment slope is protected with grouted rip rap and has a designed 3:1 slope. The downstream slope was designed to be 2:1 but is much flatter approaching 4:1, as it blends into the natural topography. The dam height to the upstream embankment is 14.1 feet. The height estimated to the downstream toe was 17 feet in a 1999 Phase I Report performed by Ernest K. Hirata & Associates. The dam has a size classification of “small” and hazard potential classification of “high.” (See Exhibit 4)

It has been noted, since the April 6, 2006 USACE Inspection, that the facility may be too small to be a regulated structure. The County of Maui is pursuing removal from the Hawaii Regulated Dam Inventory (C-122) through the dam safety permit process. The Honolulu branch of Natural Resources Conservation Service (NRCS) assisted the County of Maui by calculating the potential inflows, routing them through the dam, and determining the maximum water surface elevation along with the corresponding dam height and volume. The maximum water surface elevation was determined to be 655.73 feet, which corresponds to an upstream design height of 17.66 feet and 5.79 acre-feet of water. As mentioned in the Phase I Report, the downstream slope blends into the natural ground and the toe of the structure was believed to be three (3) feet below the upstream toe. This would yield a maximum dam height of 20.66 feet, measured to the lowest elevation of the outside limit of the barrier. The volumes of the reservoir have been plotted on the state jurisdictional chart and fall below the height and volume criteria of a state regulated dam. (See Exhibit 5)

An application for the removal of the Happy Valley Flood Prevention Dam from DLNR Jurisdiction was filed on May 2, 2014, by the County of Maui, Department of Public Works, which operates and maintains the dam and reservoir.

PROJECT DESCRIPTION:
There is no construction activity associated with this permit application. Approval of the permit would remove the Happy Valley Flood Prevention Dam from DLNR jurisdiction.

HRS CHAPTER 343 – ENVIRONMENTAL ASSESSMENT:
There is no construction activity associated with this permit application. Engineering calculations were done by NRCS at no cost to the County of Maui. Chapter 343 review was completed and there is no trigger requiring an Environmental Assessment. (See Exhibit 6)
REMARKS:
The applicant (County of Maui DPW) and the applicant’s consultant (NRCS) have completed a hydrologic and hydraulic analysis for a Probable Maximum flood (PMF) event. The calculations demonstrate that the dam falls below the regulatory criteria of the state. Therefore, the dam should be removed from the state’s regulated inventory. The County of Maui has requested for the approval of the submitted dam safety construction/alteration permit. The staff of the Dam Safety Program has reviewed the documents and concluded that they are sufficient for their intended purposes. Staff recommends approval of this permit application.

SPECIAL CONDITIONS: None

RECOMMENDATION:
That the Board:

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

2. Authorize and direct the Chairperson to issue a dam safety permit for the removal of the Happy Valley Flood Prevention Dam (DLNR Dam Safety Construction/Alteration Permit No. 69) subject to such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State; and

3. Authorize the Department to remove this dam from Board of Land and Natural Resources’ jurisdiction, the Hawaii Regulated Dam Inventory (C-122), 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 / TMK Map
3. Site Images
4. Partial Construction Drawing set
5. Hawaii Jurisdictional Determination Chart
6. Chapter 343 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  

Applicant: Rowena M. Dagdag-Andaya  
Firm / Company: County of Maui, DPW  

Mailing Address: 200 South High Street, Wailuku, Maui, Hawaii 96793  

Telephone: 808-270-7745  
Fax: 808-273-7975  
Email: David.Goode@co.maui.hi.us  

The Applicant hereby applies to the Board of Land and Natural Resources for the approval of the attached plans and specifications for the removal of a dam (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:  

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:  
8. One (1) electronic copy of all the above  
   9. Drainage and Maintenance Road Easements, Recorded June 22, 1978  
   11. Happy Valley Flood Prevention As-Built Plans, Dated April 24, 1980  
   See below for description of items 12, 13, and 14  

(please check)  

N/A  
N/A  
N/A  
N/A  
N/A  
N/A  
N/A  
X  
X  
X  
X  
X  

NAME OF STRUCTURE: Happy Valley Flood Prevention  

DAM OR RESERVOIR LOCATION: Latitude 20.8934 deg., Longitude - 156.5160  

Island: Maui  
Tax Map Key: 330020010000  

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

State Land Use District: ___ Agriculture  ___ Urban  ___ Rural  ___ Conservation  

BRIEF DESCRIPTION OF WORK TO BE PERFORMED  

There is no physical work to be performed as part of this application  

12. Wailuku Country Estates Plans showing Happy Valley Easement  
13. Visual Dam Safety Inspection by DLNR on April 16, 2013 recommending dam removal through the permitting process  
14. Jurisdictional determination calculations  

Rev. DAM PERMIT APPLICATION-20120301, 4/26/2012, 9:29 AM, 2 of 4
TECHNICAL INFORMATION:

1. Drainage Area 0.21 sq. miles or ___________ acres

2. Classification of Dam (Hazard/Size) Undetermined / Small

3. Type of Structure Debris Basin

4. Elevation-Area-Capacity Data: Elevation | Surface Area | Total Storage
<table>
<thead>
<tr>
<th>(acres)</th>
<th>Volume (acre-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Streambed</td>
<td>See attachment 14 for spillway calculations, water level elevations, outlet invert, and storage capacity at multiple elevations and storm events.</td>
</tr>
<tr>
<td>Primary Spillway</td>
<td></td>
</tr>
<tr>
<td>Secondary Spillway</td>
<td></td>
</tr>
<tr>
<td>Top of Dam</td>
<td></td>
</tr>
<tr>
<td>Design Water Level</td>
<td></td>
</tr>
<tr>
<td>Invert of Drain</td>
<td></td>
</tr>
</tbody>
</table>

5. Spillway Details (Type, Dimensions, Material)
   Primary: Concrete Channel
   Secondary: ___________

6. Purpose of Structure Debris Basin / Flood Control
   (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) N/A
   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: N/A
   ________________________________

Rev. DAM PERMIT APPLICATION-20120301, 4/26/2012, 9:29 AM, 3 of 6

Exhibit 1
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)

(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)  (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)  (Address / TMK/Interest in Dam or Reservoir)

I, Rowena M. Dagdag-Andaya, 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]

DEPUTY DIRECTOR OF PUBLIC WORKS

Date: APR 30 2014

Note: County of Maui is not the land owner, but has controlling interest and maintenance responsibilities of the Happy Valley Flood Prevention Debris Basin through recorded easement document, (litter) 12970-17, see attachment #9.

Rev. DAM PERMIT APPLICATION-20120301, 4/26/2012, 9:29 AM, 4 of 4
HAPPY VALLEY FLOOD PREVENTION (MA-0125)

<table>
<thead>
<tr>
<th>Jurisdictional Limit</th>
<th>15</th>
<th>35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jurisdictional Limit</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>Jurisdictional Limit</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>Jurisdictional Limit</td>
<td>50</td>
<td>6</td>
</tr>
<tr>
<td>Jurisdictional Limit</td>
<td>65</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Elevation (feet)</th>
<th>U Height (feet)</th>
<th>D Height (feet)</th>
<th>Volume (acre-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Downstream Toe (est)</td>
<td>635.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upstream Toe</td>
<td>638.07</td>
<td>3.00</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Spillway</td>
<td>641.07</td>
<td>3.00</td>
<td>6.00</td>
<td>0.54</td>
</tr>
<tr>
<td>Crest</td>
<td>652.27</td>
<td>14.20</td>
<td>17.20</td>
<td>3.27</td>
</tr>
<tr>
<td>PMF</td>
<td>655.73</td>
<td>17.66</td>
<td>20.66</td>
<td>5.79</td>
</tr>
</tbody>
</table>

Hawaii Jurisdictional Determination Chart

- Jurisdictional Limits
- At Spillway Invert
- At Crest of Dam
- At IDF (PMF) Maximum WSE

Exhibit 5
CHAPTER 343 ANALYSIS

Project Name: Removal of Happy Valley Flood Prevention Dam (MA-0125) from DLNR

Jurisdiction

Reviewer: John Dawley  Date of Review: 21-May-2014

___  EA Done with Finding of no Significant Impact (FONSI)

___  EIS Done with Finding of no Significant Impact (FONSI)

If FONSI has been issued no further analysis is required.  Date of FONSI:

TRIGGERS (HRS §343-5(a))
Is there an "action" that triggers the need for an EA?

Action
An "action" is a program or project:

X  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

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?
If Yes, Go to Exemptions to determine if the program or project is exempt
    If it is not exempt an Environmental Assessment is required
If No, No Environmental Assessment required
CHAPTER 343 ANALYSIS

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
   - Other exemption lists - 

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

   ______________________________________________________
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

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;
CHAPTER 343 ANALYSIS

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

___ 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
If No, Project requires Environmental Assessment
CHAPTER 343 ANALYSIS

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.

Additional Notes

- No physical work is to be done. Engineering calculations remove the dam from DLNR Jurisdiction.