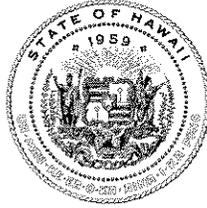


LINDA LINGLE  
GOVERNOR OF HAWAII

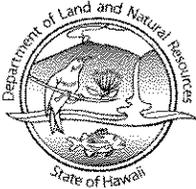


PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

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ACTING DEPUTY DIRECTOR - WATER

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KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
OFFICE OF CONSERVATION AND COASTAL LANDS  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

REF:OCCL:TM

CDUA: MO-3376

MEMORANDUM

NOV 24 2006

**TO:** Genevieve Salmonson, Director  
Office of Environmental Quality Control

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

**SUBJECT:** Final Environmental Assessment (FEA)/ Finding of No Significant Impact (FONSI) for Conservation District Use Application (CDUA) MO-3376 for Kuleana Land Use Single Family Residence and Sustainable Agriculture Located at Kiaoao, Wailau, Halawa, Island of Molokai, TMK: (2) 5-9-005:007

The Office of Conservation and Coastal Lands (OCCL) has reviewed the FEA for the Kuleana Land Use Single Family Residence and Sustainable Agriculture. The Draft Environmental Assessment (DEA) for CDUA MO-3376 was published in OEQC's September 23, 2006 Environmental Notice.

The FEA is being submitted to OEQC. We have determined that this project will not have significant environmental effects, and have therefore issued a FONSI. Be advised, however, that this finding does not constitute approval of the proposal. Please publish this notice in OEQC's upcoming December 8, 2006 Environmental Notice.

We have enclosed four copies of the FEA for the project. A copy of the OEQC Bulletin Publication Form and Project Summary is attached. Comments on the draft EA were sought from relevant agencies and the public, and were included in the FEA.

Please contact Tiger Mills of our Office of Conservation and Coastal Lands Staff at 587-0382 if you have any questions on this matter.

Attachments

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DEPARTMENT OF LAND AND NATURAL RESOURCES

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DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE OF HAWAII

FINAL ENVIRONMENTAL ASSESSMENT

FOR CONSERVATION DISTRICT USE APPLICATION

WAILAU, MOLOKA'I  
TAX MAP KEY: (2)-05-09-005:007

APPLICANT

LINDA DUNN  
2411 Makiki Heights Drive  
Honolulu, Hawaii 96822

OFFICE OF ENVIRONMENTAL  
QUALITY CONTROL

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SUMMARY

APPLICANT/OWNER: Linda Dünn

PROPERTY LOCATION: Wailau, Moloka'i

TAX MAP KEY: (2)-5-9-005:007

PARCEL SIZE: 0.58 acre

APPROVING AGENCY: Department of Land & Natural Resources  
Office of Conservation and Coastal Lands

PROPOSED ACTION: Applicant seeks approval to construct a one story single family residence including an attached deck, greywater infiltrator system and simple water catchment system, on 1/3 of the 0.58 acre parcel located on the Halawa (east) side of Wailau Valley on the north shore of Moloka'i. The parcel is in the Maui County Special Management Area and the State Land Use Conservation District, Resource (R) Subzone.

DETERMINATION: The proposed action is expected to have no significant impact on the environment, therefore a Finding of No Significant Impact (FONSI) is anticipated.

AGENCIES CONSULTED:

State

Department of Land & Natural Resources  
Office of Conservation and Coastal Lands  
Historic Preservation Division

Department of Health  
State Archives

County

County of Maui- Department of Planning  
Maui District Health Office

Federal

U.S. Army Corps of Engineers  
Department of the Interior  
Fish and Wildlife Services

Community

Moloka'i Planning Commission  
Frances H. I. Brown Trust  
Meyer Family  
Hanson/Ellithorpe Family

Private Sector Resources

Tom Dye & Associates  
Kamehameha Schools Bishop Estate-Map Department  
Silversword Engineering Inc.  
Land Surveyors Inc. (aka Valley Isle Surveyors Inc.)  
U.H. Manoa Dept. of Anthropology  
Windy McElroy, MA

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MAJOR IMPACTS AND PROPOSED MITIGATION MEASURES	8
ANTICIPATED DETERMINATION AND REASONS FOR ANTICIPATED DETERMINATION	11

## ATTACHMENTS:

- 1) LOCATION MAP
- 2) TMK MAP and AREA PLAN
- 3) SITE PLAN (sheet C-1)
- 4) VEGETATION MAP & CONSTRUCTION PLAN
- 5) HISTORIC DOCUMENTATION
- 6) STATE HISTORIC PRESERVATION DIVISION  
REPORT and ARCHEOLOGICAL SURVEY REPORT
- 7) US FISH AND WILDLIFE SERVICE REPORT
- 8) FLOOR PLAN and STRUCTURE ELEVATION DRAWINGS
- 9) STATE HEALTH DEPARTMENT REPORT
- 10) SITE PHOTOGRAPHS
- 11) DEED
- 12) EQUIPMENT SPECIFICATIONS
- 13) CORRESPONDENCE
- 14) SURVEY MAP/TOPOGRAPHY
- 15) CULTURAL SURVEY
- 16) DRAFT E.A. REVIEW COMMENTS/RESPONSE CORRESPONDENCE

NOTE: ALL CHANGES/ADDITIONS TO THE DRAFT ENVIRONMENTAL ASSESSMENT INCORPORATED  
INTO THE FINAL ENVIRONMENTAL ASSESSMENT ARE INDICATED BY \_ \_ \_ \_ UNDERLINING.

## INTRODUCTION

The applicant, Linda Dunn, proposes to construct a Single Family Residence on 1/3 of the 0.58 acre parcel TMK(2)-5-9-005:007 in Wailau, Moloka'i. The applicant is the fee owner of the parcel as shown in the Deed recorded 30 June 1998. (see attachment #11) The applicant intends to be the sole occupant of this residence.

The area of the Proposed Action is classified Conservation by the State Land Use Commission and designated within the Resource (R) Subzone.

The proposed action is an identified land use as allowed in Conservation District Guidelines for a Resource Subzone per HAR Title 13 Chapter 5 Subchapter 3 S13-5-24 R-8.

R-8 "A Single Family Residence: A single family residence that conforms to design standards as outlined in this chapter."

(This Final Environmental Assessment is prepared pursuant to and in accordance with Chapter 343 Hawaii Revised Statutes and Chapter 200 of Title 11, Administrative Rules- Environmental Impact Statement Rules, and incorporates comments/concerns received during the Draft EA review process. The action which triggers this assessment is the Conservation District Use Application for the proposed construction of a Single Family Residence on parcel TMK(2)-5-9-005:007 in Wailau, Moloka'i by applicant Linda Dunn.

<u>Permit</u>	<u>Approving Agency</u>
Final Environmental Assessment w/Finding of No Significant Impact	Dept. of Land & Natural Resources as part of CDUPermit
Special Management Area Minor Permit or Exempted Action	County of Maui Dept. of Planning after E. A w/FONSI
Individual Wastewater Disposal System	State Dept. of Health (plans approved)
Conservation District Use Permit	Dept. of Land & Natural Resources after SMAPermit
Building Permits	County of Maui Permitting Dept. after CDUPermit

A County of Maui Planning Commission Special Management Area Assessment Application For An Exempted Action has been filed and accepted by the County of Maui Dept. of Planning (assigned # SMX 2006/0282) and is awaiting the approval of the Final Environmental Assessment with a Finding Of No Significant Impact by the Department of Land and Natural Resources to finalize the application.

## AGENCIES CONSULTED:

## State

Department of Land &amp; Natural Resources

Office of Conservation and Coastal Lands

Historic Preservation Division

Department of Health

State Archives

## County

County of Maui- Department of Planning

Maui District Health Office

## Federal

U.S. Army Corps of Engineers

Department of the Interior

Fish and Wildlife Services

## Community

Molokai Planning Commission

Frances H. I. Brown Trust

Meyer Family

Hanson/Ellithorpe Family

## Private Sector Resources

Tom Dye &amp; Associates

Kamehameha Schools Bishop Estate-Map Department

Silversword Engineering Inc.

Land Surveyors Inc. (aka Valley Isle Surveyors Inc.)

U.H. Manoa Dept. of Anthropology

Windy McElroy, MA

GENERAL DESCRIPTION OF PROPOSED ACTIONLocation:

The 0.58 acre unimproved parcel is located on the Halawa (eastern) side of Wailau Valley on the north shore of Moloka'i, County of Maui at TMK(2)-5-9-005:007. (see attachments #1 Location Map & #2 TMK Map)

The parcel is classified Conservation by the State Land Use Commission and designated within the Resource (R) Subzone. The parcel is also located in the Maui County Special Management Area.

Existing Use:

The unimproved parcel is approx. 313 ft. long and 106 ft. wide. The eastern section consists of two large former loi defined by tumbled rock walls with a remnant of an 'awai running across the western ends of the former loi. The Kahawaiiki Stream runs through the western section of the parcel. The proposed construction will take place in the north-eastern 1/3 of the parcel. (see attachment #3 Site Plan) All other areas will be left "as is".

The area is currently covered with dense vegetation, mostly hau trees, yellow ginger and clydemia with a stand of bamboo on the west side of the stream. Some areas cut back for survey line-of-sight and archeological work contain small shrubs and Goat Weed.

The land area is currently used only for a temporary camp site by the applicant/owner, Linda Dunn, when she is in the valley. The stream area is currently used by local hunters and Hihwai pickers as they travel upstream to the public hunting areas.

Surrounding Area Activities and Use

The Wailau Valley is currently used by hunters, hikers and fisherman with seasonal camping, mostly at the shoreline. There are two permitted structures in the valley, one along the western side, above Wailau Stream and the second adjacent to the proposed project property on the west end, across Kahawaiiki Stream. Neither structure has full time residents at this time, one being occupied only sporadically and the other being occupied mostly in the winter months.

The limited activity in the valley consists of subsistence hunting and fishing by Moloka'i residents.

The entire valley is in the Maui County Special Management Area and the State Conservation District Resource Subzone.

Proposed Use and Related Activities

The applicant is seeking a Conservation District Use Permit for the purpose of constructing a Single Family Residence consisting of a 14'x14' single story structure with a 14'x14' attached deck containing: a self composting toilet, catchment water system, solar and propane cooking equipment, an adjacent greywater infiltrator system and a small contained garden for personal consumption.

The applicant intends to be the sole occupant of this residence.

## (Proposed Use and Related Activities cont.)

The proposed action is an identified land use as allowed in Conservation District Guidelines for a Resource Subzone per HAR Title 13 Chapter 5 Subchapter 3 S13-5-24 R-8.

R-8 "A Single Family Residence: A single family residence that conforms to design standards as outlined in this chapter."

## Single Family Residential Standards (Sept. 9, 2005)

Standard	Proposed Action
Minimum Lot Size- 10,000 sq. ft.	0.58 acre (approx. 33,000 sq. ft.)
Minimum Set back- lots of 10,000 sq. ft. to 1 acre	
Front-15'	Front-215'
Sides-15'	Sides-40'/50'
Back ±15'	Back-80'
Maximum Developable Area- lots 10,000 sq. ft. to 1 acre	
3,500 sq. ft. total floor space	Main structure-196'
	Loft area 112'
	Deck- 196'
	Total= 504 sq. ft.
Maximum Height- 25"	Height- 18'8"
Compatibility Provisions-	
Landscaping- screening of structures	No grubbing, grading or tree removal. Vegetation trimmed back by hand in area of structure, all other areas left "as is"
Paint/surface of structure- earth tones or compatible with surroundings.	Wooden Cedar structures & neutral color roofing
DOH wastewater/water collection systems	DOH approved greywater Infiltrator, catchment, self composting toilet
Minimum grading/contouring -	No grading/contouring
All structures connected	Main structure and deck attached
Conformance to applicable building and grading codes and shoreline setback	Conformes to Maui County building codes, no grading to be done, not a shoreline parcel
One kitchen	One kitchen- solar oven propane stove sink on deck

(Proposed Use and Related Activities cont.)

1) Single Family Residence

Construction of a single story cedar wood 14'x14' structure containing a 8'x14' loft area, raised 4' above ground level for a total structure height of 18'8" above ground level. Attached to this structure will be a 14'x14' cedar wood deck also raised 4' above ground level. Both structure and deck will be supported on concrete footings. Only non-reflective and earth tone materials will be used.

Adjacent to the structure, an under ground greywater infiltrator system approved by State of Hawaii Dept. of Health will be installed. (see attachments #3&#9)

Beside the deck at ground level will be the catchment water system consisting of two 55 gallon barrels attached to the gutter on the main structure.

On the deck will be the double size sink and free standing shower, attached to the greywater infiltrator system. Contained within the structure will be the SunMar non-electric waterless self composting toilet. (see attachment #12 for specs)

Cooking facilities will consist of a Gaiam Sun Oven solar oven on the deck and a Coleman propane campstove, to be used on the deck or in the structure in inclement weather. (see attachment #12 for specs)

Lighting will be with solar rechargeable battery operated lanterns with an Accumanager 2 solar battery charger. (see attachment #12 for specs)

Adjacent to the structure and deck will be a small contained organic garden containing non-propogating varieties of vegetables and fruit for personal consumption.

2) Related Activities

The existing vegetation will be cut back by hand in the northeastern 1/3 of the 0.58 acre parcel to accomodate construction. There will be no grubbing, grading or tree removal. After completion of the proposed construction, this area will be kept trimmed back as needed. The remaining 2/3 of the parcel will remain "as is" and all activity will be at least 100' from the Kahawaiiki Stream in the western end of the parcel.

Construction Timetable

Applicant intends to begin work within 1 month of receipt of permits and will complete construction within 8 months.

SUMMARY DESCRIPTION OF AFFECTED ENVIRONMENT

The Wailau Valley is located on the north shore of the Island of Moloka'i, County of Maui. The area is remote, accessible only by boat to the rocky shoreline or by an unmaintained trail over the mountains from the Puko'o area on the east end of the Island.

The valley is an amphetheatre-shaped depression with high pali (walls) on three sides and the rocky shoreline at the ocean side. There are two main streams which run through the valley from back (south) pali and converge at the shoreline to enter the ocean. These are both fed by numerous smaller streams from waterfalls or springs along the side (east and west) pali. The larger, Wailau Stream, runs along the west side of the valley from south to north. The smaller, Kahawaiiki Stream, runs along the east side of the valley also from south to north.

The area of proposed construction (TMK(2)-5-9-005:007) is located on the east (Halawa) side of Kahawaiiki Stream in the north-eastern area of the valley approximately 1200 ft. from the shoreline. The stream runs through the west end of the parcel.

The parcel is defined by several partially tumbled stone walls with another partially tumbled stone wall through the center of the east section and a partially intact 1'-2' 'awai running south to north through the center of the parcel. The walls define former taro loi. The area for the proposed construction is one loi running west to east on the northeast side of the parcel. All other areas will be left "as is". There are no significant archeological features on the parcel per review by Dept. of Land and Natural Resources State Historic Preservation Division of an archeological survey conducted in June 2004. (see attachment #6)

The soil is classified as dark yellowish brown silty clay on top of successive layers of dark grey clay and dark grey clay loam from the former tato loi activity. (see attachment #6 Archeological Survey pg 18)

The elevations on the parcel range from 23' above mean sea level in the stream bed at the west end of the parcel to 29' above mean sea level on the east bank of the stream and gently slopes to 33' above mean sea level at the east end of the parcel. Beyond the parcel boundary on the east end, the adjacent land rises sharply to the pali defining the east side of the valley. The land adjacent to the west end of the parcel rises gradually to about 27' above mean sea level. This causes any rise in stream level to flow to the east, off the parcel. The 9' rise from stream bed to proposed construction site and the presence of a partially intact 'awai 1'-2' deep running south to north through the parcel between the site and the stream prevents the area from flooding, even in times of intense flash floods in the valley described by local hunters as the "worst in 30 years" (and observed by the applicant) in summer 2000 and lesser flooding observed in winter 2005.

(Summary Description of Affected Environment cont.)

The climate is consistent with Hawaiian Windward Lowland areas with rainfall in the range of 90" to 100+" annually with temperature ranges in the low 70's in winter to the mid 80's in the summer. The winds are moderate, as the parcel is protected from the ocean side by heavy vegetation and the shape of the Valley.

The current vegetation is all introduced species, mainly hau trees with some yellow ginger and a scattering of clydemia beneath the tree cover. There is an area of bamboo on the west bank of the stream. Goat weed has begun to appear in the areas which were cut back for survey line-of-sight and archeological survey work in 2004 and 2005. There are no threatened or endangered plant species on the parcel per U.S. Fish and Wildlife report 2000. (see attachments #7 & #4)

Mammals observed on the parcel have been deer, mongoose, rats, mice and feral cats and the occasional lost hunting dog. Evidence of wild pigs can be found in the winter but they move toward the back of the valley as the hunting activity increases in the spring.

The only reptiles observed in the surrounding area have been geckos, both Mourning and House varieties. Toads (buffo) have been seen in the valley but not on the parcel. No amphibians have been found in this section of the stream.

The 105' long section of Kahawaiik Stream which crosses the western end of the parcel contains small numbers of O'opu, an occasional prawn and a few Hihiwai. (Over the last 15 years, the applicant has observed the number of Hihiwai in this section of the stream has dramatically decreased. Every year Hihiwai pickers need to move farther upstream in both Wailau and Kahawaiiki Streams to harvest as the areas closer to the shoreline are being "picked" more frequently.)

Birdlife observed on the parcel and in the area include only introduced species such as: Shama Thrush, Cardinal, Japanese White Eye. Ko'lea have been seen in the grass/field areas behind the shoreline and an Auku'u was seen in the lower ends of both streams for several years (last sighted by the applicant in 2004). No threatened or endangered species of birds have been reported in the lower areas of the Valley.

Hawaiian Damselflies are abundant in the Valley in open areas but have not been observed on the parcel. However, they will probably move in to the area when the vegetation is cut back for construction. This also occurred when the area on parcel TMK(2)-5-9-005:016 was cut back for construction, adjacent to the west end of the parcel of proposed construction.

MAJOR IMPACTS AND PROPOSED MITIGATION MEASURES

## 1-- Access

Human access to the proposed project area will be by boat to the shoreline then by existing footpath to the parcel. All activity will be confined to the northeast 1/3 of the 0.58 acre parcel, at least 100' from Kahawaiiki Stream.

All materials will be slung in by helicopter. All work will be done by hand, no heavy equipment will be brought into the valley.

\*This will minimize the impact on the environment during construction.

The applicant, the sole occupant after construction, intends to remain in the Valley year round with only semi-annual trips out to re-supply.

\*This will minimize the impact of travel on the environment.

## 2-- Activity

All activity will be contained in the northeast 1/3 of the 0.58 acre parcel. The parcel is not visible from the shoreline or the only public access to the valley, the Wailau Trail on the other side of the Valley.

The proposed structure will not be visible to hunters or Hihiwai pickers traveling upstream to the hunting areas.

\*These measures will minimize the impact of the proposed action on the activities in the surrounding areas of the Valley.

## 3-- Related Activities

The existing vegetation will be cut back by hand in the northeastern 1/3 of the 0.58 acre parcel to accommodate construction. There will be no grubbing, grading or tree removal. After completion of the construction, this area will be kept trimmed back as needed.

Only introduced and invasive species of vegetation are found on the parcel.

The remaining 2/3 of the parcel will remain "as is" and all activity will be at least 100' from Kahawaiiki Stream.

The trenching for the greywater Infiltrator chambers and the digging of the holes for the footings for the structure will be done by hand.

\*These measures will minimize the impact of the proposed action on the environment of the parcel.

## 4-- Proposed Action

The proposed action is:

A) Construction of a single story cedar wood 14'x14' structure containing a 8'x14' loft area, raised 4' above ground level for a total structure height of 18'8" above ground level. Attached to this structure will be a 14'x14' cedar wood deck also raised 4' above ground level. Both structure and deck will be supported on concrete footings. Non-reflective, and earth tone materials will be used.

\*The limited size of the structure will minimize the impact on the existing environment.

(Major Impacts and Proposed Mitigation Measures cont.)

4-- Proposed Action cont.

B) Adjacent to the structure, an underground greywater Infiltrator system approved by State of Hawaii Dept. of Health will be installed. (see attachments #3& #9)

On the deck will be a double size sink and free standing shower, both draining to the Infiltrator system.

Contained within the structure will be the SunMar Non-Electric self-composting waterless toilet. (see attachment #12 for specs)

All biodegradable waste will be composted on the parcel.

All non-biodegradable waste will be removed from the Valley to the County dump during the semi-annual re-supply trips.

The applicant intends to be the sole occupant after construction.

\*These measures will minimize the impact of human waste on the area environment.

C) Beside the deck at ground level will be the water catchment system consisting of two 55 gallon barrels attached to the gutters of the structure.

\*This will eliminate any impact on the Valley water resources.

D) Cooking facilities will consist of a Gaiam SunOven solar oven on the deck and a Colmen campstove with attachable oven, to be to be used on the deck or in the structure in inclement weather. (see attachment #12 for specs)

Lighting will be with solar rechargeable battery operated lanterns with a Accumanager20 solar battery charger. (see attachment #12 for specs)

\*These appliances will minimize the impact on the natural resources of the area environment.

E) Adjacent to the structure and the deck will be planted a small contained organic garden for personal consumption. Non-propogating varieties of vegetables will be grown.

\*This will prevent the introduction of alien plant species to the Valley.

F) As a vegetarian, the applicant/sole occupant will not be hunting or fishing.

\*This will minimize the impact on the animal species in the Valley.

5-- Historical/Cultural Activities

The determination of the DLNR State Historic Preservation Division based on the archeological survey conducted on the parcel in 2004, anticipates no significant impact on the historical aspects of the site. (see attachments #6)

\*As an extra mitigation measure, the construction will be limited to 1/3 of the 0.58 acre parcel and located away from the existing remnant stone loi walls. All other areas of the parcel will be left "as is".

(Major Impacts and Proposed Mitigation Measures cont.)

5-- Historical/Cultural Activities cont.

There are no observable traditional or customary Native Hawaiian practices being exercised in the area with the exception of subsistence hunting and fishing by local Moloka'i residents. Access for these activities will not be affected as the parcel is located away from known hunting trails. The structure and related activities will not be visible to those using the resources of Kahawaiiki Stream as the stream bed is approx. 6' below the level of the northeastern portion of the parcel where the proposed construction will be. (see attachment #15)

\*If it can be determined that Native Hawaiian rights are associated the parcel containing the proposed action, the applicant will allow access through the parcel to access these resources.

6-- Public Facilities and Services

There will be no impact on public facilities or infrastructure as none exist in the Valley at this time.

The lifestyle described in this assessment for the applicant eliminates the need for these facilities or infrastructure.

The applicant is familiar with the remoteness and limitations of the Valley from experience camping and visiting for extended periods there over the past 15 years.

\*The applicant is willing to accept these limitations and be responsible for her own health and safety.

\*The applicant will be acquiring a solar powered satellite phone for communication in the case of extreme emergency.

7-- Sustainability

The Proposed Action has been designed to minimize the use of energy and natural resources as well as reducing the impact on the physical environment of the area.

\*The size and scope of the Proposed Action will not compromise the sustainability of the Valley.

8-- Provisions for Future Use

The applicant, as fee owner of the parcel, is making provisions for the property to be placed in a conservation land trust at the time of her death.

No further major impacts are expected from the proposed action, therefore no further mitigations are considered necessary.

Alternatives To The Proposed Action

The only alternative to the proposed action would be "no action" which would deprive the applicant/owner of the reasonable use of her property.

ANTICIPATED DETERMINATION AND REASONS SUPPORTING ANTICIPATED DETERMINATION

Based on the information presented in this Final Environmental Assessment, a finding of No Significant Impact for the Proposed Action is anticipated subject to the public review provisions of Section 11-200-9.1 HAR.

All activity will be conducted in an environmentally sensitive manner and will not result in significant impact to the environmental, cultural, economic or social aspects of the area.

Environmental Impact Statement Rules (Chapter 200) of Title 11, Administrative Rules of the State Dept. of Health establish the following criteria for determining the effects of a Proposed Action on the environment. The relationships of these criteria to the Proposed Action are summarized as follows:

- 1) "Involves an irrevocable commitment to or loss of any natural or cultural resource."

The limited size and scope of the Proposed Action will not involve the loss or destruction of any natural resources.

The determination of the State Historic Preservation Division, based on the archeological survey conducted on the site, anticipates no significant impact. (see attachment #6)

Cultural activities in the surrounding area such as hunting, fishing and gathering will not be impacted. (see attachment #15)

- 2) "Curtails the range of beneficial uses of the environment."

All activity will be contained in 1/3 of the 0.58 acre parcel which is not visible from the shoreline or from the only public access, Wailau Trail, in the other side of the Valley.

Activities in the surrounding areas, subsistence hunting and fishing, camping and hiking, will not be impaired as the majority of these activities take place in other areas of the Valley.

- 3) "Conflicts with the long term environmental policies of the State."

The State Land Use designation of the area of Proposed Action is Conservation, Resource Subzone.

"The objective of the Resource Subzone is to develop, with proper management, areas to ensure sustained use of the natural resources of those areas."

The Proposed Action is an identified land use as allowed in Conservation District Guidelines for a Resource Subzone per HAR Title 13 Chapter 5 Subchapter 3 S13-5-24 R-8:

"A Single Family Residence that conforms to the design standards as outlined in this chapter."

(CONTINUED)

## (Anticipated Determination and Reasons For Anticipated Determination cont.)

Single Family Residential Standards (Sept. 9, 2005)

Standard	Proposed Action
Minimum Lot Size- 10,000 sq. ft.	0.58 acre (approx. 33,000 sq. ft.)
Minimum Set back- lots of 10,000 sq. ft. to 1 acre Front-15' Sides-15' Back -15'	Front-215' Sides-40'/50' Back-80'
Maximum Developable Area- lots 10,000 sq. ft. to 1 acre 3,500 sq. ft. total floor space	Main structure-196' Loft area 112' Deck- 196' Total= 504 sq. ft.
Maximum Height- 25"	Height- 18'8"
Compatibility Provisions- Landscaping- screening of structures	No grubbing, grading or tree removal. Vegetation trimmed back by hand in area of structure, all other areas left "as is"
Paint/surface of structure-earth tones or compatible with surroundings.	Wooden Cedar structures & neutral color roofing
DOH wastewater/water collection systems	DOH approved greywater Infiltrator, catchment, self composting toilet
Minimum grading/contouring -	No grading/contouring
All structures connected	Main structure and deck attached.
Conformance to applicable building and grading codes and shoreline setback	Conformes to Maui County building codes, no grading to be done, not a shoreline parcel
One kitchen	One kitchen- solar oven propane stove sink on deck

## 4) "Substantially affects the economic or social welfare of the community."

The economic welfare of the community will not be impacted as there are no public services or facilities and no infrastructure in the Wailau Valley. None will be required by the applicant.

The limited size and scope of the Proposed Action will not cause any impacts on the social welfare of the community.

(Anticipated Determination and Reasons For Anticipated Determination cont.)

5)"Substantially affect public health."

All activity will be contained on 1/3 of the 0.58 acre parcel. All sanitation facilities contained within the Proposed Action have been reviewed and approved by Hawaii State Department of Health and will be installed and inspected by a licensed greywater engineer.

6)"Involves substantial secondary impacts."

There are no secondary or cumulative impacts anticipated from the Proposed Action, and it does not involve a commitment for a larger action.

The Special Management Area Minor Permit and Conservation District Use Permit requirements and processes are complex and expensive which will deter many land owners from building on their properties.

The logistics and expense of constructing in such a remote, hard to access area will also limit the number of future projects in the Valley.

Furthermore, the majority of the parcels large enough to meet CDU standards in the Valley have multiple owners in family estates or trusts.

7)"Involves a substantial degradation of environmental quality."

The environmental quality of the area will not be affected due to the limited size and scope of the Proposed Action. There will be no grubbing, grading or tree removal and all cutback of vegetation will be done by hand as well as being limited to the 1/3 of the 0.58 acre parcel.

8)"Substantially affects a rare, threatened or endangered species, or its habitat."

There are no threatened or endangered plant species in the area per U.S. Fish and Wildlife report in 2000. (attachment#7)

All mammals, reptiles, birds or insects observed on the parcel are introduced species.

The stream life will not be affected by the Proposed Action as all activity will be at least 100' from the edge of the stream bank.

9)"Detrimentially affects air or water quality or ambient noise levels."

All activity will be confined to 1/3 of the 0.58 acre parcel at least 100' from the stream. Catchment water system will eliminate impact on area water tables.

All activity during construction will be done by hand which will lessen the noise level. Noise levels of sole occupation will be minimal.

The use of solar for cooking and lighting will lessen air pollution by the applicant/sole occupant when construction is completed.

(Anticipated Determination and Reasons For Anticipated Determination cont.)

- 10) "Affectior is likely to suffer damage by being located in an environmentally sensitive area."

The elevations in the area of Kahawaiiki Stream causes any rise in stream level to flow to the west, away from the area of Proposed Action. There is a 9' rise in elevation from the stream bed to the proposed construction site and the presence of a partially intact 'awai 1'-2' deep running north to south through the parcel between the site and the stream prevents the site from flooding. This has been observed during severe flash flooding in the Valley in 2000 and 2005.

- 11) "Substantially affects scenic vistas and view planes."

The area of the Proposed Action is not visible from the shoreline or from the only public access, Wailau Trail, in the other side of the Valley.

The proposed structure will not be visible to hunters and hihiwai pickers traveling upstream to the hunting areas due to the 9' rise in elevation from the stream bed and the "as is" condition of the vegetation on the western area of the parcel.

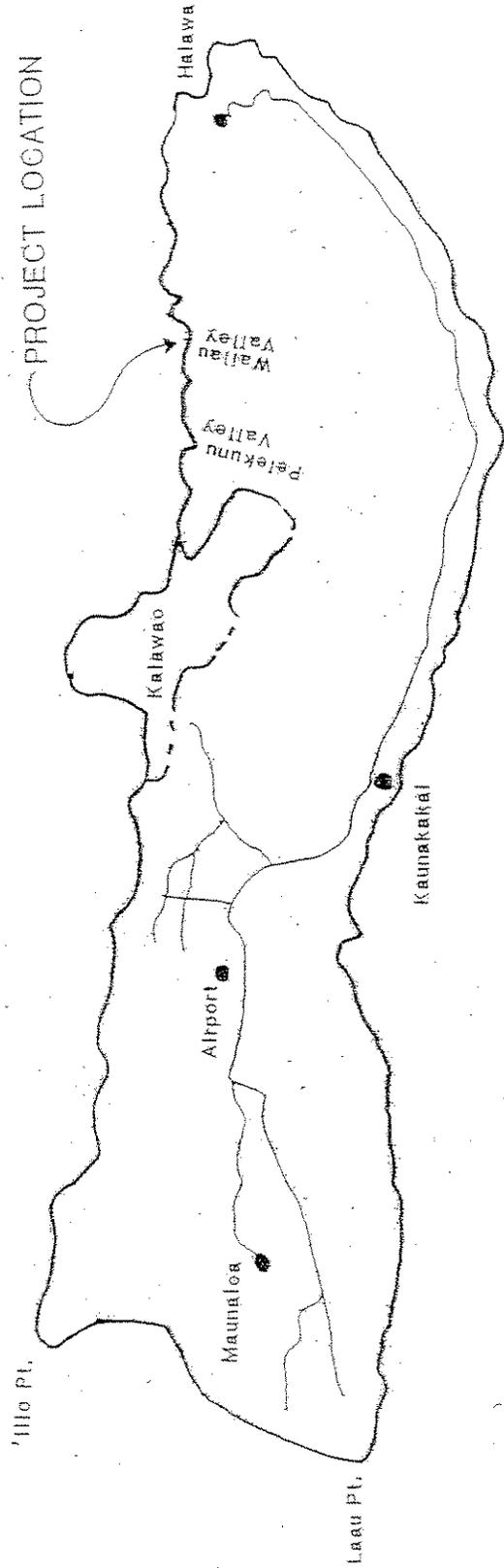
- 12) "Requires substantial energy consumption."

The proposed action will not use heavy equipment, all cut back of vegetation, all digging and trenching, will be done by hand.

The completed Single Family Residence with the applicant as sole occupant will use solar power for lighting and the majority of the cooking with propane as backup. Water is by catchment and a non-electric self composting toilet will be installed.

No other energy consumption will be associated with the Proposed Action.

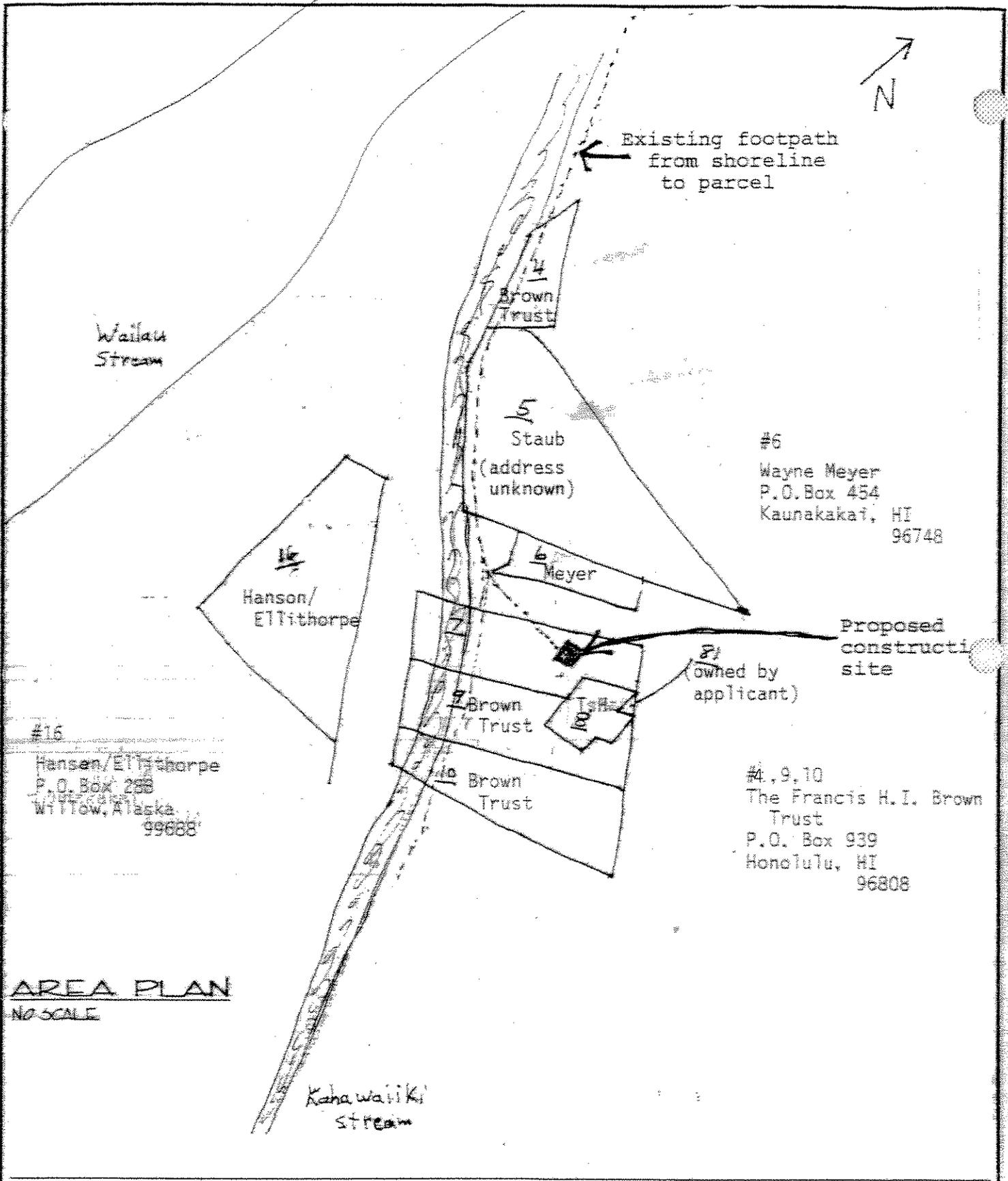
LOCATION MAP  
NO SCALE



RESIDENCE FOR LINDA E. DUNN  
WAILAU VALLEY, HALAWA, MOLOKAI  
TMK: 2-5-9-005.007







#6  
 Wayne Meyer  
 P.O. Box 454  
 Kaunakakai, HI  
 96748

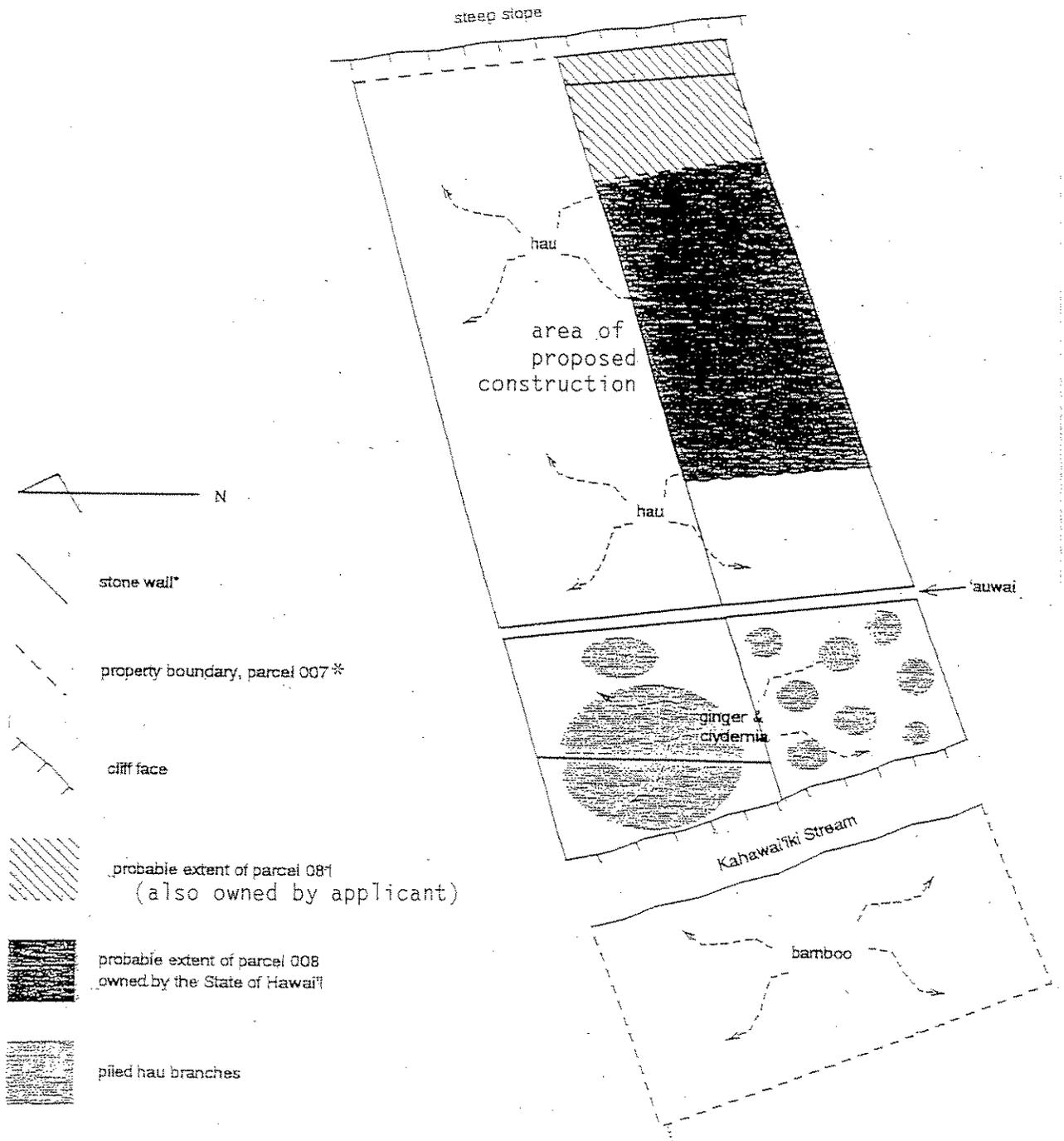
#16  
 Hansen/Elithorpe  
 P.O. Box 288  
 Wittow, Alaska  
 99688

#4, 9, 10  
 The Francis H.I. Brown  
 Trust  
 P.O. Box 939  
 Honolulu, HI  
 96808

AREA PLAN  
 NO SCALE

RESIDENCE FOR LINDA E. DUNN  
 WAILAU VALLEY, HALAIVA MOLOKAI  
 T.M.K. 2-5-9-005.007

VEGETATION MAP

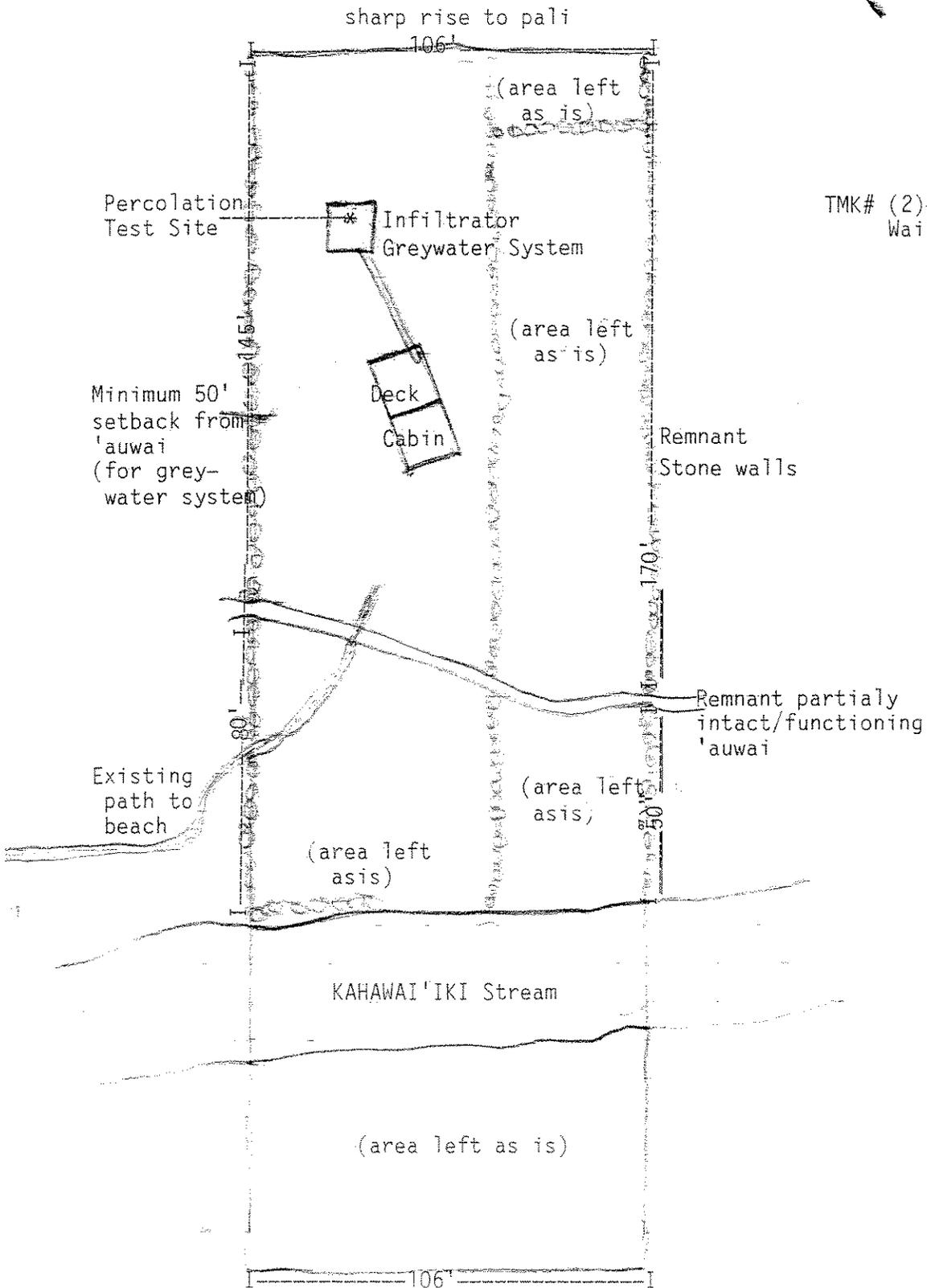


\*northernmost and southernmost walls also mark property boundary of parcel 007

TMK (2)-5-09-005:007 Linda Dunn

Wailau, Moloka'i

CONSTRUCTION PLAN



TMK# (2)-5-9-5:007  
Wailau, Moloka'i

TITLE

# TITLE OF WORK

STATE OF HAWAII

DEPT. OF LAND

AND NATURAL RESOURCES

BOARD OF COMMISSIONERS

TO QUIET LAND TITLES

NATIVE REGISTER

VOL. 1 - 9

TRANSLATED BY

FRANCES FRAZIER

ORIGINAL IN HAWAII STATE ARCHIVES

MICROFILMED BY  
HAWAII STATE ARCHIVES  
1976

Translation:

No. 10869 Puhili

I, the one whose name is below, hereby state to you, the Commissioners to Quiet Land Titles, my claim for my mo'o in the 'Ili of Keiu, Ahupua'a of Halawa, Island of Molokai. Its name is Kiaoao and there are some lo'is and kula.

Page 317

The lo'is are 52 fathoms long by 15 fathoms wide. I also have a kula which is 25 fathoms by 52 fathoms. My house lot is 16 fathoms by 8 fathoms. My mo'o is bounded by Kapaanie on the east and by Kalaikai on the southwest. I have occupied this mo'o for one year. The present konohiki is Haluku. There are two of us in our mo'o.

PUHILI  
HALUKU

10869 Puhili: (Original text from Native Register Volume 6)

O wau o ka mea ma na ka inoa  
malalo. He hui aku nei au ia oukou  
e ka hui Hoona Kuleana eina i kou  
wahi Kuleana, he wahi moe aina Kou  
i loko o ka 'ili aina o Keiu ma ke  
Ahupuaa o Halawa, o Kiaoao kona  
ino ma ka Mokupuni o Molokai.  
he mau wahi lo'i a me kona kula

O ka lo'i o na lo'i a me ka kula. Ka lo'i  
52 anana, ka kula 15 anana, he wahi kula  
hekaheka o, ka lo'i 25 anana, ka kula 52 ana-  
na. He mau o kuu wahi pahale o ka lo'i  
16 anana, ka kula 8 anana eia Kou wahi ku-  
leana. O na aina e 'ili ana ma Kala aoao  
Keia aoao, Kou moe aina o Kapaanie ma  
ka Hekeia, o Kalaikai ma ka Konohiki  
hema, eia ma aina e 'ili ana ma na ao-  
ao o Kou moe aina. Hekaheka hekaheka eia  
i moe ai ma Kala aina, o Hekeia he kona  
o 'u i ka'u mau e moe nei.

Olua maua i ka maua moe aina

o ka 'Ili

Haluku

*T. S. Dye & Colleagues, Archaeologists, Inc.*

735 Bishop St., Suite 315, Honolulu, Hawai'i 96813

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Archaeological Inventory Survey of  
TMK:(2)-5-9-005:007 and 081 in Wailau Valley,  
Hālawā Ahupua'a, Ko'olau District, Island of  
Moloka'i\*

Windy K. McElroy, M.A.†

August 25, 2004

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\*Prepared for Linda Dunn, 2411 Makiki Heights Drive, Honolulu, Hawaii 96822.

†Special thanks to Linda Dunn for making this project possible and for her gracious hospitality in Wailau Valley. *Mahalo nui loa* to Mark McCoy for his hard work and sharp thinking during fieldwork. I would also like to thank Glenn Davis, Walter Naki, and Yama for help with logistics on Moloka'i.

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### Abstract

Archaeological inventory survey was conducted on two small parcels in Wailau Valley, Moloka'i Island located within the Wailau Agricultural Complex, site 50-60-04-272. Part of this *lo'i* system depicted on a 1915 map (Podmore 1915) encompasses both parcels. The terrace walls and 'auwai depicted on the map were relocated and described. Test excavations were carried out on the larger of the two parcels in an area where a small cabin will be constructed. Excavation revealed an earlier phase of *lo'i* construction beneath the terrace facing walls visible on the surface. Charcoal was obtained from beneath the foundation stones of a surface wall, dating its construction to sometime after A.D. 1635. The lower wall was built sometime before A.D. 1724. Inventory survey results support the determinations made during the statewide inventory of historic places in 1974 that site 50-60-04-272 is significant for its research potential and as a good example of a wetland taro system.

## 1 Introduction

At the request of Linda Dunn, *T. S. Dye & Colleagues, Archaeologists, Inc.* conducted an archaeological inventory for a proposed undertaking at TMK:(2)-5-9-005:007 and 081 in Wailau Valley, Ko'olau District, Moloka'i Island. The proposed undertaking will involve the construction of a single-family residence, in the form of a small cabin, with an associated garden and self-composting toilet on Parcel 007. Footings for the cabin will extend approximately 18 in. below the surface. The primary focus of the project was on the discovery and appropriate treatment of historic properties potentially affected by the construction.

undertaking

project

This report is drafted to meet the requirements and standards of state historic preservation law. These include Chapter 6e of the Hawai'i Revised Statutes, and the State Historic Preservation Division's draft *Rules Governing Standards for Archaeological Monitoring Studies and Reports* (§13-279).

The report begins with a description of the project area. The next section presents an historical overview of land use and archaeology in Wailau Valley and Hālawā *ahupua'a*. Following this, survey methods are delineated and the results of the archaeological inventory survey are presented. Project results are summarized and significance determinations and recommendations are made in the final section.

Marginal notes call out the first occurrence of words that appear in the glossary.

### 1.1 Project Area

The project is located in Wailau Valley on the windward side of Moloka'i Island (fig. 1). The majority of Wailau Valley is part of Wailau *ahupua'a*, but a small strip of land on the east side of the valley is part of the neighboring Hālawā *ahupua'a*. The project lies within this eastern portion of the valley in Hālawā *ahupua'a*. It is unusual for a small strip of land from one *ahupua'a* to encroach into the valley of another, as *ahupua'a* boundaries tend to follow natural topographic breaks.

*ahupua'a*

The survey area includes Parcel 007, a 0.68 ac. property, and Parcel 081, a 0.01 ac. piece of land, both owned by Linda Dunn. Parcel 081 lies adjacent to Parcel 007 on the south (fig. 2). Parcel 008, owned by the state, lies between the two parcels on the south. Construction will occur only on Parcel 007, but both properties were intensively surveyed. The parcels are located on the east side of the valley, approximately 350 ft. from the coast. The survey area lies within the Wailau Agricultural Complex, State Inventory of Historic Places Site 50-60-04-272, a 2,312 ac. area where *lo'i*, trails, burials, and habitation and religious sites occur. Several *lo'i* terraces are located in the survey area, but the proposed undertaking will be constructed entirely within the *lo'i* walls to minimize adverse effects to the stonework.

### 1.2 Environment

The surveyed parcels are relatively flat pieces of land bounded by a steep slope on the east and adjacent parcels on the north, south, and west. Kahawai'iki Stream cuts through the western portion of Parcel 007, and there is a 6 ft. drop in elevation where the stream occurs. The parcel continues on the other side of the stream in a lowlying former

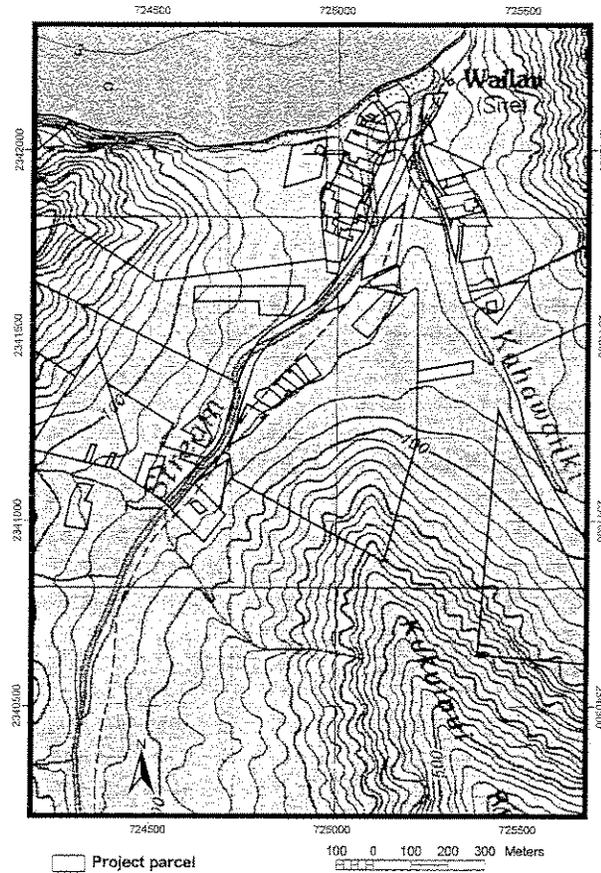


Figure 1. Project area location on a copy of the USGS topographic map.

bamboo  
*hau*  
 ginger  
 clidemia

stream bed. A dense thicket of bamboo now blankets this area west of the stream. The rest of the survey area is heavily overgrown with *hau*, ginger, and clidemia.

Soils in the area consist of rough mountainous land of the Amalu-Olokui association that includes Kawaihapai Stony Clay Loam near the coast and along Wailau and Kahawai'iki Streams, Colluvial Land along the upper reaches of Wailau and Kahawai'iki Streams and to the west of Wailau Stream, and Rough Mountainous Land on the slopes and ridges bordering the streams (Foote et al. 1972). Rainfall in the valley is generally heavy, ranging from 60–120 in. per year (Juvik and Juvik 1998).

The remains of five or six *lo'i* terraces encompass the entire survey area, and additional terraces occur to the north, south, and west. The terraces tend to be slightly higher in elevation to the south, so that the general impression is that the terraces form steps which get increasingly lower to the north. The terrace located on Parcel 081 is small and elevated; it is unclear whether this terrace is part of the *lo'i* cultivation system

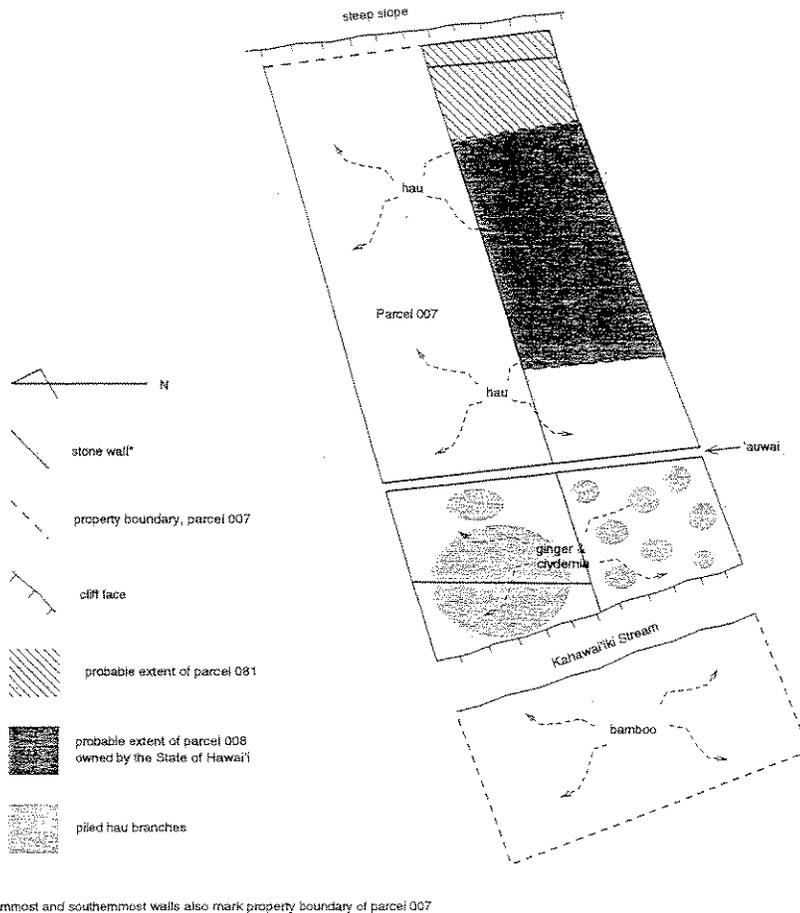


Figure 2. Schematic of survey area, not to scale.

or served another function. The ground surface within each terrace is flat and relatively free of stones. These areas are muddy and prone to flooding. An 'auwai runs through the middle of the property on the east side of Kahawai'iki Stream.

### 1.3 Background Research

Wailau Valley was known for its extensive irrigated agriculture system, with taro terraces extending up the valley sides, in the lowlands, and to the backs of the valleys produced by Wailau and Kahawai'iki Streams (Handy and Handy 1972:516). Handy and Handy comment on the exceptional amount of taro produced at Wailau:

Wailau produced far more taro than could be consumed locally, so that quantities of *pa'i 'ai* (hard *poi*) were shipped by boat to Kalaupapa and other localities on Molokai in early post-missionary days. The *pa'i 'ai* was

wrapped in *ti* leaves, and it is said that donkeys used to eat the packages—perhaps the only record of donkeys (“Kona nightingales”) being fed on *poi*! (Handy and Handy 1972:519).

Although *poi* was a staple of the traditional Hawaiian diet, it was also considered a delicacy, thus the feeding of *poi* to donkeys attests to the overabundance of taro that must have been grown at Wailau. For unknown reasons, taro production ceased in 1931, and the *lo'i* of Wailau were abandoned (Handy and Handy 1972:516).

The valley was also known as an area of *wauke* cultivation (Hitchcock 1836 in Summers 1971:176). Two types of specialized *kapa* were manufactured in Wailau, the *pa'ikukui* and *mahunali'i kapa* (Kanepuu 1867 in Summers 1971:176). *Pa'ikukui kapa* was a pale yellow cloth dyed with liquid from the bark of the *kukui* tree (Brigham 1911 and Pukui and Elbert 1957 in Summers 1971:176). *Mahunali'i kapa* was a thin, fine-scented cloth dyed with the bark of the *noni* tree (Brigham 1911 and Pukui and Elbert 1957 in Summers 1971:176). It was a *kapa* cloth reserved for *ali'i* use. The *kapa* was oiled and used in sorcery or was used to cover idols.

More than 60 land claims were awarded in Wailau Valley during the Great Mahele of 1848. The property in the survey area was awarded to Puhili (No. 10869), who states that the land is named Kiaoao and is located in the 'ili of Keiu. He mentions *lo'i*, *kula*, and a house lot, although the *kula* lands were not recognized on the survey.

The *lo'is* are 52 fathoms long by 15 fathoms wide. I also have a *kula* which is 25 fathoms by 52 fathoms. My house lot is 16 fathoms by 8 fathoms. My *mo'o* is bounded by Kapaanie on the east and by Kalaikai on the southwest. I have occupied this *mo'o* for one year. The present Konohiki is Haluku. There are two of us in our *mo'o*.

PUHILI

HALUKU (Land Board 1851:317).

Due to its inaccessibility, references to Wailau Valley are scarce in the historic literature. In 1854, French biologist Jules Remy traveled by row boat from Hālawā Valley to Pelekunu Valley, passing Wailau on the way. Unfortunately Remy was not able to stop at Wailau because of dangerous surf. He provides a brief description of the coastline:

Have arrived opposite the picturesque valley of Wailau and the village of the same name, where I had planned to disembark, the fury of breakers stopped me and made me go beyond. From there one could see a somewhat large extent of jagged and sinuous shore, along with the plain of Kalaupapa, forming a point detached from the heights, and one could see in the ocean large rocks resembling small islands (Remy 1893:13).

More than a century later, Catherine Summers 1971 compiled all of the archaeological information available for the island of Moloka'i. Much of this information was obtained from unpublished manuscripts. The locations and descriptions of archaeological sites in Wailau are based largely on the work of J.F.G. Stokes of the B.P. Bishop Museum, who surveyed the island of Moloka'i in 1909.

*wauke*

*kapa*

*kukui*

*noni*

*kapu*

*ali'i*

'*ili*

*kula*

*mo'o*

Two *pu'uhonua*, a number of *heiau*, and two trails are described for Wailau Valley (Summers 1971:134–136, 175–178). One of the *pu'uhonua* is named Pu'uali'i and is located roughly 2,500 ft. from the coast on the west side of Wailau Stream. It was recorded as a terrace 65 ft. long and 30 ft. wide, including a 6 ft. wide bench. The other *pu'uhonua* is named Oloku'i. It is located on a hill north of Pelekunu and may have also functioned as a fortress. Oloku'i was also an area for capturing 'ua'u birds for *ali'i* consumption.

*pu'uhonua*

'ua'u

Four *heiau* were described for Wailau. Kanane Heiau is located on the southern slope of the west side of the valley. It was described as a partly demolished platform with a 70 ft. long wall, 8.5 ft. high in places, and 45 ft. wide. Kapala'alaea Heiau is located 4,500 ft. from the coast, on the east side of Wailau Stream. Architecturally, it was only a small terrace, but Hawaiian informants indicated that the site was used as a preparation area for *iwi* of the *ali'i* before burial. Waipulea and Kupukapuakea Heiau were believed to be in Wailau Valley but were never relocated.

*iwi*

Two ancient foot trails were described for the valley (Summers 1971:134–136, 178). Wailau trail was the only over-land route between Wailau Valley and the Kona side of the island. The trail begins behind 'Ili'iliopae Heiau and continues past numerous springs, up and down steep cliffs, and ends in Wailau Valley. George Kane, a native of Kalalau, Kaua'i traversed the trail in 1912 with guide James Naki. Kane described the treacherous five-and-a-half hour journey to Wailau:

At 9:30 a.m. I left 'Ili'iliopoe [sic] heiau with my guide . . . We then reached the top of the hill called Haleone. From this spot you could see clearly the harbor of Mapulehu on the western side of this small hill. The harbor of Puna'ula is on the eastern side and when you look down at Puko'o it is beautiful . . . I left there with my patient guide and reached Pu'o'akai, a spring. We drank some water there and found it refreshing and cool because we were climbing straight up the mountain side through 'ie vines and other creeping plants of the forest.

'ie

We left this place and arrived at the first gate. This is a gate on the trail itself, to go through and out on the other side of the old trail. One has to creep through it. We left there and came to Kaunuakea. There is a watchman there . . . We left there and arrived at Kilohana, the summit of the mountain separating Puko'o and Wailau, at 11:20 a.m. At this place I looked about to observe the contour of the land but saw nothing except a deep hollow surrounding me on all sides, and rows of forest trees all about me . . . We continued on and arrived at Pohakukuo. This is a stone upon which visitors placed pebbles, and then called down to the natives a mile away and the voice could be heard below. Then the natives knew that there was a visitor. From here I looked at the root-matted trail of Wailau and saw how steep it was when one had looked down and then up. The hillside went straight up and one had to throw back the head to look.

We left Pohakukuo and found we were on the descending trail . . . We . . . arrived at Kapilipohaku. This is a steep rock like the hillside and one has to pass by it sideways. This is a stone that takes away a wife of a husband,

because this is where the natives made the strangers climb from Puko'o or from Wailau. . . . We then continued on to Malama. This is a level place and the trail leads through an 'ōhi'a grove. After leaving Malama we came to Keauhou, a taro growing place. From this place on, I saw taro leaves until I reached the shore. After Keauhou, we arrived at the village of Wailau at 3:00 p.m. (Kane 1912 in Summers 1971:134-136).

A secondary trail that splits from Wailau trail is also described (Summers 1971:178). This departed from the Wailau trail at Waiakeakua Stream, continued west to Pulena Stream, crossed Pohakaunoho Ridge, and ended in Pelekunu Valley. A shelter, named Malihini Cave, was located three-quarters of the way from Wailau. The cave functioned as a resting place for travelers, and was outfitted with *lau hala* mats for sleeping and poi pounders and scrapers for travelers to prepare food. In the 1950s it was reported that the bank which supported the cave eroded into the stream, obliterating any remains of the shelter.

Three of the archaeological sites documented by Summers (1971) were relocated by Reeve (1973) on a trail-maintenance expedition sponsored by the Sierra Club. Reeve visited Pu'uali'i Pu'u honua, Kananae Heiau, and Kapala'alaea Heiau but he was only able to spend time at Pu'u ali'i. The site consisted of a 6.5 ft. high terrace associated with multiple small enclosures. Reeve produced a rough field sketch (Reeve 1973:20) but lacked the equipment to clear and map the site in detail. Kananae and Kapala'alaea Heiau were in the same condition as described by John F. G. Stokes in the early twentieth century (Summers 1971). In addition to relocating the three sites, Reeve discovered a bottle cache beneath a *kukui* tree 40 ft. east of the trail and 15 minutes from the beach. Lacking excavation equipment, Reeve used his bare hands and a stick to remove 18 glass bottles from a subsurface deposit. The bottles dated to the late nineteenth century, and most were alcoholic beverage containers. Because of the lack of domestic items in the deposit, the site was interpreted as a traveler's resting place, and not a dump for a historic residence. A thorough archaeological survey of the valley was recommended.

The statewide inventory of historic places recorded the Wailau Agricultural Complex as site 50-60-04-272 in 1974. The Hawaii Register of Historic Places Feature Description Form, filled out by Robert D. Connolly III, describes the site as follows:

The site was named Wailau Agricultural Complex by the Bishop Museum Statewide Inventory Team. The site area includes approximately 936 hectares on the floor and sides of Wailau Valley . . .

The site itself consists of an extensive wet-land taro agricultural system with an associated *heiau*. Also in the valley are signs of what were probably historic housesites, as evidenced by the mango tree, many other exotic plants, and historic wastes, but no structural evidence of a housesite was found near any of these archaeological indicators.

The taro system is quite extensive and impressive. It compares favorably to the systems found in Pelekunu Valley to the W and Halawa Valley to the E on Molokai. The terraces of this system possess the same degree of variety as those of Halawa and Pelekunu, varying from one stone to more than 2 meters in height . . .

'ōhi'a

lau hala

The other feature located by the Inventory Team was the Pu'uhonua of Pu'uali'i . . . The Inventory Team did not have time to map and record the numerous individual terraces or the *pu'uhonua*, as that task would take at least a month in the field. Terraces were observed from the mouth of the valley extending continuously back into the valley as far as the team was able to travel during the day used to record this area. Many of the sites recorded by Summers (1971:175–178) could not be relocated because of sketchy location data.

No prehistoric artifacts were found; historic artifacts included bottles and a piece of chain, but they were not found near any recognizable house-site . . .

The most important archaeological aspects of Wailau Valley are its isolation, distance from developed areas, and its consequent undisturbed state—all of the physical aspects of a wet-taro agricultural society, unchanged since the valley was abandoned early in the 20th century . . .

Connolly also evaluated the significance of the site, although the significance categories he used in 1974 differ somewhat from the categories later devised by SHPD. Given the choices “good,” “moderate,” and “poor” in the Register Form field “Importance as Example of Site Type,” Connolly chose “good.” He made a similar choice for “Research Potential.” Thus, in modern terms, the site was evaluated as significant for criteria *c* and *d*.

More archaeological work has been completed in the Hālawā Valley portion of Hālawā *ahupua'a*, which lies to the east of the Wailau Valley portion of Hālawā *ahupua'a*. An extensive archaeological research program was conducted in Hālawā Valley in the 1970s (Riley 1973; Kirch and Kelly 1975). This was a settlement pattern study that focused on the south side of the valley. Excavations were conducted in the *'ili* of Kapana, Kaio, Pua'alaulau, and two sites on the coastal flat. Residential, agricultural, ceremonial, and midden sites were excavated. <sup>14</sup>C and volcanic glass hydration rind dates indicated early nucleated settlement at the coast as early as A.D. 650, with dispersed settlement and cultivation of inland areas occurring later, from ca. A.D. 1250–1750. A wide array of artifacts was recovered, including fishhooks and fishhook manufacturing implements, ornaments, weapons, adzes and other tools, a large assemblage of basalt and volcanic glass flakes, and a variety of food remains. Excavations of irrigated agricultural fields, similar to those found in Wailau Valley indicated two horizons of agricultural use (Kirch and Kelly 1975:113, 114). The most recent horizon was defined by surface remains associated with irrigated taro agriculture. An earlier horizon indicative of shifting cultivation was found below the surface remains. A dissertation provides a detailed report on the excavations of the agricultural complexes (Riley 1973).

## 2 Methods

Archaeological inventory survey, photography, and test excavations were carried out between 10 and 12 June 2004. Thomas Dye, Ph.D. served as principal investigator, while fieldwork was conducted by archaeologist Windy McElroy, volunteer archaeolo-

gist Mark McCoy, and landowner Linda Dunn. One hundred percent of the survey area was systematically surveyed on foot, with archaeologists spaced 10 m apart, visually inspecting the ground surface for archaeological remains. The survey was hindered by dense vegetation in most of the project area. Bamboo, *hau*, ginger, and clidemia obscured the ground surface and hindered movement throughout the survey. In addition, piles of decaying *hau* were encountered in a strip across the center of the survey area, between the 'auwai and Kahawai'iki Stream. It was nearly impossible to see the ground surface beneath these piles.

An existing survey map (Podmore 1915) was used in place of the requirement to map the surface architecture. Both cultural and physical features are depicted on the map. These include *lo'i* boundaries, 'auwai, streams, and hillsides (fig. 3). Field observations indicate that the map is of high quality, thus no additional mapping was conducted. The control points engraved in stones and depicted on the map have been located (fig. 4), and these were used to verify the accuracy of the map. Additional data regarding *lo'i* wall construction were gathered to augment the existing map. Despite the dense vegetation, every wall depicted on the map was located. No additional archaeological sites or features were observed. A similar map was utilized as a basis for field survey for the large-scale settlement pattern study of Hālawā Valley (Kirch and Kelly 1975). The map was produced in the same year and by the same surveyor as the map used here. The map was confirmed to be reasonably accurate for the Hālawā Valley project, although in Hālawā Valley it was noted that many of the smaller archaeological features were not depicted.

Two test units were excavated to detect subsurface deposits or cultural material. One unit was placed in the middle of the *lo'i* in the area proposed for construction of the cabin. Another was placed over one of the *lo'i* walls to obtain datable material from beneath the wall. Both test units were excavated by hand with trowel and whisk broom. All sediment was screened through 0.125 in. mesh and sediment characteristics were described using Munsell soil color charts and a sediment texture flowchart (Thien 1979). Both test units were backfilled after excavation. Cultural material was assigned to contexts in the field according to vertical and horizontal position. Collected materials were sorted in the laboratory by material type and described, weighed, measured, and photographed where appropriate. One sample of charcoal was identified by Gail Murakami of the Wood Identification Laboratory of International Archaeological Research Institute, Inc. and a portion of the same sample was submitted to Beta-Analytic, Inc. for <sup>14</sup>C dating (section 5).

### 3 Field Survey Results

Archaeological remains within the survey area consist of terrace walls and an 'auwai. These are part of the Wailāu Agricultural Complex, which bears the State Inventory of Historic Places site number 50-60-04-272. New site numbers were not given to the individual components of this site that are documented here. Feature letters *a* through *g* are designated to aid in the description of these structures.

*Lo'i* are laid out in a stepped pattern, higher on the south and descending toward the north. The steps descend on the north side of each *lo'i* so that the ground surface

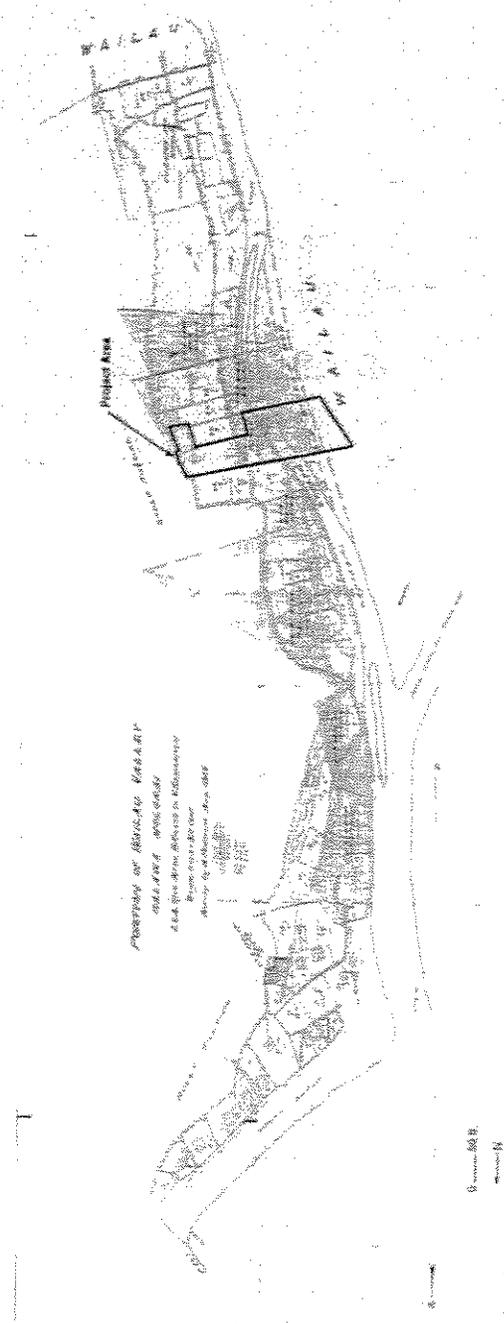


Figure 3. Survey map (Podmore 1915) annotated to show project area.

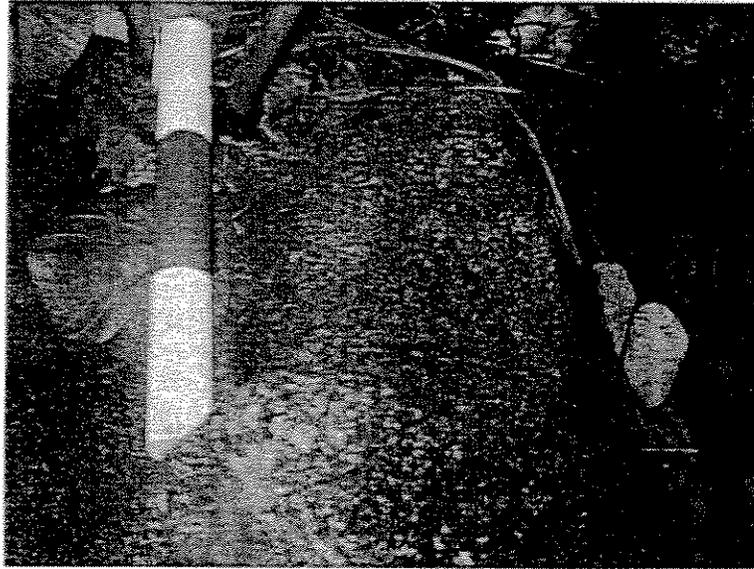


Figure 4. Survey control point engraved in stone and depicted on map (Podmore 1915). The scale is marked in 10 cm increments.

within an individual terrace is flat. One *'auwai*, designated feature 50-60-04-272-a and six terraces, designated features 50-60-04-272-b through -g occur in the survey area (fig. 5). No archaeological features are present in the survey area to the west of Kahawai'iki Stream. This was expected because the stream once meandered through this area (Podmore 1915).

Terraces 272-b, -c, and -e lie between the stream and the *'auwai*. The land area of terraces 272-b and -e has diminished significantly since the 1915 map was drawn Podmore (1915). The 1915 map depicts the south end of the wall that divides terraces 272-b and 272-c approximately 4 m from the stream cut, but today it lies only 1 m from the stream cut. In addition, a wall and a stone with a reference mark are depicted along the stream cut but have since eroded into the stream. The wall is no longer present in the survey area but can be seen along the bank to the north. The stone bearing the triangular reference mark was discovered in the stream, apparently toppled from the bank above.

The walls of terraces 272-b, -c, and -e are in fair condition. The south wall of terrace 272-e is in the best condition, although all walls are thoroughly overgrown. The wall that divides terraces 272-b and -c is almost completely obscured by decaying piles of cut *hau*. The best preserved wall sections are composed of small stones of basalt stacked 3-4 courses to a height of 60 cm (fig. 6). A single alignment of stones is visible, typically 40 cm in width. In some areas only one course of the wall is visible. The eastern boundary for terraces 272-c and -e is the *'auwai*. An examination of the surface structural remains was insufficient to determine the construction sequence of the terraces and *'auwai*.

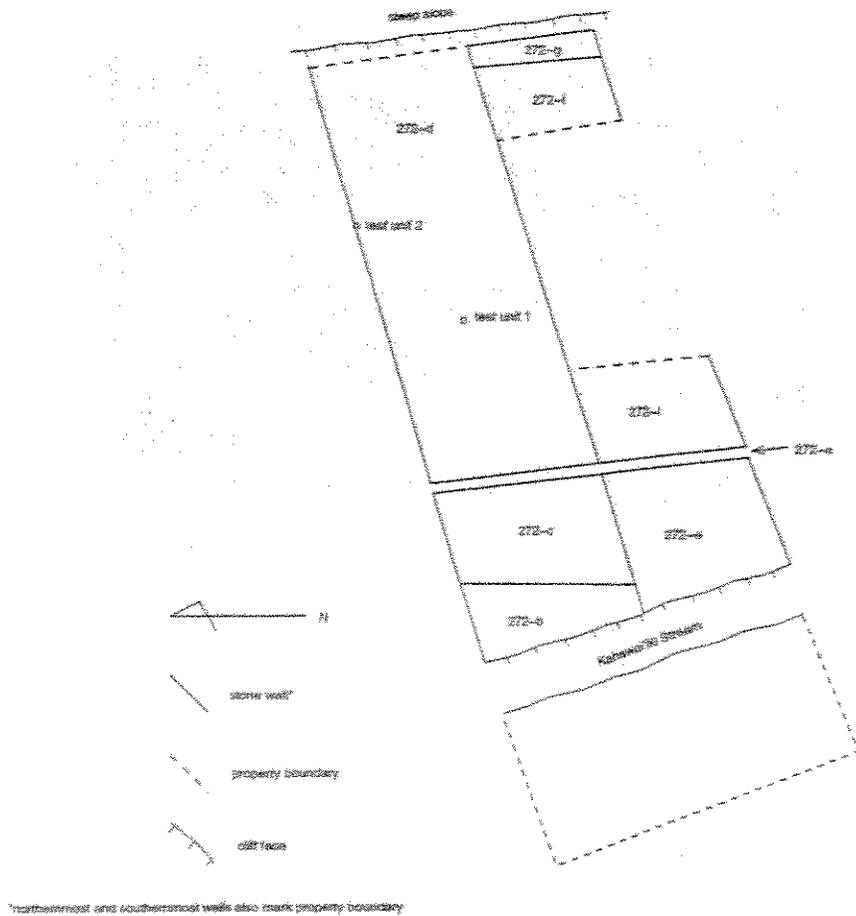


Figure 5. Schematic of survey area, not to scale. Archaeological features and test units are depicted.

Feature 272-a is the *'auwai*. It runs between terraces 272-c and -d and 272-e and -f and continues north and south out of the project area. According to the historic map (Podmore 1915), the *'auwai* continues up the valley to the south and toward the coast to the north to water other *lo'i* in these areas. The *'auwai* ends just south of a church that once sat near the beach. The *'auwai* appears to run off the map to the south, thus its point of origin is unknown. However, the map depicts the entire Wailau Valley section of Hālawā *ahupua'a*, thus it is likely that the *'auwai* starts in Wailau *ahupua'a* to the west. It is unusual for an *'auwai* to begin in one *ahupua'a* and feed the *lo'i* of another, because each *ahupua'a* was directed by a different land manager. This situation suggests close ties between the two *ahupua'a* of Wailau Valley.

In the project area, the *'auwai* does not run a perfectly straight course, but snakes slightly in several places from approximately 150° to 160°. The inner sides of the



Figure 6. Section of wall that divides terraces 272-c and 272-e, facing south. The scale is marked in 10 cm increments.

'*auwai* are stone lined with up to four courses of stacked and piled basalt and the bottom has filled in with mud (fig. 7). The '*auwai* is generally 60 cm deep, 1.3 m wide and exhibits a U-shaped cross-section. This feature is in fair condition. It is heavily overgrown and its stone lining has tumbled in places, but the general shape and course of the '*auwai* are prominent. Residents claim that during periods of heavy rain, the '*auwai* of Wailau are still functional (Linda Dunn, pers. com. 2004).

Terrace 272-d is adjacent to the '*auwai* to the east. Its north and south walls extend to the base of a steep slope, where it lacks an east wall. The north and south walls are similar in construction to the walls of the terraces described above. The southern wall is typically in better condition than the northern wall, although well preserved sections of the northern wall exist. A few sections of the northern wall are low and wide from stones that have tumbled, although the feature is generally in fair condition. The undertaking will occur entirely within this terrace. Two test units were placed here, one in the center of the terrace and another against its north wall (section 4).

Terrace 272-f is adjacent to terrace 272-d on the south. The '*auwai* makes up the western boundary of this terrace, and another smaller terrace, feature 272-g, lies to the east. Neighboring parcel TMK:(2)-5-9-005:008 occupies the central portion of the terrace, leaving only the east and west ends within the project area. The property boundary is not marked by walls (fig. 5, pg. 13). The north and south walls of the terrace are generally in good condition, although heavily overgrown in places. The south wall is typically composed of small stones stacked three courses to a height of 45 cm. A single alignment of stones is visible, measuring up to 80 cm in width.

Terrace 272-g lies to the east of terrace 272-f, against a steep slope. This terrace is much smaller than the others in the survey area and may not have served an agricul-

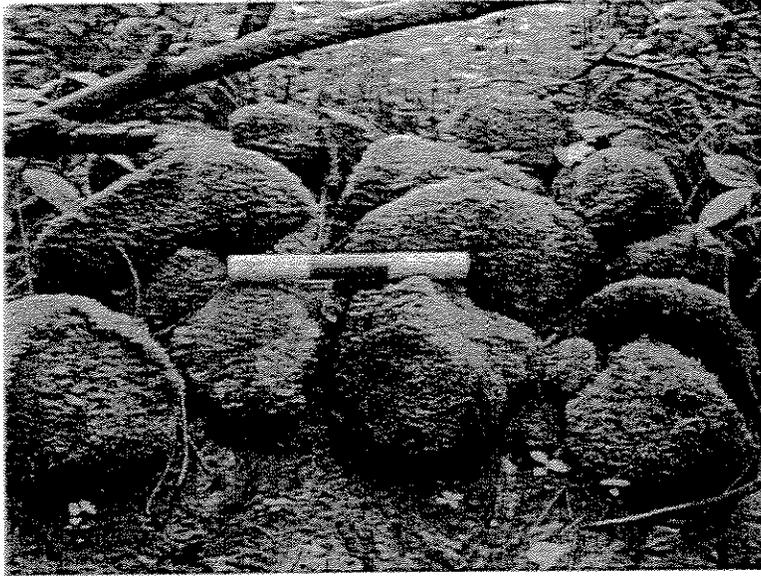


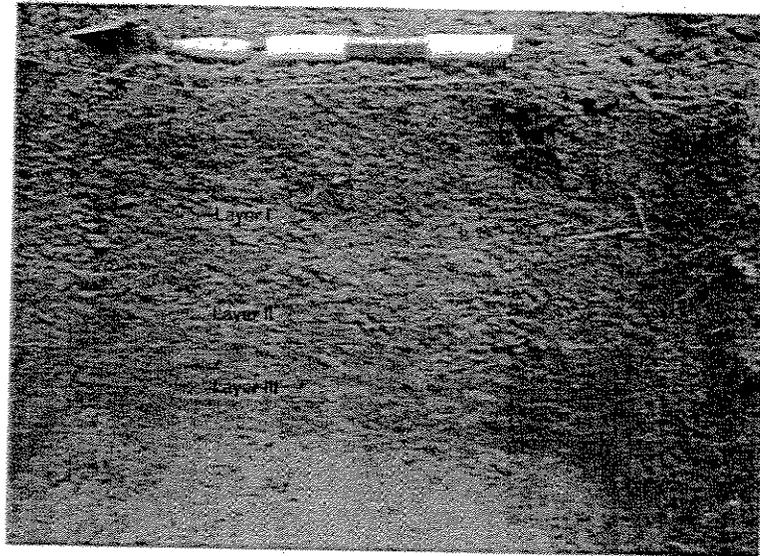
Figure 7. Section of stone facing of 'auwai 272-a, facing east. The scale is marked in 10 cm increments.

tural function. It is possible that this is the house lot referred to by Puhili in his *mahela* claim (pg. 6). The terrace is also atypical because it is raised 50 cm higher than the terrace to the west, defying the typical pattern of terraces stepping down to the north. Its walls are composed of roughly piled stones and boulders, with the junction between its west wall and the south wall of terrace 272-d forming a corner on its northwest side. A rusty metal axe head is wedged beneath a tree near this corner, possibly indicating historic use of the terrace. An examination of the surface structural remains was insufficient to determine which terrace was constructed first. The terrace is generally in poor condition, with one to two courses of piled stones remaining.

#### 4 Test Excavation Results

Two test units were opened within *lo'i* 272-d. Test unit 1 measured 1 m<sup>2</sup> and was placed in the center of the *lo'i* in the area proposed for construction of the cabin. The unit was placed here to expose any possible subsurface cultural deposits or burials that might be disturbed during construction. Stratigraphy consisted of a dark brown upper layer of runoff deposition overlying a grey pondfield deposit, with a mottled layer of decomposing bedrock below (figs. 8 and 9, table 1). Isolated charcoal fragments were recovered from every layer. Decayed basalt fragments that resembled charcoal in color and texture occurred in layer III but these were not collected. A tiny volcanic glass flake was recovered from layer II (section 5).

Test unit 2 began as a 0.25 m<sup>2</sup> unit but was later expanded to 0.375 m<sup>2</sup>. It was placed at the north edge of *lo'i* 272-d, above the best preserved facing wall section.



**Figure 8.** Test unit 1, east wall. The scale is marked in 10 cm increments; the trowel points north.

and extending beyond the facing wall into the *lo'i*. A single alignment of wall stones was visible on the surface before excavation (fig. 10). The wall is stacked two to three courses high in this section (fig. 11). As the unit was excavated, a second, partially buried, alignment was discovered. This second alignment paralleled the first, 20 cm south of the first alignment. The fill between the two alignments was composed of densely packed gravel and cobbles. The parallel alignments with rubble between them are interpreted as a single core-filled stone wall (fig. 12). A metal nail was discovered near the surface above the rubble layer (section 5). Charcoal was collected from the rubble layer, beneath the foundation stones of this wall. This was submitted for wood identification and  $^{14}\text{C}$  dating (section 5). The unit was expanded 25 cm to the south because the densely packed rubble impeded further vertical excavation. As excavation continued south of the wall, a third alignment was discovered 14 cm below and 8 cm south of the second alignment (fig. 13). Gravel and cobble fill occupied the space between the second and third alignments. This third alignment is interpreted as an earlier *lo'i* wall that was constructed before and to the south of the first *lo'i* wall. In the interest of time, a shovel was used to expand the unit vertically and horizontally to the south to gain a better understanding of the construction of the wall and the stratigraphy within the *lo'i*. The soil removed by shovel was not screened. A layer of basalt gravel and cobbles was found to the south of the lower wall at 28 cm below surface. This is interpreted as a builder's trench for the lower wall. A layer of decomposing bedrock was encountered beneath the rubble layer. This layer is consistent in color and texture with the basal layer of unit 1. Due to time constraints, the excavation could not be expanded horizontally beyond the rubble of the builder's trench.

Three stratigraphic layers were defined in test unit 2 (fig. 14, table 1). Layer I is a dark brown runoff deposit which is probably continuous with Layer I of test unit 1.

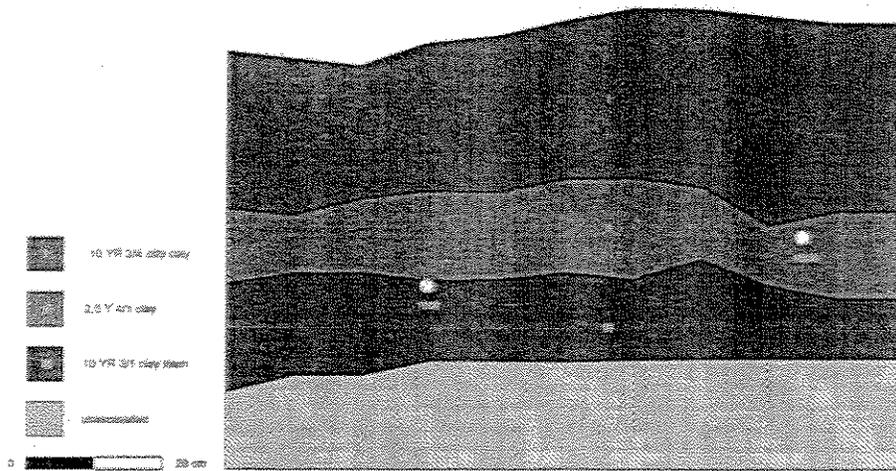


Figure 9. Test unit 1, east wall profile.

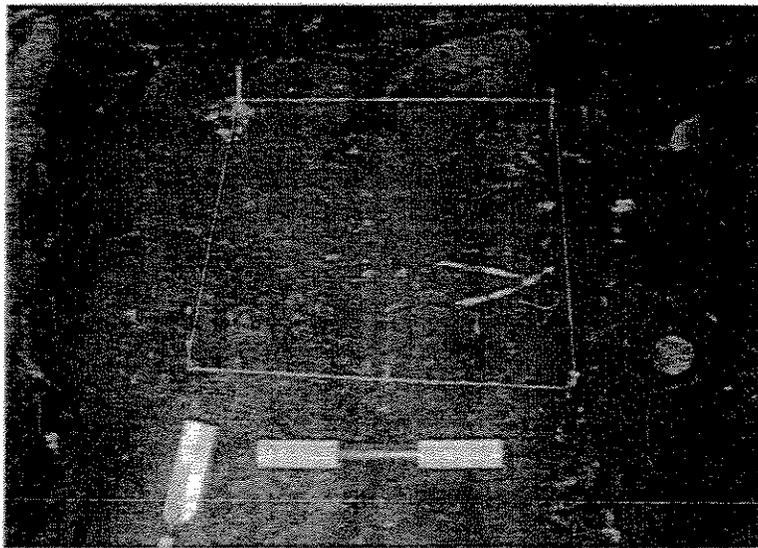


Figure 10. Test unit 2 before excavation, facing north. The *lo'i* wall runs horizontally along the top of the photo. The scale is marked in 10 cm increments; the trowel points north.

Layer Ia is interpreted as the builder's trench for the lower wall. It lies beneath layer I in the southern portion of the unit. The soil of layer Ia is the same color and texture as the soil of layer I, but this layer is differentiated because it contained densely packed

Table I. Sediment descriptions

Unit	Layer	Depth*	Color <sup>†</sup>	Description	Interpretation
1	I	0-31	10YR 3/4	Dark yellowish brown silty clay, few large roots, many fine roots, no rocks, few isolated charcoal flecks; wavy, clear boundary.	Runoff deposition after pondfield abandonment
1	II	20-41	2.5 Y 4/1	Dark gray clay, few fine and medium roots, some basalt gravel, isolated charcoal flecks throughout; wavy, clear boundary.	Pondfield deposit
1	III	37-52	10 YR 3/1	Very dark gray clay loam, very mottled, few fine and medium roots, weathered basalt gravel, few isolated charcoal flecks; base of excavation.	Natural decomposing bedrock
2	I	0-28	10YR 3/2	Very dark grayish brown clay loam, many large and medium roots, few isolated charcoal flecks, some basalt gravel and cobbles; smooth, abrupt boundary.	Runoff deposition after wall construction
2	Ia	28-42	10YR 3/2	Very dark grayish brown clay loam, many large and medium roots, few isolated charcoal flecks, densely packed basalt gravel and cobbles; smooth, abrupt boundary.	Fill from builder's trench
2	II	42+	10 YR 3/1	Very dark gray clay loam, very mottled, few fine and medium roots, weathered basalt gravel and cobbles, few isolated charcoal flecks; base of excavation.	Natural decomposing bedrock

\* Centimeters below surface.

† Colors determined from wet sediment.

basalt gravel and cobbles. Layer II corresponds with layer III of test unit 1, consisting of a mottled layer of decomposing bedrock. The pondfield deposit layer II observed in test unit 1 did not occur in test unit 2.

In sum, a chronological sequence for the stratigraphy, features and artifacts exposed during excavation of the two test units can be outlined as follows:

1. The natural bedrock layer is deposited and begins to decompose (layer II of test unit 2 and layer III of test unit 1).
2. A trench for the lower wall in test unit 2 is excavated and the foundation stones for this wall are laid.
3. Gravel and cobbles are placed within the trench to support the foundation stones (layer Ia of test unit 2). This rubble may have been a product of clearing the land within the *lo'i*, as the pondfield deposit of test unit 1 was relatively free of basalt.
4. Use of the *lo'i* for pondfield cultivation begins. Evidence for this is absent from test unit 2, but can be inferred by the position of the pondfield deposit exposed



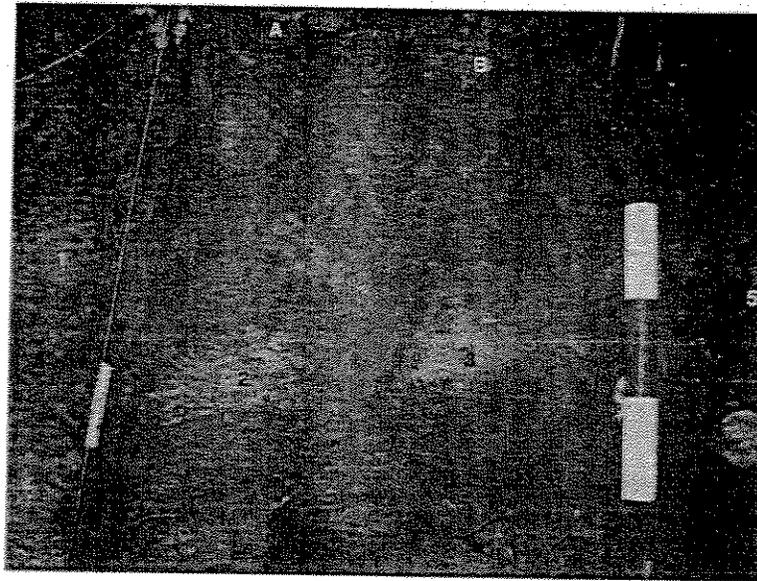
Figure 11. Test unit 2 before excavation, facing south. The *lo'i* wall runs horizontally across the bottom of the photo. The scale is marked in 10 cm increments; the trowel points north.

in test unit 1 (layer II of test unit 1). The volcanic glass flake found in test unit 1 made its way into the archaeological record at this time.

5. A trench for the upper wall of test unit 2 is excavated and foundation stones for the two alignments of this wall are laid. The dated sample of charcoal came from beneath the foundation stones, predating the construction of this wall.
6. Gravel and cobbles that make up the rubble for this upper wall are placed within and around the foundation stones.
7. The pondfield is abandoned and runoff deposition occurs (layer I of both test units), completely covering the lower wall and partially covering the upper wall in test unit 2. The metal nail of test unit 2 was deposited during this time.

## 5 Laboratory Results

A tiny volcanic glass fragment, a rusty metal nail, and isolated charcoal fragments were recovered from the test excavations. The fragment of volcanic glass was found in layer II of test unit 1 at 23–32 cm below the surface (fig. 15). The fragment is 0.35 cm long, 0.3 cm wide, and weighs less than 1 g. The metal nail was found near the surface of test unit 2. The nail measures 1.8 cm long, 0.7 cm wide at the head, and weighs 1.2 g (fig. 16). Historic archaeologist, Susan Lebo determined that the nail was machine cut and manufactured during the nineteenth century.



**Figure 12.** Test unit 2 during excavation, facing north. Stones *A* and *B* are part of the alignment identified before excavation. Stones *1* through *5* are part of a second alignment, identified during excavation. White text indicates a stone visible above the surface, while black text indicates a subsurface stone. Note the cobble fill between the two alignments. The scale is marked in 10 cm increments.

Isolated charcoal fragments were recovered from every layer of test unit 1 and from layer I of test unit 2, although a single specimen from test unit 2 can be regarded as suitable dating material. The specimen was recovered directly beneath the base of a boulder in the upper wall, thus the age of the specimen represents a *terminus post quem* for construction of the upper wall. The specimen was identified by Gail Murakami of International Archaeological Research Institute, Inc. Wood Identification Laboratory as cf. *Chamaesyce* sp. It strongly resembles 'akoko, but Murakami was not able to rule out the possibility that it is from a different species of the genus. There are 15 endemic shrubs and small trees in the genus *Chamaesyce*, all of which can be reasonably assumed to be short-lived for the purposes of  $^{14}\text{C}$  dating. The identified specimen was sent to Beta-Analytic, Inc. in Miami, Florida for accelerator mass spectrometry dating. The specimen, which was assigned the laboratory number Beta-193986, provided ample amounts of carbon for an accurate measurement and the analysis went normally. No students or intern researchers who would necessarily be distracted with other obligations and priorities were used in the analysis. Beta-193986 yielded a conventional radiocarbon age (Stuiver and Polach 1977) of  $330 \pm 30$  (table 2).

The results returned by the dating laboratory were calibrated using Bayesian statistics (Buck et al. 1996). Bayesian statistics were used because the goal of the dating program was to provide an estimate of when the upper wall was built; the age of the dated sample was of secondary interest. Bayesian calibration can yield a posterior

suitable dating material  
terminus post quem

'akoko

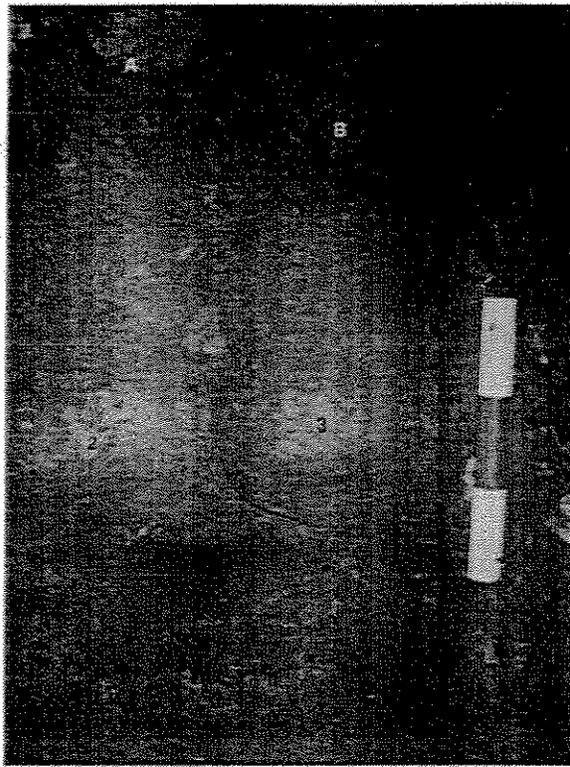


Figure 13. Test unit 2 post-excavation, facing north. Stones A, B, 2, and 3 are part of the alignments that make up the upper wall and are labeled as in fig. 12. Stones I and II are the foundation stones of the alignment that comprises the lower wall. The scale is marked in 10 cm increments.

Table 2. Radiocarbon laboratory results

Sample	Lab. No.	Material	$^{13}\text{C}$ per mil	CRA*
04607	Beta-193986	<i>Clammycybe</i> sp.	-10.8	330 $\pm$ 30

\* Conventional radiocarbon age. (Stuiver and Polach 1977).

probability for an archaeological event that cannot be directly dated, given a model that includes its temporal relationship to one or more events that are dated. The model used for the calibration can be represented by inequalities (1) and (2), where  $w_u$  is the construction date of the upper wall,  $w_l$  is the construction date of the lower wall,  $\alpha_1$  and  $\beta_1$  are the beginning and end of the period of sediment deposition in the builder's trench for the upper wall, and A.D. 1915 is the date of a map (Podmore 1915) that shows the system of walls represented in the excavation by the upper wall. Events  $w_l$  and  $w_u$  were assigned uninformative prior probabilities, modeled as uniform distributions over the period from initial Polynesian settlement to the drawing of the map, A.D.

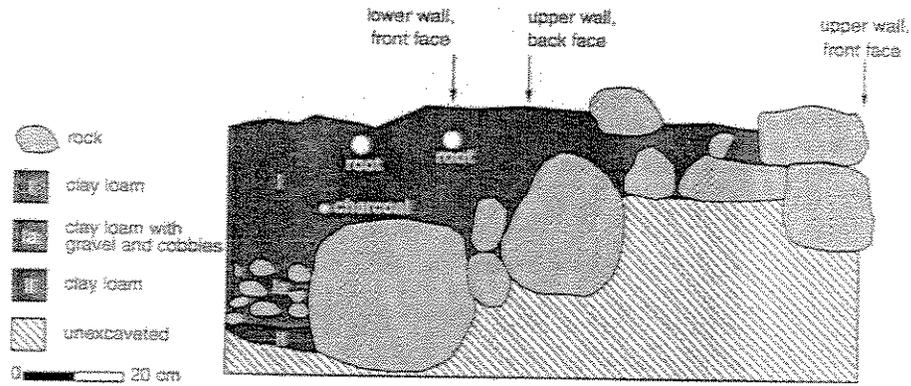


Figure 14. Test unit 2, west wall profile.

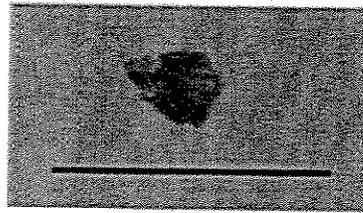


Figure 15. Volcanic glass fragment from layer II of test unit I. The scale bar is 1 cm long.

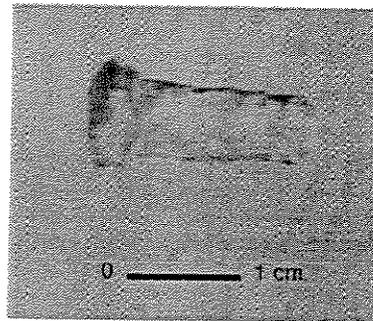


Figure 16. Metal nail dating to the nineteenth century. The scale bar is 1 cm long.

750–1915. The calibration was run on the BCal server in Sheffield (Buck et al. 1999), where the results converged after 50,000 iterations.

$$\alpha_1 > \beta_1 > w_4 > \text{A.D. 1915} \quad (1)$$

$$w_l > w_u \quad (2)$$

The calibration yielded posterior probabilities for the construction of the lower and upper walls, and the age of the *Chamaesyce* sp. specimen. The dated specimen provided little information on the construction date of the lower wall, and the age of this event was constrained only by the uninformative prior and the stratigraphic information that it was older than the upper wall. Thus, it is only possible to say that the wall was built sometime prior to A.D. 1724, the upper bound of the 95% highest posterior density region for the event (fig. 17). The dated specimen does constrain the estimate for the construction date of the upper wall, which was built sometime in the interval A.D. 1635–1914, the 95% highest posterior density region for the event (fig. 18). Finally, the specimen of *Chamaesyce* sp. grew, probably somewhere in Wailau Valley, between A.D. 1476 and A.D. 1641.

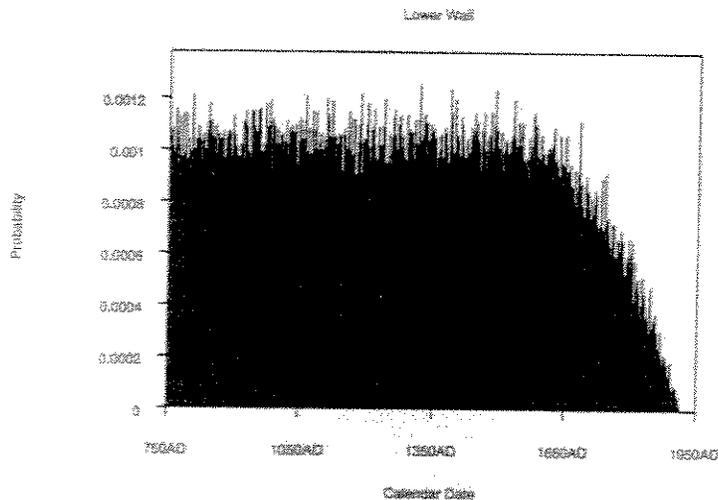


Figure 17. Posterior probability of the lower wall construction date.

## 6 Discussion and Conclusions

The work reported here represents the first detailed archaeological survey and the first archaeological excavation in the valley of Wailau. Seven architectural components were found on parcels (2)–5–9–005:007 and 081 in Wailau Valley. They consist of an 'aiawai, five agricultural terraces, and a possible habitation terrace. All were depicted on a survey map of a portion of the valley (Podmore 1915). Test excavations in one of the agricultural terraces revealed an intact pondfield deposit, portions of the upper *lo'i* wall not visible on the surface, and a lower *lo'i* wall that lay entirely buried. Bayesian

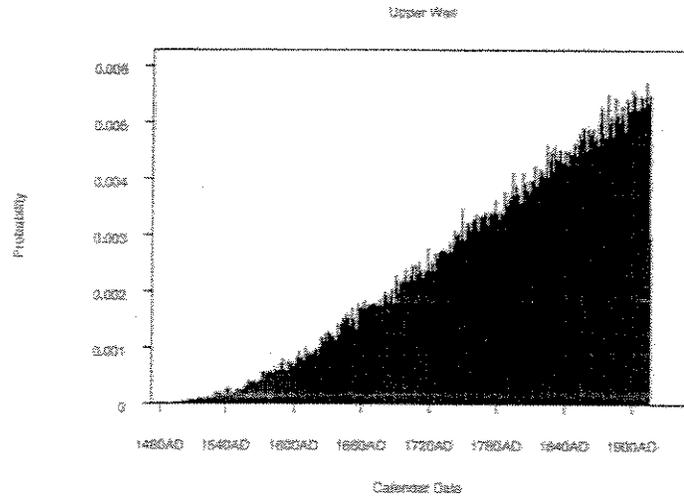


Figure 18. Posterior probability of the upper wall construction date.

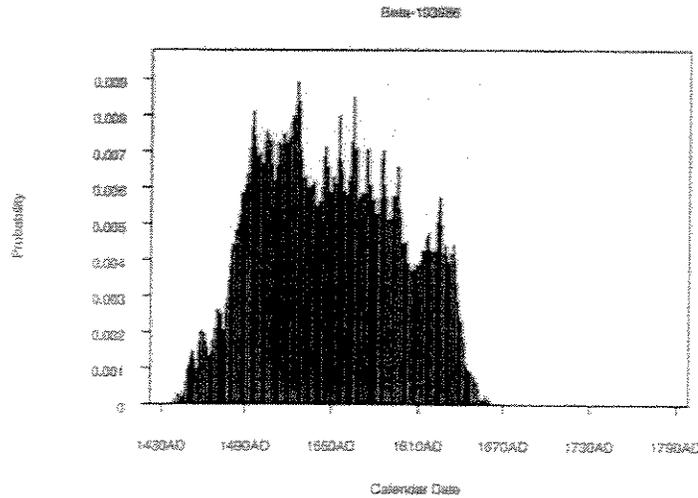


Figure 19. Posterior probability of dated *Chamaesyce* sp. wood sample, Beta-193986.

calibration of a dated fragment of charred *Chamaesyce* sp. wood indicated a construction date of A.D. 1635–1914 for the upper wall, and sometime before A.D. 1724 for the lower wall. Thus, the lower wall was clearly constructed in the pre-contact era. It is possible that the upper wall was built in pre-contact times as well, though it is

more likely to have been constructed in the historic era; the probability that it was constructed before A.D. 1778, given the current dating evidence, is approximately 0.39. The metal nail, *mahale* documents, and the Podmore map all indicate that use of the *lo'i* continued into the historic era, and it is reasonable to conclude that the most recent modifications of the excavated *lo'i* wall were made in the historic period, building on a plan laid out in the pre-Contact era.

## 7 Significance Assessments

The Wailau Agricultural Complex, site 50-60-04-272, has been evaluated as significant under criteria *c* and *d* because the system may be representative of a pre-contact irrigated agricultural complex and might yield information on Hawaiian history and prehistory (see pg. 9). The seven architectural components that occur in the project area are elements of site 50-60-04-272 and contribute to its significance.

Table 3. Significance determinations

Site	Description	Criterion	Justification
50-60-04-272	Wailau Agricultural Complex	c and d	Representative of a traditional irrigated agricultural system and may yield information on Hawaiian history and prehistory.

Construction of a single-family residence, garden, and self-composting toilet will take place entirely within agricultural terrace 272-d. Undertaking activities will be restricted to the center portion of the *lo'i* to avoid disturbing the terrace walls. Excavation of test unit 1 in the center of the *lo'i* did not expose any buried walls or cultural features. However, an intact pondfield deposit is buried about 20 cm below surface in the area that will be affected by the undertaking. This deposit was well documented with the excavation of test unit 1. Cultural material was sparse in the grey pondfield deposit, consisting of isolated charcoal fragments and a tiny piece of volcanic glass. No further work is recommended because the undertaking will not disturb the *lo'i* walls and the pondfield deposit was well-documented in test unit 1.

The possibility that isolated human burial remains will be discovered during construction activities should be noted, even though no evidence of human burials was discovered during archaeological survey. This caveat is based on the fact that the test units excavated during the survey were not large or numerous enough to have exposed isolated cultural features in every part of the property. However, because of the dynamic nature of irrigated agriculture, it is highly unlikely that human burials will be found in the deposits within the *lo'i*. If human burial remains are discovered during construction activities, work in the vicinity of the remains should cease and the Maui Island Archaeologist should be contacted.

## Glossary

Entries for Hawaiian words are excerpted or paraphrased, where possible, from the *Hawaiian Dictionary* (Pukui and Elbert 1971), or from Lucas (1995). Geological and geographical terms are from American Geological Institute (1976) and Clark (1998). Archaeological terms are from Bray and Trump (1982) and Mignon (1993).

**'akoko** A member of the genus *Chamaecryse* spp., which includes 15 endemic shrubs and small trees.

**'auwai** Ditch.

**'āi** A land section, next in importance to *ahupua'a* and usually a subdivision of an *ahupua'a*.

**'ōhi'a** Two kinds of forest trees. See also *'ōhi'a 'ai* and *'ōhi'a lehua*.

**'ōhi'a 'ai** The mountain apple tree, *Eugenia malaccensis*, a forest tree to 50 ft. high.

**'ōhi'a lehua** An endemic species, *Metrosideros polymorpha*, that ranges in habit from prostrate shrubs to tall trees and is distributed from sea level to 2,200 m elevation on all the main Hawaiian Islands.

**'ua'u** The endangered seabird *Pterodroma phaeopygia*, or dark-rumped petrel.

**ahupua'a** Traditional Hawaiian land division usually extending from the uplands to the sea.

**ali'i** Chief, chiefess, officer, ruler, monarch, peer, head man, noble, aristocrat, king, queen, commander.

**bamboo** A shrub or tree including *Dendrocalamus*, *Phyllostachys*, *Schizostachyum*, and *bambusa* with various uses. Some species provide edible seeds and young shoots. Bamboo is also a common building material in Asia.

**clidemia** The tropical American weed *Clidemia hirta*. Also known as Koster's curse, the shrub tends to take over where it is introduced.

**ginger** The flowering plant *Zingiber* common to Hawaiian forests.

**hau** An indigenous tree, *Hibiscus tiliaceus*.

**'ie** Vine of the *'ie 'ie*, or *Freycinetia arborea*, an endemic, woody branching climber that grows at altitudes of 300–600m. In ancient Hawai'i, vines were considered sacred and used in basketry and for ceremonial purposes.

**iwi** Bone.

**kapa** Tapa cloth.

- kapu* Taboo, prohibition; special privilege or exemption from ordinary taboo; sacredness; prohibited, forbidden; sacred, holy, consecrated; no trespassing, keep out.
- kukui* The candlenut, *Aleurites moluccana*.
- kula* Plain, field, open country, pasture. Land with no water rights.
- lau hala* Pandanus leaf, especially as used in plaiting.
- lo'i* A single irrigated taro patch. Irrigated terrace, especially for taro.
- mo'o* Narrow strip of land, smaller than an 'ili. See also *ahupua'a*.
- noni* The Indian mulberry (*Morinda citrifolia*), a small tree or shrub in the coffee family, native to Asia, Australia, and the Pacific Islands. In Hawai'i, *noni* was used for medicines and dyes.
- project* The inventory survey.
- pu'uhonua* Place of refuge, sanctuary, asylum, place of peace and safety.
- suitable dating material* An identified sample of wood charcoal, selected to include short-lived species, twigs, or sapwood collected from a context that is in a clearly defined association with a confidently identified traditional Hawaiian cultural feature.
- terminus post quem* A date earlier than an archaeological event of interest.
- undertaking* Construction of a single-family dwelling within an abandoned taro *lo'i*.
- wauke* A small tree or shrub, *Broussonetia papyrifera*, whose bark was made into tapa cloth used for clothing.

## Bibliography

- American Geological Institute (1976). *Dictionary of Geological Terms* (Revised ed.). Garden City, N.Y.: Anchor Press.
- Bray, W. and D. Trump (1982). *The Penguin Dictionary of Archaeology* (Second ed.). New York: Penguin Books.
- Buck, C. E., W. G. Cavanagh, and C. D. Litton (1996). *Bayesian Approach to Interpreting Archaeological Data*. Statistics in Practice. Chichester: John Wiley & Sons.
- Buck, C. E., J. A. Christen, and G. James (1999, July). BCal: an on-line Bayesian Radiocarbon Calibration Tool. <url:http://bcal.sheffield.ac.uk>.

- Clark, A. N. (1998). *The Penguin Dictionary of Geography* (Second ed.). London: Penguin Books.
- Foot, D. E., E. L. Hill, S. Nakamura, and F. Stephens (1972). *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. Washington, D.C.: United States Department of Agriculture, Soil Conservation Service. Published in cooperation with the University of Hawaii Agricultural Experiment Station.
- Handy, E. S. C. and E. G. Handy (1972). *Native Planters in Old Hawaii: Their Life, Lore, and Environment*. Number 233 in Bernice P. Bishop Museum Bulletin. Honolulu: Bishop Museum Press. With the collaboration of Mary Kawena Pukui.
- Juvik, S. P. and J. O. Juvik (Eds.) (1998). *Atlas of Hawai'i* (Third ed.). Honolulu: University of Hawaii Press.
- Kirch, P. V. and M. Kelly (Eds.) (1975). *Prehistory and Ecology in a Windward Hawaiian Valley: Halawa Valley, Molokai*. Number 24 in Pacific Anthropological Records. Honolulu: Anthropology Department, B. P. Bishop Museum.
- Land Board (1846-1851). Native register. Archives of Hawaii.
- Lucas, P. F. N. (1995). *A Dictionary of Hawaiian Legal Land-Terms*. Honolulu: Native Hawaiian Legal Corporation and University of Hawai'i Committee for the Preservation and Study of Hawaiian Language, Art and Culture.
- Mignon, M. R. (1993). *Dictionary of Concepts in Archaeology*. Number 13 in Reference Sources for the Social Sciences and Humanities. Westport, Conn.: Greenwood Press.
- Podmore, G. (1915, August). Portion of Wailau Valley, Halawa, Molokai. Bishop Estate Survey Map. Scale 1:600.
- Pukui, M. K. and S. H. Elbert (1971). *Hawaiian Dictionary* (Third ed.). Honolulu: University of Hawaii Press.
- Reeve, R. (1973, August). *Wailau: An Archaeological Site Survey of Wailau Valley Molokai*. Honolulu: Anthropology Department, B. P. Bishop Museum. Ms. Anthropology Department 122873.
- Remy, J. (1893). *The Island of Molokai Before Leprosy*. Arcis-sur-Aube. Translated by Mildred M. Knowlton, Oct. 1975.
- Riley, T. J. (1973, May). *Wet and Dry in a Hawaiian Valley: The Archaeology of an Agricultural System*. Honolulu: University of Hawai'i. Ph.D. Dissertation.
- Stuiver, M. and H. Polach (1977). Discussion: Reporting of  $^{14}\text{C}$  data. *Radiocarbon* 19, 355-363.
- Summers, C. C. (1971). *Molokai: A Site Survey*. Pacific Anthropological Records Number 14. Honolulu: Anthropology Department, B. P. Bishop Museum.
- Thien, S. (1979). A flow diagram for teaching texture-by-feel analysis. *Journal of Agronomic Education* 8, 54-55.

LINDA LINGLE  
GOVERNOR OF HAWAII



PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON  
DEPUTY DIRECTOR - LAND

YVONNE Y. IZU  
DEPUTY DIRECTOR - WATER



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

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

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

November 10, 2004

Ms. Windy K. McElroy, MA  
T.S. Dye & Colleagues  
735 Bishop Street, Suite 315  
Honolulu, Hawai'i 96813

LOG NO: 2004.3258  
DOC NO: 0411SC03

Dear Ms. McElroy:

**SUBJECT: Chapter 6E-42 Historic Preservation Review of a Report Documenting the Results of an Archaeological Inventory Survey in Wailau Valley, Moloka'i Hālawā, Ko'olau, Moloka'i**  
**TMK: (2) 5-9-005:007 & 081**

Thank you for the submission of a report documenting the results of an archaeological inventory survey in Wailau Valley on Moloka'i (McElroy. 2004. Archaeological Inventory Survey of TMK: [2] 5-9-005:007 & 081 in Wailau Valley, Hālawā Ahupua'a, Ko'olau District, Island of Moloka'i). We received the subject report on September 8, 2004, and provide the following comments. Our review is late, and we apologize for any inconvenience this may cause you or your client.

The historical and archaeological background sections are thorough, and well done. We appreciate the correlation of survey data to the historic Podmore map, and other records. The project area of 0.69 acres underwent survey, with seven features (a through g) of SIHP No. 50-60-04-272, the Wailau Agricultural Complex, identified on the property. The seven features include an 'auwai, five lo'i, and a possible habitation terrace. Two test units were excavated, and data obtained that demonstrated the sequence of construction of the lo'i. Intact pond field soils were present as were a now-buried lo'i wall, in addition to the visible surface features. A single radiocarbon sample yielded a late pre-Contact date, with possible time ranges for initial construction ranging from the 17<sup>th</sup> through 19<sup>th</sup> centuries AD. Details of the site area, as recorded during the subject survey, were congruent with information contained on a Podmore map of 1915. The seven features are deemed significant under Criteria C and D, and are considered to be contributory properties of Site -272. No further work is recommended.

The survey was carried out as part of the requirements for a Conservation District Use Permit application. The landowner intends to construct a single-family dwelling that will stand entirely within agricultural terrace -272d. With the exception of ground disturbance for construction of the residence, no other features will be affected by the proposed development, and will be left in place, as is.

Ms. Windy K. McElroy, MA  
Page 2

We concur with the findings and recommendations made. We can deem the report adequate, and accept it as final. Should you have any questions, please contact Sara Collins at 692-8026.

Aloha,



Melanie A. Chinen, Administrator  
State Historic Preservation Division

SC:jen

c: Michael Foley, Director, Dept of Planning, 250 S. High Street, Wailuku, HI 96793  
Maui Cultural Res Commission, Dept of Planning, 250 S. High Street, Wailuku, HI 96793  
Lori Buchanan, Moloka'i Plng Comm, Dept of Plng, 250 S. High St, Wailuku, HI 96793



# Federal Register

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Friday,  
December 29, 2000

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## Part III

# Department of the Interior

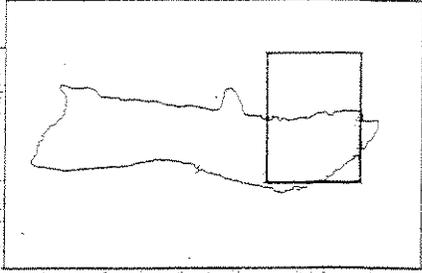
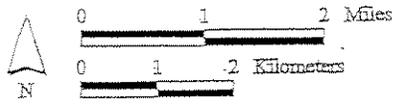
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Fish and Wildlife Service

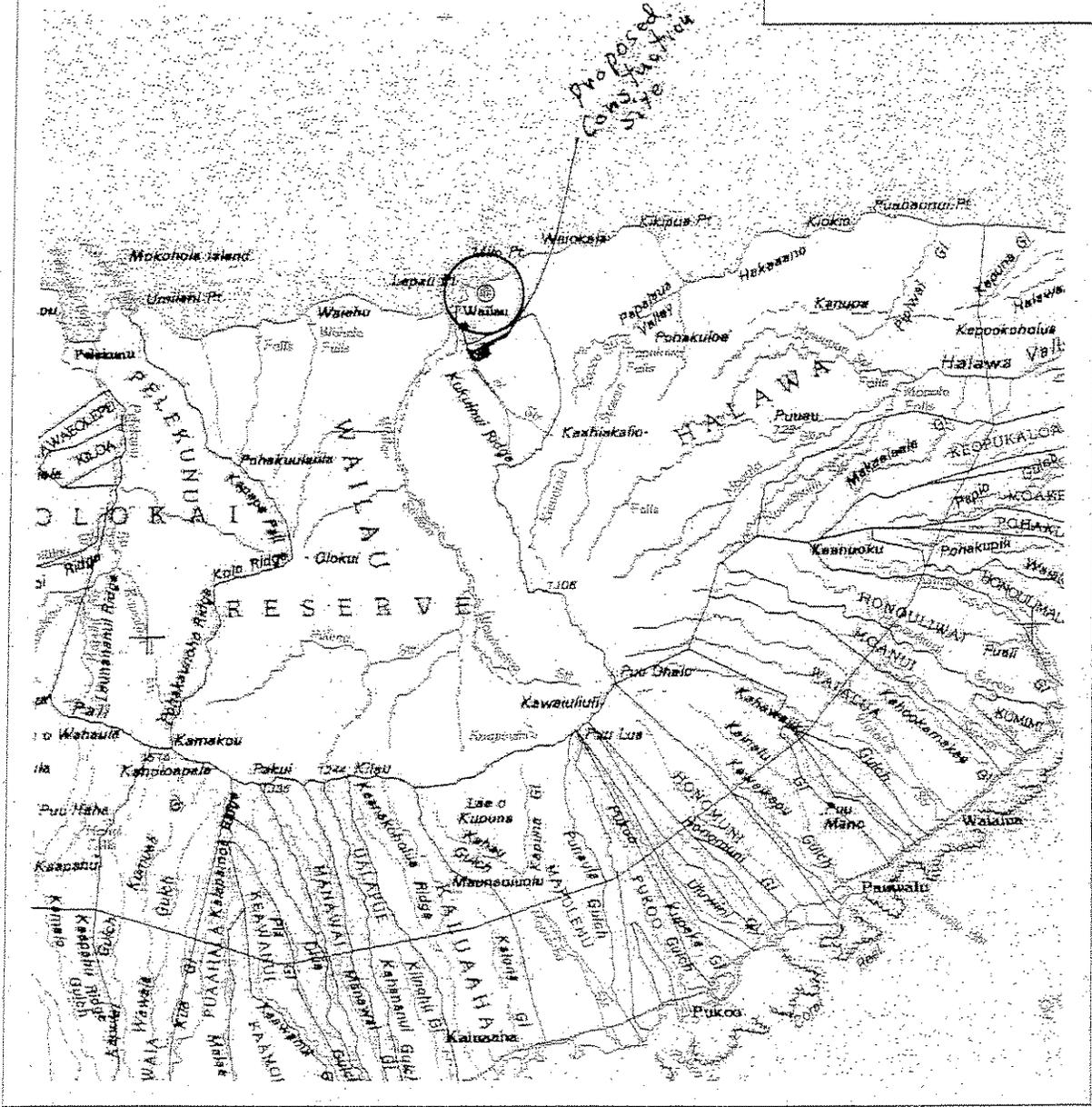
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50 CFR Part 17

Endangered and Threatened Wildlife and  
Plants; Determinations of Whether  
Designation of Critical Habitat Is Prudent  
for 20 Plant Species and the Proposed  
Designations of Critical Habitat for 32  
Plant Species From the Island of Molokai,  
Hawaii; Proposed Rule



Prepared by U.S. Fish & Wildlife Service, February 2000



Plant species

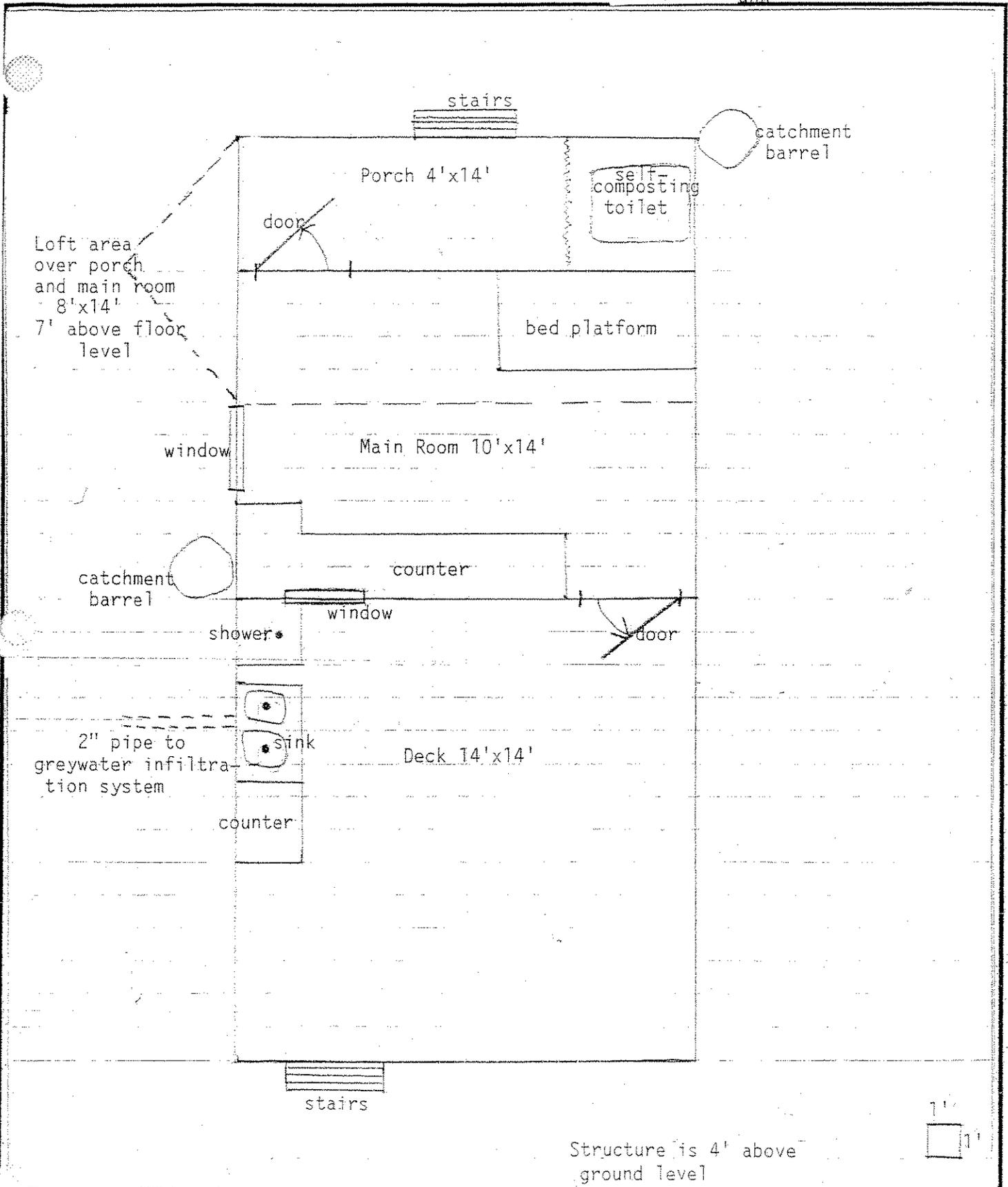
- ⊙ *Brighamia rockii*
- *Peucedanum sandwicense*

■ TMK: 2-5-9-005: 007, 2-5-9-005: 081

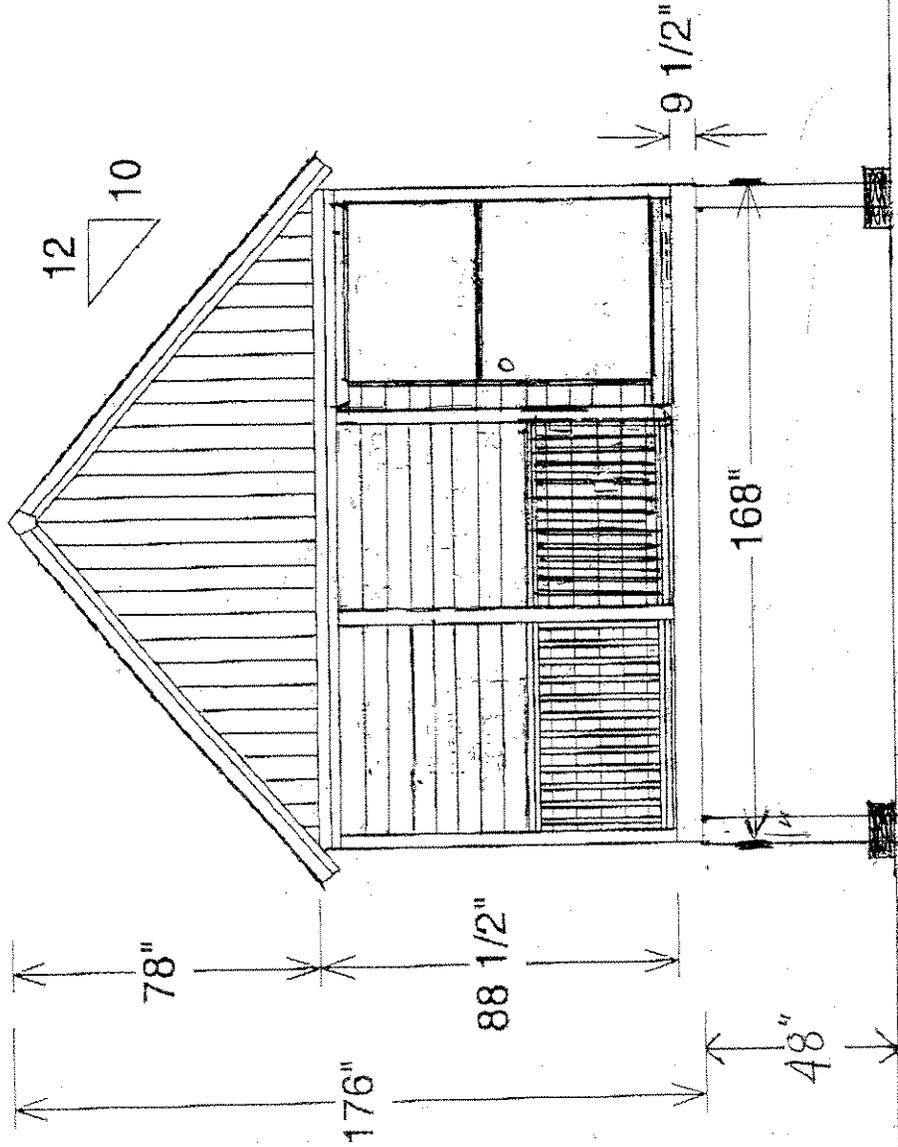
Owner: DUNN, LINDA

○ General plant location

RESIDENCE FOR LINDA E DUNN  
 WAILAU VALLEY, HALAWA, MOLOKAI  
 TMK 2-5-9-005.007



RESIDENCE FOR LINDA E. DUNN  
 WAILAU VALLEY, HALAIVA, MOLOKAI  
 T.M.K. 2-5-9-005.007



Notes: Scale: 1/4" (inch) = 1' (foot)

Drawn By: DMC  
05/05

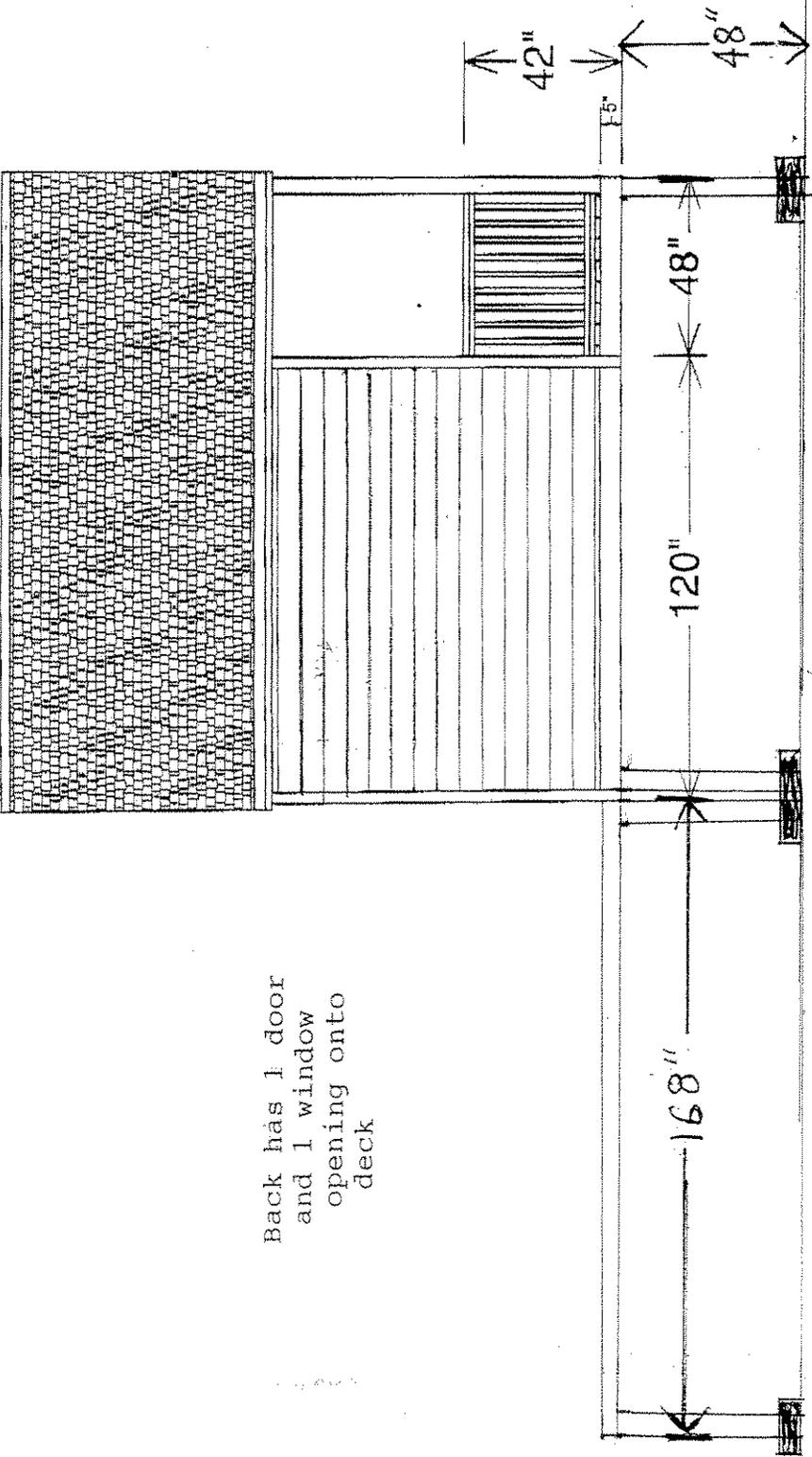
For Linda Dunn  
Wailau, Moloka'i

**14' X 14'  
Telluride  
Front View**

735 Progress Ave.  
Toronto, M1H 2W7  
Ontario, Canada  
design@summerwood.com  
www.summerwood.com  
A Division of Environmental Products Inc.

**Summerwood**  
PRODUCTS

Right side has  
1 window



Back has 1 door  
and 1 window  
opening onto  
deck

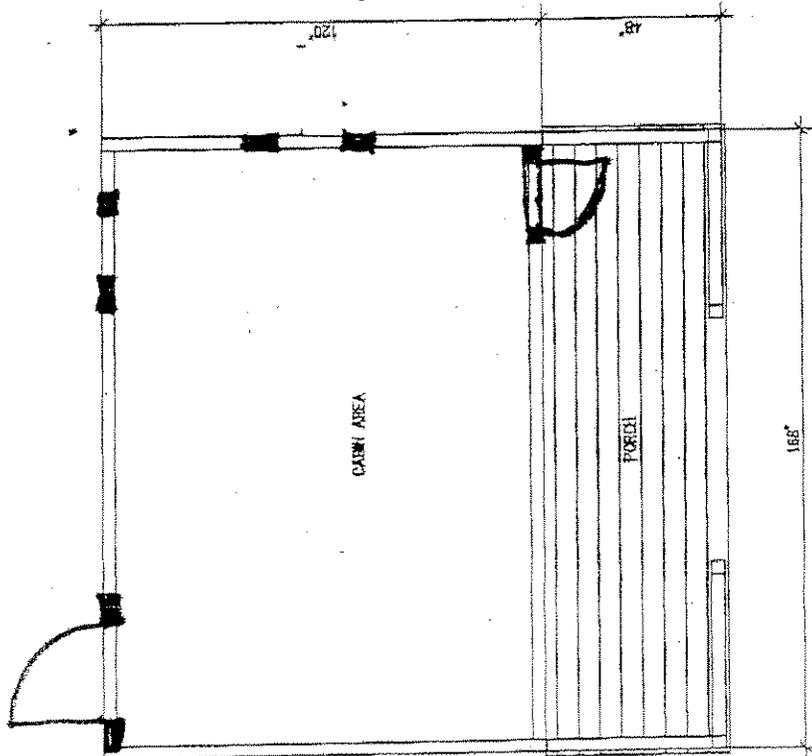
Notes:  
Scale: 1/4" (inch) = 1' (foot)  
Drawn By: DMC  
05/05

**14' X 14'  
Telluride  
Side View**

735 Progress Ave.  
Toronto, M1H 2W7  
Ontario, Canada  
design@summerwood.com  
www.summerwood.com  
A Division of Summerwood Products, Inc.

**Summerwood**  
PRODUCTS

# WALL FRAME PLAN



**Notes:**

This drawing shows the footprint of the building and is useful for obtaining building permits. Window and door openings have been left out as details may vary from project to project.

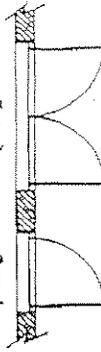
Indicate the size and location of any openings on this floor plan by hand. If you add any interior partitions, they should be shown here as well.

**Hint:**

The following symbols can be added to this drawing by hand to indicate the location of doors and windows.

Single Door  
Opening Out

Double Door  
Opening Out



Single Window  
Opening Out

Single Hinged  
Window

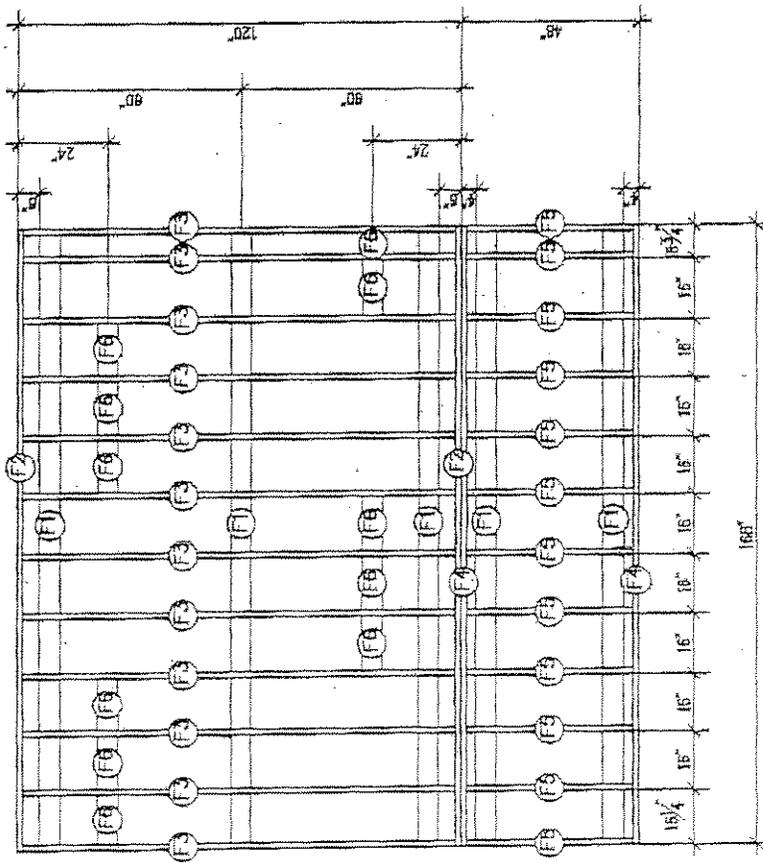


www.summerwood.com	SUMMERWOOD PRODUCTS A Division of Summerwood Outdoor
Plansupport@summerwood.com	
Project: <b>STYLE: Telluride</b>	
SIZE: 14'X14'	
<b>WALL FRAME PLAN</b>	
Scale: 1/4"=1'	Version No: 1.01
	Sheet No: TEL-14X14

# FLOOR FRAME DETAILS

(for main structure & deck)

PLAN VIEW



FRONT VIEW

SIDE VIEW



**Notes:**

This drawing illustrates how the various pieces of the floor frame are assembled.

Note that when positioning the PT Runners on the bottom of the frame assembly, the outside runner are measured from the edge of the piece and the middle runner from the centre.

**REQUIRED COMPONENTS**

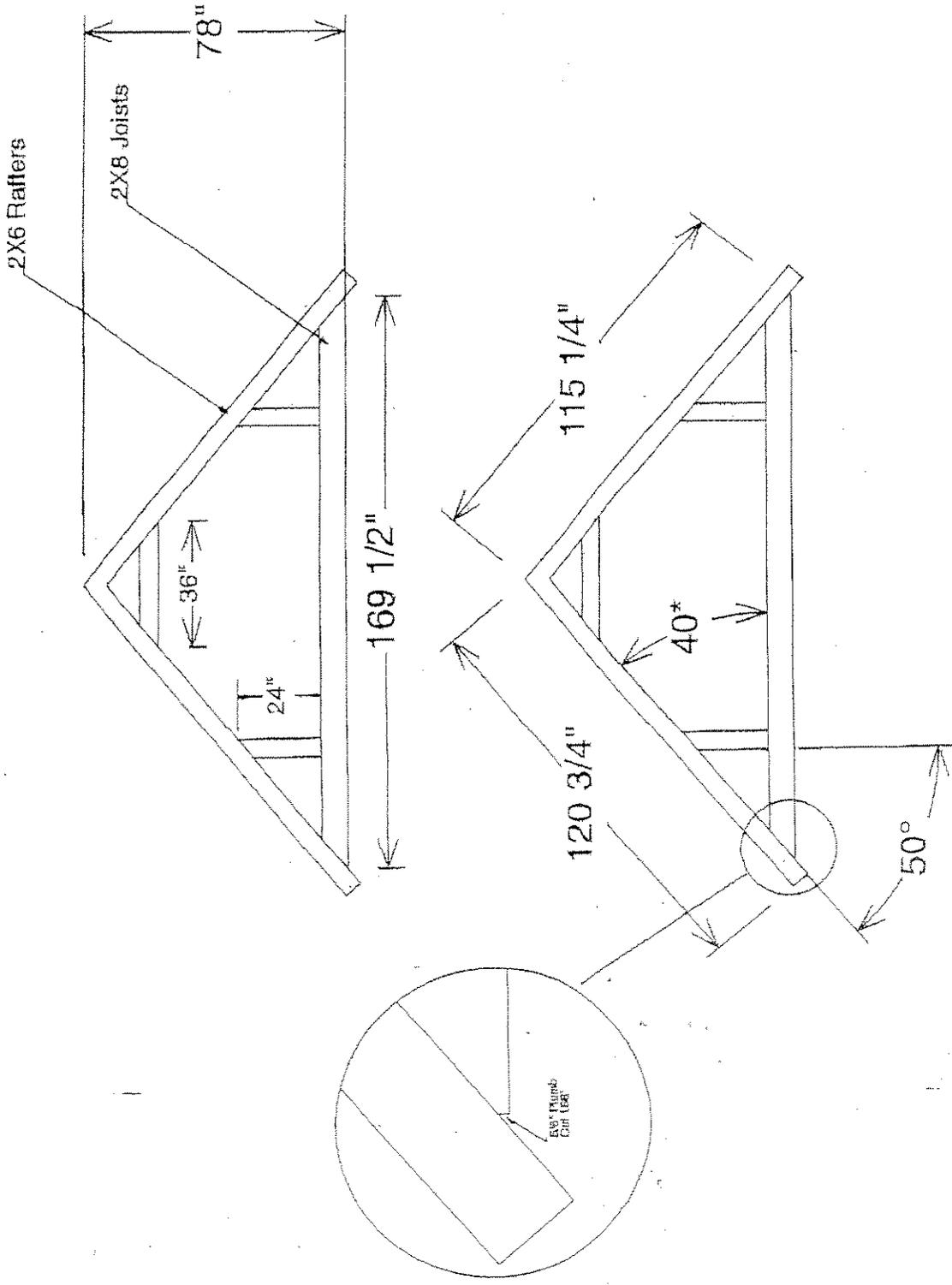
ITEM #	QTY	MATERIAL	DESCRIPTION	LENGTH
F1	5	2" x 6" PT	PT Runners	14'-0"
F2	2	2" x 6" Cedar	Floor Face Joist	14'-0"
F3	12	2" x 6" Cedar	Floor Joist	9'-9"
F4	2	2" x 4" Cedar	Floor Face Joist	14'-0"
F5	12	2" x 4" Cedar	Floor Joist	3'-9"
F6	11	2" x 6" Cedar	Bridging	1'-2 1/2"

www.summerwood.com  
 phone: 403.243.1111  
 www.summerwood.com

Summerwood PRODUCTS  
 A Division of Summerwood Builders

STYLE: Telluride  
 SIZE: 14'X14'  
**FLOOR FRAME DETAILS**

Scale: 1/4"=1'  
 Number: 1.01  
 Date: TEL: 14X16



Notes: Scale: 1/4" (inch) = 1' (foot)  
 Drawn By: DMC  
 05/05

14' Telluride Truss  
 5/8" Plywood on both sides of corner joints  
 and peak joints.

735 Progress Ave.  
 Toronto, M1H 2W7  
 Ontario, Canada  
 design@summerwood.com  
 www.summerwood.com  
 A Division of Summerwood Products Inc.

**Summerwood**  
 PRODUCTS



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. Box 3378  
HONOLULU, HAWAII 96801-3378

In reply, please refer to:  
File:

June 5, 2006

Mr. Michael Coonway  
Silversword Engineering  
1371 Lower Main St., Suite 2  
Wailuku, Maui 96793

**FAX MEMO**

# PAGES \_\_\_\_\_ DATE \_\_\_\_\_ FAX # \_\_\_\_\_

TO: #500-245-1131

FROM: #500-245-1131

CO: #500-245-1131

# \_\_\_\_\_ FAX # \_\_\_\_\_

RECEIVED  
JUN 5 2006

Dear Mr. Conway:

Subject: Individual Wastewater System (IWS) Plans for  
Dunn Cabin  
Project Site: Wailau, Molokai  
TMK: (2) 5-9-005: 007  
File No.: 6084

IWS plans consisting of a sun Mar Compost toilet and graywater soil absorption bed to serve a 1 bedroom dwelling located at the above site have been reviewed by the Wastewater Branch for conformance to applicable provisions of Hawaii Administrative Rules, Title 11, Chapter 62, entitled "Wastewater Systems." The IWS plan conforms to applicable provisions of Chapter 11-62 provided that the following is complied with:

Per Section 11 62-31.2(c), the minimum depth of soil profile observation shall be at least five feet. Please provide the required soil profile information in your final inspection report.

The Department of Health will sign an applicable county building permit application provided that all information submitted as part of the IWS plan and county building permit application are consistent with each other and meet applicable provisions of Chapter 11-62 at the time of permit signature.

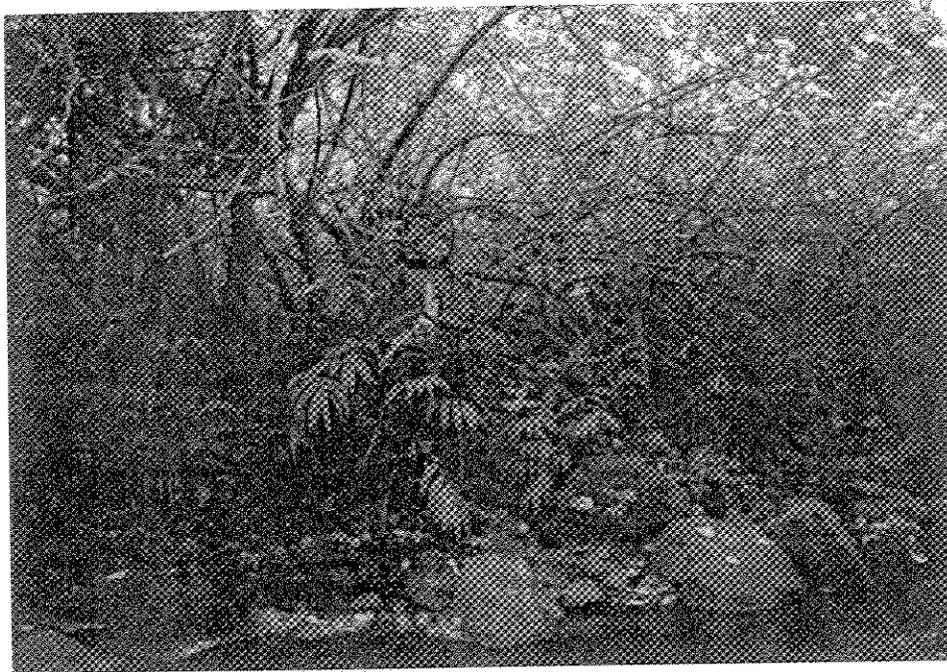
As the professional engineer responsible for the design of the above wastewater plan, it is your responsibility to inform the owner/lessee of the property that a) the IWS plans must be attached to each set of permit construction plans; b) the IWS must be installed by a licensed contractor, c) inspected by the engineer, and d) authorized in writing by the Department before use.

Should you have any questions, please feel free to contact Roland Tejano of the Wastewater Branch at 984-8232.

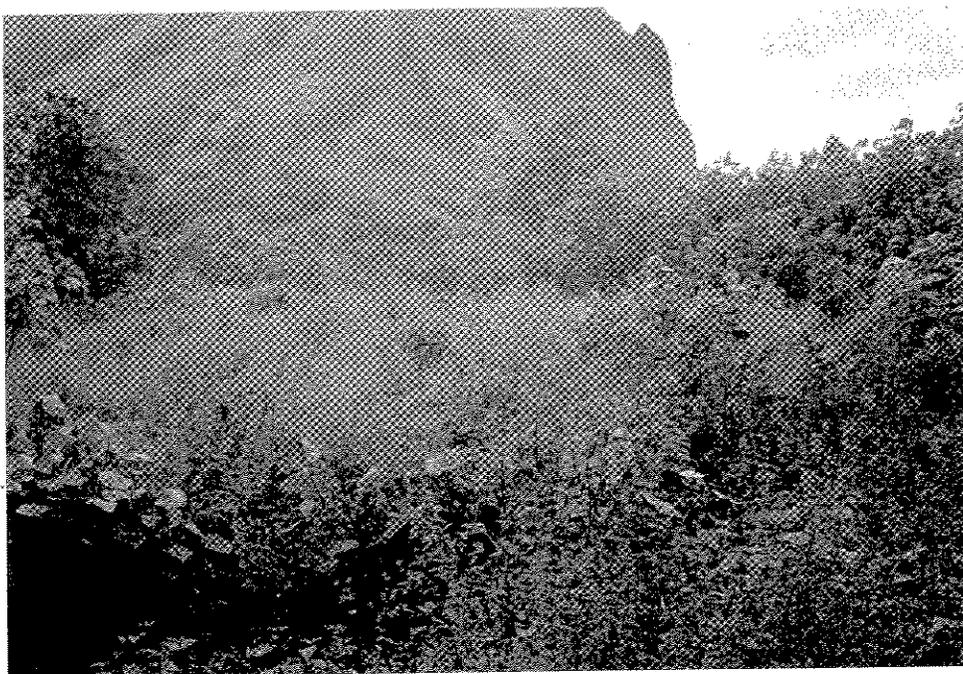
Sincerely,

HAROLD K. YEE, CHIEF  
Wastewater Branch





Stream bank facing NE  
in western end of  
parcel 100'+ from  
proposed construction.



Middle of northern  
most terrace, area of  
proposed construction  
facing west.

RESIDENCE FOR LINDA E DUNN  
WAILAU VALLEY, HALAIVA, MOLOKAI  
T.M.K. 2-5-9-005:007 & 081

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The text notes that without reliable records, it would be difficult to track the flow of funds and identify any irregularities.

2. The second part of the document focuses on the role of internal controls in ensuring the accuracy of financial reporting. It describes how internal controls are designed to prevent errors and detect any unauthorized transactions. The text highlights that a strong internal control system is a key component of an organization's risk management strategy and is necessary to ensure the reliability of financial statements.

3. The third part of the document discusses the importance of transparency and accountability in financial reporting. It notes that organizations should provide clear and concise information about their financial performance to all stakeholders. This includes providing timely and accurate financial statements, as well as disclosing any potential risks and uncertainties. The text emphasizes that transparency and accountability are essential for building trust and confidence in the financial system.

4. The fourth part of the document discusses the importance of maintaining the confidentiality of financial information. It notes that financial data is often sensitive and can be used to gain a competitive advantage if it is disclosed to unauthorized parties. The text emphasizes that organizations should implement robust security measures to protect their financial information from unauthorized access and disclosure. This includes using secure communication channels, implementing access controls, and regularly updating security protocols.

5. The fifth part of the document discusses the importance of staying up-to-date on changes in financial reporting standards and regulations. It notes that the financial reporting environment is constantly evolving, and organizations must stay current on the latest developments. The text emphasizes that organizations should invest in ongoing training and education for their financial reporting staff to ensure they are knowledgeable about the latest standards and regulations. This is essential for ensuring the accuracy and reliability of financial reporting.



Partial wall of 'auwai in  
western area of parcel.  
(to remain undisturbed)



Midwall of parcel,  
facing S to southern-  
most terrace.  
(to remain undisturbed)

RESIDENCE FOR LINDA E. DUNN  
WAILAI VALLEY, HALAIVA, MOLOKAI  
T.M.K. 2-5-9-005.007 & 081



LAND COURT SYSTEM

REGULAR SYSTEM

Return by Mail (✓) Pickup ( ) To:

LINDA DUNN  
2411 MAKIKI HGTS DR  
HONOLULU, HI 96822

TGE: 98-101-1566  
MABEL LEE-ESCROW OFFICER

THIS DOCUMENT CONTAINS PAGES.

Tax Map Key Nos. (2) 5-9-5-7;  
(2) 5-9-5-23;  
(2) 5-9-5-81

TRUSTEE'S QUITCLAIM DEED

I. WORDS USED OFTEN IN THIS DOCUMENT:

A. "Deed". This document will be called the "Deed".

B. "Grantor". The word "Grantor" means JOHN H. MAGOON, JR. and BANK OF HAWAII, a Hawaii corporation, by its division, Pacific Century Trust, as Co-trustees under that certain Testamentary Trust created by John H. Magoon, Sr. in Article Fifth of the Last Will and Testament dated November 7, 1967, as amended (the "John H. Magoon, Sr. Trust").

C. "Grantee". The word "Grantee" means LINDA DUNN, whose address is 2411 Makiki Heights Drive, Honolulu, Hawaii 96822, and Grantee's heirs, personal representatives and assigns.

D. "Heirs". The word "Heirs" means the persons who are entitled by law to receive the property of someone who dies without a will.

E. "Personal representatives". The phrase "Personal representatives" means the persons or entities designated by a court to handle the estate of a deceased person.

F. "Assigns". The word "Assigns" means the persons or entities to whom the rights and obligations that another has under this Deed are transferred.

G. "Property". The word "Property" means the property described in Exhibit A attached to this Deed.

## II. GRANTOR'S QUITCLAIM TO GRANTEE OF GRANTOR'S RIGHTS AND INTERESTS IN THE PROPERTY.

By this Deed, Grantor does hereby release, remise and quitclaim unto Grantee, all of Grantor's right, title and interest in and to the Property.

## III. TENANCY.

The Property is transferred to Grantee as tenant in severalty.

## IV. VALUE RECEIVED.

Grantor acknowledges that Grantor has received good and valuable consideration (in other words, something of good value) in signing this Deed.

## V. CAPTIONS AND TITLES.

The captions and title of this Deed are for convenience only. They may not be used to interpret or to define the terms and provisions of this Deed.

## VI. PRONOUNS AND NUMBER.

The use of any pronouns in this Deed, such as "his", shall include all pronouns, and the use of any number shall be construed and interpreted as singular or plural, as the context or situation may require. The terms "Grantor" and "Grantee", as used in this Deed, shall refer to either one or more persons, as the case may be.

## VII. COUNTERPARTS.

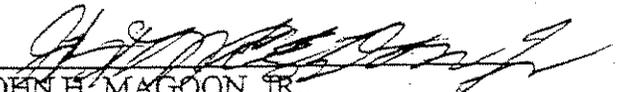
This instrument may be executed in counterparts, each of which shall be deemed an original, and said counterparts together shall constitute one and the same instrument binding the undersigned notwithstanding that all of the undersigned are not signatory to the original or the same counterparts. Duplicate unexecuted and unacknowledged pages of the counterparts

may be discarded and the remaining pages assembled as one document.

VIII. TRUSTEES' LIMITATION OF LIABILITY.

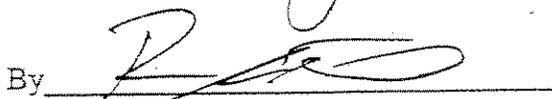
In accordance with Section 560:7-306(a) of the Hawaii Revised Statutes (1993), as amended, said John H. Magoon, Jr. is executing this instrument solely in his capacity as Co-trustee as aforesaid and is not assuming any personal liability in his individual capacity hereunder. In accordance with Section 560:7-306(a) of the Hawaii Revised Statutes (1993), as amended, said Bank of Hawaii, by its division, Pacific Century Trust, is executing this instrument solely in its capacity as Co-trustee as aforesaid and is not assuming any personal liability in its individual or corporate capacity hereunder. Any recovery against Grantor based on this instrument shall be limited to the assets of the Trust referred to above.

The undersigned have signed this Deed as of the 30 day of JUN, 1998. *MOE/HP*

  
JOHN H. MAGOON, JR.,  
as Co-trustee of the John H. Magoon, Sr.  
Trust as aforesaid

BANK OF HAWAII,  
a Hawaii corporation, by its division,  
Pacific Century Trust, as Co-trustee of the  
John H. Magoon, Sr. Trust as aforesaid

By   
Its **VICE PRESIDENT**

By   
Its **VICE PRESIDENT**

"Grantor"

STATE OF HAWAII )  
 ) SS:  
CITY AND COUNTY OF HONOLULU )

On this 30 day of JUN, 1998, before me personally appeared JOHN H. MAGOON, JR., as Co-Trustee under that certain Testamentary Trust created by John H. Magoon, Sr. in Article Fifth of the Last Will and Testament dated November 7, 1967, as amended, to me known to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same as his free act and deed as such Co-Trustee.

L.S.

Marsha Dale Ellis  
Notary Public, State of Hawaii  
MARSHA DALE ELLIS  
My Commission expires: JULY 7, 2000

STATE OF HAWAII )  
 ) SS.  
CITY AND COUNTY OF HONOLULU )

On this 30 day of JUN, 1998, before me appeared  
PAMELA A. SPADARO and RANN WATHIMULI, to  
me personally known, who, being by me duly sworn, did say that they are the  
VICE PRESIDENT and VICE PRESIDENT, respectively, of BANK OF  
HAWAII, a Hawaii corporation, by its division, Pacific Century Trust, as Co-Trustee under that  
certain Testamentary Trust created by John H. Magoon, Sr. in Article Fifth of the Last Will and  
Testament dated November 7, 1967, as amended; that said instrument was signed in behalf of said  
corporation by authority of its Board of Directors; and said officers severally acknowledged said  
instrument to be the free act and deed of said corporation as such Co-Trustee.

Marsha Dale Ellis  
Notary Public, State of Hawaii  
MARSHA DALE ELLIS  
My commission expires: JULY 7, 2000

L.S.

EXHIBIT A

-Parcel First:-

All that certain land, identified by Tax Key No. 5-09-05-07 and Tax Key No. 5-09-05-81, situate at Wailau, Ili o Keiu, Molokai, being R. P. 2304 LCAw 10869 to Puhili, area 0.69 acre less two lois of the konohiki within this kuleana, containing 0.10 acre, leaving a net area of 0.59 acre.

-Parcel Second:-

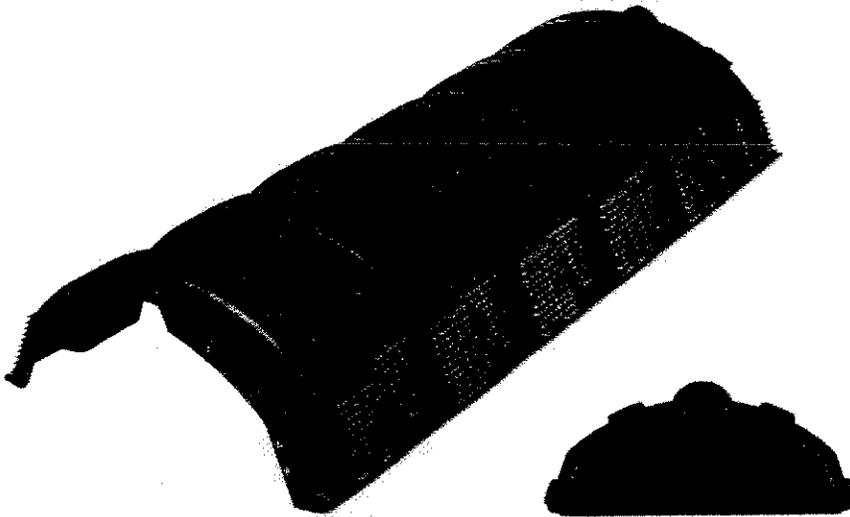
All that certain land, identified by Tax Key No. 5-9-05-23, situate at Wailau, Ili o Kukuinui, Molokai, being R. P. 6046 LCAw 9106 to Kanihomole containing an area of 1.14 acres less one loi of the konohiki within this kuleana containing 0.02 acre, leaving a net area of 1.12 acres.

Being a portion of the property described in that certain Order Allowing Interim Accounts for Period April 28, 1975 to April 30, 1977, Terminating Possession and Control of Certain Real Property, Authorizing Partial Distribution and Approving Fees dated August 31, 1977, recorded in the Bureau of Conveyances of the State of Hawaii in Liber 12490 at Page 171.

The foregoing real property is quitclaimed in "AS IS, WHERE IS, WITH ALL FAULTS AND DEFECTS" CONDITION, WITHOUT ANY WARRANTIES WHATSOEVER.

The Standard  
**Infiltrator**<sup>®</sup>  
Chamber

**INFILTRATOR**<sup>®</sup>  
SYSTEMS INC  
*Environmental Onsite Wastewater Solutions™*



When a shallow trench is appropriate for the site, the Standard Infiltrator Chamber offers the advantages of lower installation cost, lighter weight and a smaller footprint. The Standard Chamber is a 12" tall low-profile unit with a 6" sidewall for shallow placement. With 12" of compacted cover, it supports 16,000 lbs/axle, equivalent to an F-10 AASHTO rating.

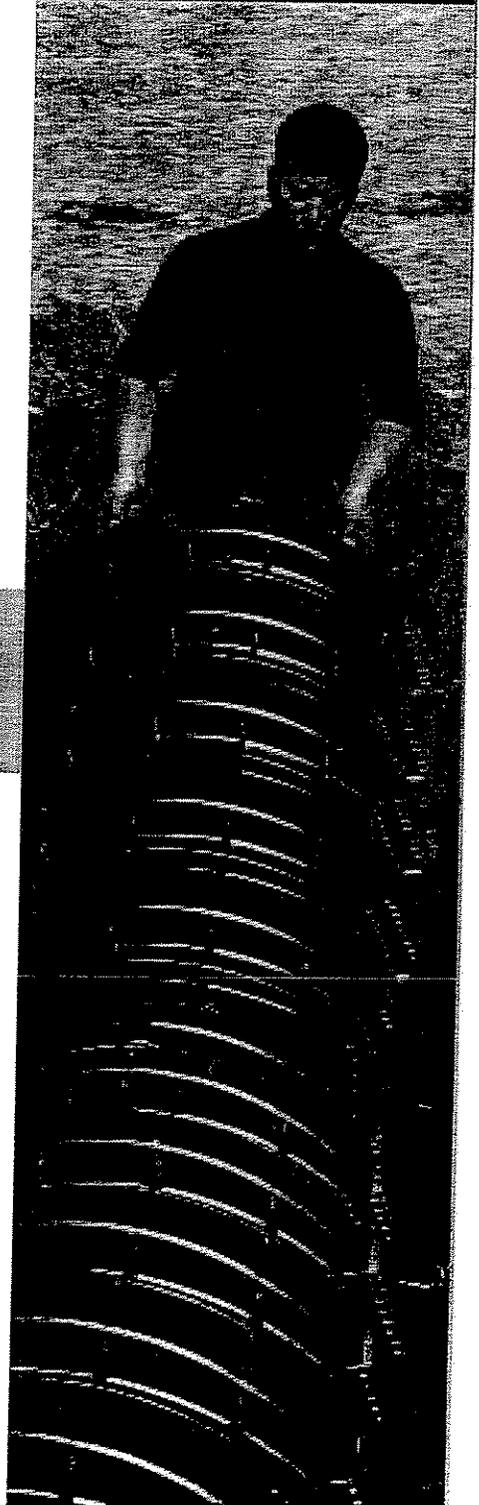
**The Standard Infiltrator Chamber System Offers You These Unique Benefits:**

- Lightweight and compact for easy storage
- Easy assembly and installation with as few as two people, a backhoe and a pickup truck
- Lightweight chambers that can be delivered in one pickup truck load and hand-carried into position
- Inspection port option for easy access to leachfield with no site disruption
- Solid-topped chambers that need no geotextile
- **OVERALL REDUCED COST**

**Tested and Proven with More than One Million Systems Installed**

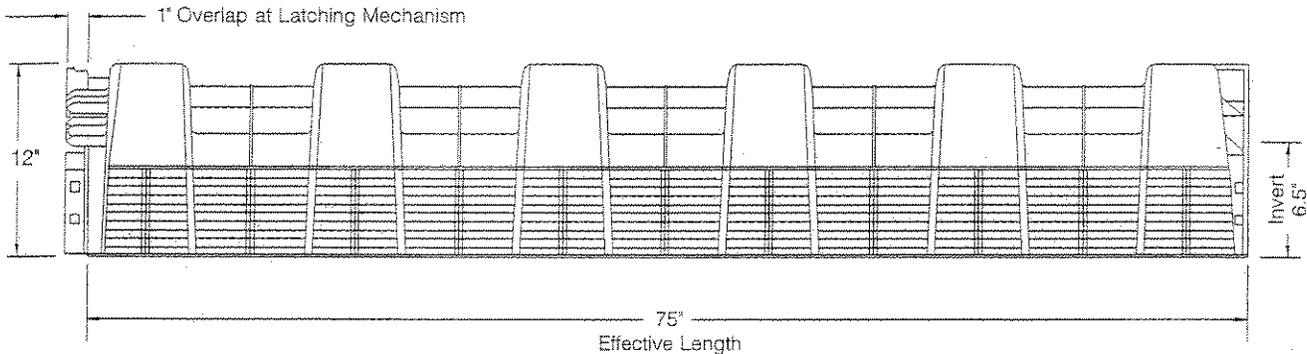
- Infiltrator is the number-one septic leachfield chamber system in the onsite industry.
- More than one million systems have been installed, with over 27 million units in-ground in all 50 states and 24 countries.
- Infiltrator's established history of performance and reliability began in 1987.
- Field surveys show that Infiltrator chamber systems, at 50% reduced sizing, perform equivalent to full-size stone and pipe systems.
- Infiltrator is ISO 9001:2000 certified and is IAPMO tested and UPC approved.

Approved in \_\_\_\_\_

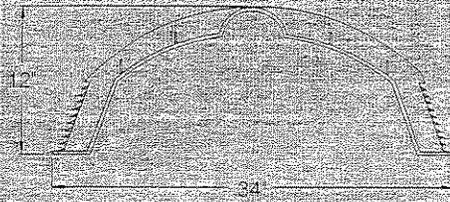


# The Standard Infiltrator® Chamber

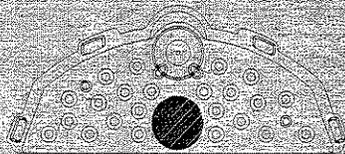
## The Standard Infiltrator Chamber



Chamber End View



PosiLock™ End Plate



### Specifications

Size (W x L x H)	34" x 75" x 12" (85 cm x 191 cm x 31 cm)
Storage Capacity	77.5 gal (293 L)
Weight	26 lbs (11.8 kg)
Louvered Sidewall Height	.6" (15 cm)

### INFILTRATOR SYSTEMS, INC. STANDARD LIMITED WARRANTY

#### INFILTRATOR SYSTEMS, INC., ("Infiltrator") STANDARD LIMITED WARRANTY FOR SEPTIC PRODUCTS

(a) The structural integrity of each chamber and end plate manufactured by Infiltrator (collectively referred to as "Units"), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator's installation instructions, is warranted to the original purchaser ("Holder") against defective materials and workmanship for one (1) year from the date upon which a septic permit is issued for the septic system containing the Units, provided, however, that if a septic permit is not required for the septic system by applicable law, the one (1) year warranty period will begin upon the date that installation of the septic system commences. In order to exercise warranty rights, Holder must notify Infiltrator in writing at its corporate headquarters in Old Saybrook, Connecticut, within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for those Units determined by Infiltrator to be defective and covered by this Limited Warranty. Infiltrator's liability specifically excludes the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

(c) The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage is damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper sizing, improper siting, excessive water usage, improper grease disposal or improper operation or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in this Limited Warranty. Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes, as other applicable laws and Infiltrator's installation instructions.

(d) No representative of Infiltrator has the authority to change this Limited Warranty in any manner whatsoever, or to extend this Limited Warranty. No warranty applies to any party other than the original Holder.

The above represents the standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of Units should contact Infiltrator's corporate headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty and should carefully read that warranty prior to the purchase of Units.

Infiltrator Systems does not recommend installing onsite systems under pavement.  
Chambers must be installed according to manufacturer's instructions. Failure to install according to manufacturer's instructions will void warranty.  
Infiltrator Systems recommends the use of septic tank filters and laundry filters with all onsite septic systems.  
System siting is determined by government regulations.

**For technical assistance, installation instructions or customer service, call Infiltrator Systems at 1-800-221-4436.**

**INFILTRATOR**  
SYSTEMS INC

Environmental Onsite Wastewater Solutions™

6 Business Park Road • P.O. Box 768  
Old Saybrook, CT 06475  
860-577-7000 • FAX 860-577-7001

1-800-221-4436

[www.infiltratorsystems.com](http://www.infiltratorsystems.com)

U.S. Patents: 4,759,661; 5,017,041; 5,156,488; 5,336,017; 5,401,116; 5,401,459; 5,511,903; 5,716,163; 5,588,778; 5,839,844  
Canadian Patents: 1,329,959; 2,004,564 Other patents pending.

Infiltrator, Equalizer and SideWinder are registered trademarks of Infiltrator Systems Inc. Infiltrator is a registered trademark in France. Infiltrator Systems Inc. is a registered trademark in Mexico. Contour, MicroLeaching, PolyTuff, SnapLock, ChamberSpacer, PosiLock, QuickCut and QuickPlay are trademarks of Infiltrator Systems Inc. © 2003 Infiltrator Systems Inc. All rights reserved. Printed in U.S.A.

C700603WA-4



# COMPOSTING TOILETS

## SELF-CONTAINED TOILETS

EXCEL NE • EXCEL AC/DC • COMPACT

### EXCEL NE (Non-Electric)

The success of the Excel meant that a three chamber unit could be built for those with no 110 Volt power supply. First launched in 1981, the Excel NE has long been the standard toilet for those living off the grid, or those who want to minimize power consumption. The Excel NE proves that an odor free inside toilet really is possible in a remote workplace, cabin, or home.

The Excel NE has no fan or heater. Odorless operation is achieved by a 4" vent mounted at the top rear of the unit, which acts like a chimney on a wood stove to pull air into the unit and keep the bathroom odorless. For good air movement the vent should be installed vertically; the optional 12 Volt Fan should be used if this is not possible.

The 12 Volt Fan should also be installed in residential or commercial applications, or where the vent stack is subject to downdraft. The fan draws 1.4 watts and can be powered by a solar panel and 12 Volt battery. The 1" drains at the rear must be connected.

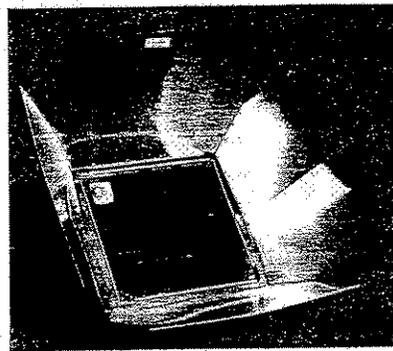
Composting Capacity: Residential & Continuous - 2 to 3 • Weekend & Vacation - 5 to 7



## Self-Contained Toilets Excel NE

Composting Capacity	
Residential & Continuous use (Adults-families*)	2/3
Weekend & Vacation use (Adults/families*)	5/7
Electrical	
Max. Amps (with heater on)	NA
Fan Watts (Required or Optional Hook-Up)	1.4 (12V) Op
Heater Watts (When thermostat switches it on)	NA
Average Power Use in Watts (heater on 1/2 time)	NA
Unit Dimensions (inches)	
Height (Unit only)	31½
Depth (Unit only)	32½
Width (Unit only)	22½
Height Footrest (when in use)	10½
Height (Footrest to Seat)	17
Footprint (Width x Depth)	
Vent & Drains	
Vent Pipe (2" Cent. Vac. Tubing; 3" & 4" Sewer)	4"
Drains (Required or Optional Hook-Up)	1" Req.
Weights (Lbs.)	
Product Weight/Shipping Weight	50/95
Shipping Carton Dims (Inches)	
Width	28
Length	35½
Height	36
Rough-in Measurements (inches)	
Depth required to remove drawer	46
Vent outlet center distance from left side (looking at back of unit)	11¼
Height to center of vent	NA
Height to top of vent outlet assembly	35
Depth With Footrest on Applicable Units	41¼

\* Family numbers include adults and small children



### Sun Oven

A great portable solar cooker weighing only 21 lbs., our Sun Oven is ruggedly built with a strong, insulated fiberglass case and tempered glass door. The reflector folds up and secures for easy portability on picnics, etc. It's completely adjustable and comes with a built-in thermometer. The interior oven dimensions are 9"H x 14"W x 14"D and temperatures range from 350°-400°F. This is a very easy oven to use and it will cook most anything! Includes a handy 16-page recipe booklet. USA.



### Stainless Steel Propane Stove

Stainless steel and heavy-duty components gives this stove the durability you can count on for years of reliable service. The dual 12,000-BTU stainless steel burners have individual control knobs. And the pressure is regulated to deliver consistent burner output regardless of fuel level or altitude. The extra-wide cooking surface offers 12 1/2" burner spacing to accommodate various-sized pans, 50% larger than standard two-burner stoves. Heavy-gauge stainless steel grate. Piezo ignition for matchless lighting. Auto-up wind guards extend into place when the lid is opened.

### AccuManager 20

Using a pulse-charging technology that rechargeable batteries just love, the AccuManager 20 charger will recharge your NiMH or NiCad batteries faster, and better, than any other charger we've ever seen. You can mix different battery types, sizes and charging times.



After charging, each cell is stored at the peak of readiness with a gentle trickle charge, until you're ready for it. There are four bays that accept AAA, AA, C or D cells, plus two bays that accept 9-volt cells. Charge times will run from 20 minutes to 12 hours depending on type and size. Supplied with both AC and DC charging cords and will run off standard 120V AC, automotive 12 volts, or a 10- to 15-watt solar panel with appropriate plug, such as our solar option sold below. Three-year mfg. warranty. Germany/China. For rechargeable batteries only.

AccuManager 20 Battery Charger 50269 \$69  
Lightweight 10W Solar Option 06-0384 \$149

County of Maui  
Planning Department  
Clayton Yoshida, Deputy Director  
200 South High Street  
Wailuku, HI 96793

27 March 2002

Dear Mr. Yoshida:

Enclosed please find a copy of a letter obtained from DLNR records regarding Wailau, Moloka'i property.

I own two parcels adjoining the parcel referenced in that letter and am in the process of applying for a CDU permit to construct a single family residence (529 sq ft) on the site.

I would like to know, please, if these similar adjoining parcels, TMK's (2) 5-9-5:7/81, are also in the Special Management Area and also exempt from the provisions of the county ordinance and/or regulation specific to Section 205A-29(b), HRS, as stated in the enclosed letter.

Thank you for your assistance in this matter.

Sincerely,



Linda E. Dunn  
2411 Makiki Hts. Dr.  
Honolulu, HI 96822



JOHN E. MIN  
Deputy Planning Director

COUNTY OF MAUI  
PLANNING DEPARTMENT

250 S. HIGH STREET  
WAILUKU, MAUI, HAWAII 96793

November 8, 1990

Mr. William W. Paty  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, Hawaii 96809

Dear Mr. Paty:

Re: Conservation District Use Application for the  
Construction of a Single-family Residence at TMK: 5-9-5: 16,  
Wailau, Molokai. (File No. MO-8/7/90-2416)

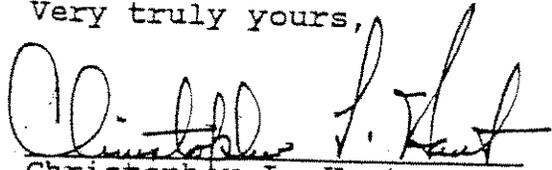
Our office has reviewed the above application as requested  
and offer the following comments:

(1) The Project site is located within the Special  
Management Area (SMA) as shown on SMA map MO-4. However, a  
single-family residence that is not part of a larger  
development is not considered to be a development under Section  
205A-22(B)(i), Hawaii Revised Statutes, and Section 12-2-5(b)  
of the Molokai Planning Commission Rules. Therefore, the  
proposed development of a single-family residence is exempt  
from the provisions of the county ordinance and and/or  
regulation specific to Section 205A-29(b), HRS.

(2) We would like to see that applicant comply with the  
State Department of Health regulations with regards to the  
disposal of waste materials as the area is a pristine area.

Thank you for the opportunity to comment on this  
application. Should you have any questions, please contact  
Clayton Yoshida of this office at 243-7735.

Very truly yours,



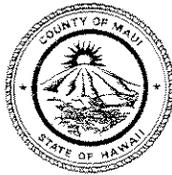
Christopher L. Hart  
Planning Director

cc: Sarah E. Sykes ✓  
LUCA, Public Works Dept.  
John Min  
c. Yoshida

JAMES "KIMO" APANA  
Mayor

JOHN E. MIN  
Director

CLAYTON I. YOSHIDA  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

April 10, 2002

Ms. Linda E. Dunn  
2411 Makiki Heights Drive  
Honolulu, Hawaii 96822

Dear Ms. Dunn:

RE: Special Management Area Permitting Requirements -- For the Construction of a Single-Family Residence in Wailau, Molokai, TMK: 5-9-005:007 and 081 (LTR 2002/1760)

The Maui Planning Department has received your March 27, 2002, letter and has the following comments to offer. Like the parcel noted in the previous correspondence you provide, the above-referenced parcels are located within the Special Management Area (SMA). However, because of recent changes to Chapter 205A, Hawaii Revised Statutes, the regulations that currently apply to the construction of single-family residences in the SMA differ from those cited in your letter.

One of the new requirements is that proposed single-family residences undergo review for potential environmental and ecological impacts before an SMA permit requirement determination can be made. In other words, single-family residences are no longer automatically exempt from SMA permitting requirements. An SMA Assessment Application will need to be submitted, and a determination will be made at that time whether the project will require an SMA minor permit, an SMA major permit, or is exempt from SMA permitting requirements.

Thank you for your cooperation. If additional clarification is required, please contact Matt Niles, Staff Planner, of this office at 270-7735.

Very truly yours,

A handwritten signature in black ink, appearing to read "John E. Min", is written over a faint, larger signature.

JOHN E. MIN  
Planning Director

Ms. Linda E. Dunn  
April 10, 2002  
Page 2

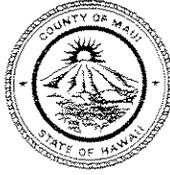
JEM:MCN:smb

c: Clayton Yoshida, AICP, Deputy Planning Director  
Matt Niles, Staff Planner  
Project File  
02/CZM File  
General File  
S:\ALL\Matt\Wailau\_letter.wpd

ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

WAYNE A. BOTEILHO  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

March 7, 2003

Ms. Linda E. Dunn  
2411 Makiki Heights Drive  
Honolulu, Hawaii 96822

Dear Ms. Dunn:

RE: Special Management Area (SMA) Assessment for an Exempted Action (SM5) or a SMA Minor Permit for a Single-Family 529 Square Foot One-Story Single Family Dwelling at Tax Map Key 5-9-005: 007 and 081, Wailau, Ko`olau, Molokai (SMX2002/0641)

The Planning Department has reviewed your application and has the following questions:

1. The proposed development is located in the 100-year flood inundation limits of Kahawaiiki Stream. Please provide a topography map and/or description of the elevations on the property and its relationship with the stream. Note that the flood inundation limits for the adjacent stream should be determined and if the building is within the 100-year limits the building shall be constructed to the current flood standards in Chapter 19.62, Maui County Code. The height of the pier/post and the finish floor may need to be elevated up to the base floor elevation. The Department would also recommend an additional one foot above the base floor elevation. Consult with a professional engineer registered in the State of Hawaii and provide revised drawings if necessary.
2. Please consult with the Department of Health (DOH), Environmental Management Division, Wastewater Branch, in Honolulu (Telephone: 586-4294) regarding the location and construction of the distribution area. Provide written

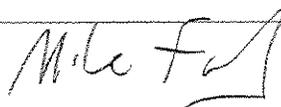
documentation from the DOH that they have approved this location and system, and if necessary provide a revised site plan (Attachment #4b). We note that in addition to the digging required for the foundation, you will also be digging the pipes and the area where the grey water will be discharged. Will the Java tree, also be removed?

3. A copy of the State Historic Preservation Division's (SHPD) letter of January 7, 2003, is enclosed. SHPD has determined that the construction of a single-family dwelling may have an "adverse effect." SHPD is requesting that, prior to conducting any ground disturbance associated with construction of the proposed single-family residence, you should have an archaeological survey conducted on Parcel 007 by a qualified archaeologist, in accordance with an approved work plan. A report of findings shall be prepared and if significant historic sites are found, an acceptable mitigation plan shall be prepared for review and approval by the SHPD.

The Department recommends that you submit a work plan approved by SHPD and that you conduct an archaeological survey on the property before this Department can exempt the proposed development. If SHPD accepts your work plan and archaeological survey, they may then determine that the proposed single-family construction will not have an adverse effect.

A copy of a location map and a revised Zoning and Flood Confirmation Form are enclosed for your use. If you have any further questions, please contact, Ms. Julie Higa, Staff Planner, of this office at 270-7814.

Sincerely,



MICHAEL W. FOLEY  
Director of Planning

Ms. Linda E. Dunn  
March 7, 2003  
Page 3

MWF:JH:lar

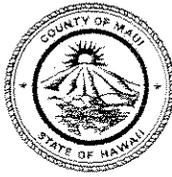
Enclosures

c: Clayton Yoshida, Program Planning Administrator  
Sam Lemo, DLNR, Land Division, Planning Branch  
Herbert Matsubayashi, Maui District Health Office, DOH  
Julie Higa, Planner  
2003CZM File  
Project File  
General File  
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ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

WAYNE A. BOTEILHO  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

May 6, 2003

MEMO TO: Ms. Linda Dunn  
2411 Makiki Heights Drive  
Honolulu, Hawaii 96822

FROM: Julie Higa, Staff Planner

SUBJECT: **SPECIAL MANAGEMENT AREA (SMA) ASSESSMENT FOR AN EXEMPTED ACTION (SM5) OR A SMA MINOR PERMIT FOR A SINGLE-FAMILY 529 SQUARE FOOT ONE-STORY SINGLE-FAMILY DWELLING AT TAX MAP KEY: 5-9-005:007 AND 081, WAILAU, KO`OLAU, MOLOKAI (SMX2002/0641)**

Transmitted herewith are the agency communications for the above-referenced application(s):

- Agencies with no comments or concerns.
- Agencies have comments or concerns. Before we can continue to process your application(s), please address their concerns. Please communicate directly with the agencies and be sure that a copy of all communications are sent to this office. Application(s) will be held in abeyance pending resolution of the comments or concerns.

1. Department of Health, March 21, 2003.

In addition, please address, in writing, comments and concerns raised in our letter to you dated March 7, 2003. Thank you for your cooperation. If additional clarification is required, please contact Ms. Julie Higa, Staff Planner, of this office at 270-7814.

MWF:JMh:smb  
Enclosure(s)

c: Clayton I. Yoshida, AICP, Planning Program Administrator  
Julie Higa, Staff Planner  
Project File  
General File

(S:\ALL\Julie\Dunn\DOHtrn.wpd)

ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

WAYNE A. BOTEILHO  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

TRANSMITTAL:

March 7, 2003

TO: **State Agencies**

- Dept of Health, Maui
- Dept of Health, Honolulu
- Dept of Transportation,  
Statewide Plnng Off(3)copies
- DLNR (5 copies)
- DLNR-Historic Preservation Div.
- DLNR-Maui Office
- Dept of Agriculture, Honolulu
- Dept of Agriculture, Maui
- DAGS, Survey Division (SMA Only)
- DOE,Office of Business Services
- State Land Use Commission
- DBEDT
- DBEDT, Office of State Planning
- Dept of Hawaiian Homes Land
- Dept. of Labor
- Office of Hawaiian Affairs
- Dept. of Human Services-Maui
- Civil Defense (CPA/CIZ only)

**OTHERS:**

- Maui Electric Company
- Hawaiian Telephone
- Library
- Community Association (2 copies)  
Conservation District

**County Agencies**

- DPWWM, LUCA (5 copies)
- Water Department
- Parks and Recreation
- Fire
- Police
- Housing & Human Concerns
- Corporation Counsel
- County Clerk
- Mayor's Office
- Finance Dept

**FEDERAL:**

- Natural Resources Conservation  
Services - Maui
- Natural Resources Conservation  
Services - Lanai, Molokai
- U.S. Fish and Wildlife
- Army Corps of Engineers
- Maui Soil & Water Conservation District
- Molokai/Lanai Soil & Water

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SUBJECT: I.D.: SMX2002/0641  
TMK: 5-9-005: 007 and 081  
Project Name: Linda E. Dunn Single Family Residence (Conservation District)  
Applicant: Linda E. Dunn

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TRANSMITTED TO YOU ARE THE FOLLOWING:

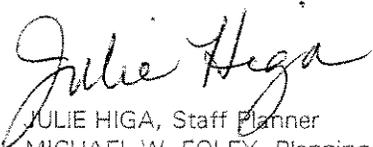
- Application**
- Revised Project Plans
- Traffic Report/Analysis
- Archaeological Report/Survey

THESE ARE TRANSMITTED AS CHECKED BELOW:

- For Your Comment/Recommendation**
- For Your Approval/Signature
- As Requested

Transmittal to: DOH  
March 7, 2003  
Page 2

Please submit your comments/recommendations by April 6, 2003. If additional clarification is required please contact me at 270-7814.

  
JULIE HIGA, Staff Planner  
for MICHAEL W. FOLEY, Planning Director

MWF:JMH:iar

c: Clayton Yoshida, Planning Program Administrator  
Julie Higa, Staff Planner  
Project File  
General File K:\WP\_DOCS\PLANNING\smx\2002\0641\_Dunn\Health.wpd

Ms. Julie Higa  
Staff Planner  
County of Maui  
Department of Planning

31 December 2003

Re: SMA Exemption Application  
Linda E. Dunn  
TMK # 5-9-005: 007 & 081  
#SMX2002/0641

Dear Ms. Higa,

As the year ends, I wanted to advise you (and my file) on the progress I have made on the concerns in the Department's letter of March 7, 2003 which were raised regarding my application for SMA Exemption on my construction on my property in Wailau, Moloka'i.

- 1) The 100 year flood inundation limits of Kahawaiiki Stream have NOT been determined per Steve Yamamoto, Hydrolic Engineer, Army Corp of Engineers. Mr. Yamamoto stated only Kalaupapa inundation limits have been determined on North Shore Moloka'i due to lack of inhabitants. Therefore I will raise the current base floor elevation of 4' to 6' to meet (and exceed) current flood standards on my proposed construction.
- 2) I am currently consulting an engineer to provide the grey water system construction plans requested by the Department of Health. (per: Roland Tejano, Maui District Health Offices)
- 3) I will be accompaning an archeologist to the property in June 2004 to conduct a site survey per: State Historic Preservation guidelines agreed upon through discussions with Sarah Collins of that Department.
- 4) In January of the new year, I will be submitting my application to the State Department of Land and Natural Resources for cosideration as advised by Dawn Hegger of that department.

I will keep you informed on the results of these projects and any new developments regarding my proposed construction in Wailau.

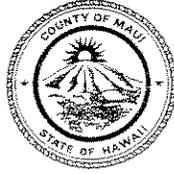
Wishing you a safe and prosperous New Year!  
Sincerely,



ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

WAYNE A. BOTEILHO  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

January 26, 2004

Ms. Linda E. Dunn  
2411 Makiki Heights Drive  
Honolulu, Hawaii 96822

Dear Ms. Dunn:

RE: Special Management Area (SMA) Assessment for an Exempted Action (SM5) or an SMA Minor Permit for a Single-Family 529 Square Foot One-Story Single Family Dwelling at Tax Map Key: 5-9-005:007 and 081, Wailau, Ko'olau, Molokai (SMX 2002/0641)

The Planning Department (Department) received your letter of January 6, 2004, which provided a status of the issues raised by this Department in our letter of March 7, 2003. Based on the information you provided, the Department has determined that since your application has remained incomplete for more than one (1) year (November 19, 2002), and additional information will not be provided until after June 2004, we are closing your file and suggest that you reapply after you have provided the information requested by this Department.

In your resubmittal, you should include all of the letters from the agencies, including this Department's letter of March 7, 2003. Your application should address all concerns raised by the agencies including this Department's letter of March 7, 2003. The Department requested a topographical map and location of Kawaiiki Stream because of comments made on your "Zoning and Flood Confirmation Request Form" from our Zoning Administration and Enforcement Division which commented that the property was within the 100 year flood inundation limits of Kawaiiki Stream.

If you have any further questions, please contact Clayton Yoshida, Planning Program Administrator, at 270-7735.

Sincerely,

A handwritten signature in black ink that reads "Mike Foley". The signature is stylized and written in a cursive-like font.

MICHAEL W. FOLEY  
Planning Director

Ms. Linda E. Dunn  
January 26, 2004  
Page 2

MWF:JH:smb

c: Clayton I. Yoshida, AICP, Program Planning Administrator  
Sam Lemo, DLNR, Land Division, Planning Branch  
Herbert Matsubayashi, Maui District Health Office, DOH  
Julie Higa, Planner  
2004 CZM File  
Project File  
General File  
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Ms. Julie Higa  
Staff Planner  
County of Maui  
Department of Planning

June, 2006

Dear Ms. Higa,

In November of 2002 I submitted an Assessment For Exempted Action to your department for my property in Wailau, Moloka'i. In March 2003 I received a letter with questions from Director of Planning Foley (see attached). My original application was returned to me in January 2004 for lack of prompt action (see attached).

It has taken over 2 years, and great expense, to comply with the three requests from those letters. The biggest obstacle was finding professionals willing to take on such a small project in such a remote area!

Enclosed please find my re-submitted Assessment Application For Exempted Action with the letters of approval from the departments requested in the Directors letter of March 2003.

Regarding paragraph #1 of that letter:

In the new application is a topographical map with elevations of the stream and proposed construction area. I have been advised that no 100 year flood inundation limits for Kahawaiiki Stream or any of North Shore Moloka'i has been determined, with the exception of Kalaupapa, due to lack of inhabitants. (per Steve Yamamoto, Hydrolic Engineer, Army Corp of Engineers)

Therefore, I propose to bulid my cabin 4' above ground level to meet (and exceed) current flood standards in Chapter 19.62, Maui County Code.

Regarding paragraph #2 of that letter:

The enclosed greywater plans were drawn by a licensed engineer who will also inspect the finished system per Roland Tejano, Maui District Health Office. The java plum tree refered to in that paragraph "removed" itself during a storm in 2003. (see Attachments 5 & 10 of application)

Regarding paragraph #3:

The approval letter for the archeological survey and report from State Historic Preservation Division is enclosed as well as the report being included in the application. (see attachment #8 of application)

If there are any further questions please contact me at: Work- 237-5228  
(this # has voice-mail)  
Home- 599-5667

I will also be submitting a Conservation District Use Application with the Department of Land+Natural Resources at this time.

Thank you for your assistance in this matter.

Sincerely,



Linda Dunn

24 July 2006

To: County of Maui Department of Planning

From: Linda Dunn  
2411 Makiki Hgts. Dr.  
Honolulu, HI 96822

Re: SMX2006/0282

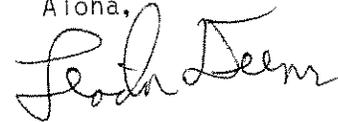
Aloha Robin!

I am enclosing a copy for the file of my follow-up letter to DLNR after my meeting with Tiger Mills on 21 July 2006. I am working to make required changes and additions to my CDUA so that I may resubmit in a few weeks.

I believe you received a copy of the 14 July 2006 letter to me from DLNR Administrator Lemmo regarding the deficiencies in my application. This triggered the meeting with Tiger to discuss the areas of the application which need to be expanded or added to.

I will keep you informed of my progress. Thank you again for your assistance in this matter.

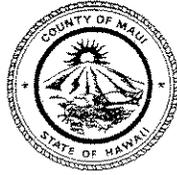
Aloha,

A handwritten signature in cursive script, appearing to read "Linda Dunn".

ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

DON COUCH  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

August 14, 2006

Ms. Linda Dunn  
2411 Makiki Heights Drive  
Honolulu, Hawaii 95822

Dear Ms. Dunn:

RE: Special Management Area Assessment for a One-Story,  
Single-Family Dwelling and Associated Improvements Located at  
TMK's: 5-9-005:007 and 081, Wailau Valley, Koolau, Molokai  
(SMX 2006/0282)

The Maui Planning Department (Department) has reviewed the Special Management Area (SMA) Assessment (Assessment) for the construction of a single-family dwelling and associated improvements located within the State Conservation District and will hold the Assessment in abeyance until the provisions of Chapter 343, Hawaii Revised Statutes (HRS) are complied with.

Provisions within the SMA Rules of the Maui Planning Commission mandates that SMA assessments requiring compliance with Chapter 343, HRS, contain one of the following: a letter from the accepting agency exempting the requirement of an environmental assessment, an environmental assessment with findings of no significant impact, or an environmental impact statement.

Proposed actions on lands designated Conservation by the State Land Use Commission requires compliance with the provisions of Chapter 343, HRS. Documentation provided in the Assessment indicates that the Department of Land and Natural Resources, Office of Conservation and Coastal Lands (DLNR) has determined that an Environmental Assessment would be required. Once the Department receives documentation that the DLNR has completed processing the Environmental Assessment, then the Department will complete the review of the Assessment.

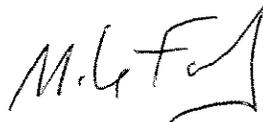
The Department notes that this Assessment contains the additional information requested in its March 7, 2003 letter (SMX 2002/0641). Further, that the DLNR indicated in their letter dated July 17 2003, (MA-03-127) that the proposed undertaking is an identified land use that requires a Conservation District Use Application from the

Ms. Linda Dunn  
August 14, 2006  
Page 2

Board of Land and Natural Resources. Lastly, the Department of Land and Natural Resources Historic Preservation Division has accepted the report documenting the results of an archaeological inventory survey conducted on the property via letter dated November 10, 2004, (Log No: 2004.3258, Doc No: 0411SC03). Thus the Department awaits the completion of the Environment Assessment to resolve other issues that may emerge.

Should you require further clarification, please contact Ms. Robyn Loudermilk, Staff Planner, at [robyn.loudermilk@co.maui.hi.us](mailto:robyn.loudermilk@co.maui.hi.us) or 270-7180.

Sincerely,



MICHAEL W. FOLEY  
Planning Director

MWF:RLL:bv

c: Clayton I. Yoshida, AICP, Planning Program Administrator  
Robyn L. Loudermilk, Staff Planner  
Nancy M. McPherson, Molokai Planner  
Tiger Mills, DLNR-Office of Conservation and Coastal Resources  
Project File  
Molokai File  
General File  
K:\WP\_DOCS\PLANNING\smx\2006\0282\_DunnRes\labeyance.wpd

To: Roland Tejano  
Maui District Health Office  
54 High Street  
Wailuku, Hawaii 96792

November, 2005

From: Linda Dunn  
2411 Makiki Heights Dr.  
Honolulu, Hawaii 96822

Re: Greywater Distribution System Approval  
TMK# 5-9-005-007/081  
Wailau, Moloka'i

Aloha!

I am writing in reference to an SM5 application which your office reviewed in March 2003 for my proposed construction on my parcel in Wailau, Moloka'i. I was referred to you by the Department of Health, Wastewater Division in Honolulu.

You advised me that the greywater system plans must be drawn by an engineer registered in the state of Hawaii. It has taken over 2 years and great expense to comply with this request. The biggest obstacle was finding an engineer willing to take on such a small project in such a remote area! Enclosed please find the plans drawn by Michael Conway of Silversword Engineering of Maui.

As you requested in our phone conversation in June 2005, I am enclosing a floor plan, to scale, of the cabin and attached deck. The structure is a single family residence, to be occupied by one person, with a single sink and shower on the deck and a Sun-Mar waterless self-composting toilet on the back porch.

The cabin itself and attached deck are of cedar and are a pre-cut kit unit from Summerwood Products of Ontario, Canada. The main cabin is 10'x14' interior with a 4'x14' back porch and a 8'x14' loft area. The attached deck is 14'x14'.

I hope this will meet the requirements of your department. Please contact me if there are any further questions. The Maui County Planning Department has requested that I enclose a letter of approval from your department with my revised SM5 application.

I thank you for your assistance and look forward to receiving your letter.

Mahalo,



Linda Dunn  
599-5667 home  
237-5228 work (with voice mail)

To: Roland Tejano  
Maui District Health Office  
54 High Street  
Wailuku, Hawaii 96792

November, 2005

From: Linda Dunn  
2411 Makiki Heights Dr.  
Honolulu, Hawaii 96822

Re: Greywater Distribution System Approval  
TMK# 5-9-005-007/081  
Wailau, Moloka'i

Aloha!

I am writing in reference to an SM5 application which your office reviewed in March 2003 for my proposed construction on my parcel in Wailau, Moloka'i. I was referred to you by the Department of Health, Wastewater Division in Honolulu.

You advised me that the greywater system plans must be drawn by an engineer registered in the state of Hawaii. It has taken over 2 years and great expense to comply with this request. The biggest obstacle was finding an engineer willing to take on such a small project in such a remote area! Enclosed please find the plans drawn by Michael Conway of Silversword Engineering of Maui.

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The cabin itself and attached deck are of cedar and are a pre-cut kit unit from Summerwood Products of Ontario, Canada. The main cabin is 10'x14' interior with a 4'x14' back porch and a 8'x14' loft area. The attached deck is 14'x14'.

I hope this will meet the requirements of your department. Please contact me if there are any further questions. The Maui County Planning Department has requested that I enclose a letter of approval from your department with my revised SM5 application.

I thank you for your assistance and look forward to receiving your letter.

Māhale



Linda Dunn  
599-5667 home  
237-5228 work (with voice mail)



**silversword engineering**

January 13, 2006

05025

**FAXLETTER**

TO: Roland Tejano

9848237

Page(s) { 7 } including this page  
*(if there are any problems with this transmission please call.)*

FROM: Jofor Michael Conway

SUBJECT: Dunn TMK 2-5-9-009:007

**MESSAGE:**

It is our understanding that you spoka with Linda Dunn, owner. You mentioned to her that the application is not complete. You may need to check you files again. To follow please find our file copies of transmittal dated 11/29/05;which was in response to your Nov. 22, 2005 letter. Copy of our transmittal letter dated 11/29/05 to follow for your convenient review

Additionally on Nov. 10, 2005 we transmitted to you the items noted on copy of transmittal to follow for your review

Ms. Dunn has mentioned that you can approve this and since you are in receipt of all requested items, we look forward to your letter of approval. If you have any questions, please contact us..

- SUBMITTED:** (x ) for your use/files ( ) for your review/response  
 ( ) for action ( ) per our conversation ( ) per your request  
 ( ) for forwarding to: ( ) other  
 ( ) hard copies mailed ( ) no hard copies of fax mailed

cc: file fax copy/cover only: L. Dunn

536 513

If you disagree with any portion of the contents of this document, please contact us within five (5) days of the date of this document for discussion(s) and/or revision(s). In the absence of any revision(s), the contents of this document will serve as official record for the subject.

242-7746

LINDA LINGLE  
GOVERNOR OF HAWAII



CHIYOME L. FUKINO, M. D.  
DIRECTOR OF HEALTH

LORRIN W. PANG, M. D., M. P. H.  
DISTRICT HEALTH OFFICER

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
MAUI DISTRICT HEALTH OFFICE  
54 HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2102

February 3, 2006

Mr. Michael Conway  
1371 Lower main Street, Suite 2  
Wailuku, HI 96793

Dear Mr. Conway:

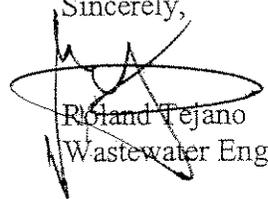
Subject: Individual Wastewater System for  
Linda Dunn  
T. M. K (2) 5-9-005:007  
Project Site: Wailau, Molokai, Maui

The Department of Health reviewed your proposed IWS plan and specification and we have the following comment that needs to be addressed:

1. The minimum absorption area for any trench or bed system shall be based upon flow of 200 gallons per bedroom per day and in accordance with Table III located in appendix F, entitled Tables.
2. Provide details showing manholes or removable covers to the septic tanks shall be extended to within twelve inches of the finished grade. If the manhole or removable cover is brought to grade, it shall be secured from unwanted entry. If the manhole or removable cover does not extend to the finished grade, a permanent inspection port with a minimum of six inches expanding thru the cover shall be brought to finished grade and fitted with screw type cap.
3. If a distribution box is used a permanent inspection port with minimum interior diameter of six inches shall be secured to the box cover brought to finished grade, and fitted with screw type cap or cover.
4. Please revise your IWS plans according to meet Chapter 11-62 requirement.

If you have any questions, please call my office at 984-8232, Wastewater Branch, Maui District Health Office.

Sincerely,

A handwritten signature in black ink, appearing to be 'Roland Tejano', written over the typed name and title.

Roland Tejano  
Wastewater Engineer

To: Roland Tejano  
Maui District Health Office

Re: Individual Wastewater System for  
Linda Dunn  
T.M.K. (2) 5-9-005:007  
Project site: Wailan, Molo Kai, Maui

### Project Fact Sheet

- 1) Property is in Conservation District with no utilities or roads for access. (All supplies must come by boat or helicopter.)
- 2) Building is a Cabin - 196 sq ft. interior area  
(one room) 196 sq ft. deck area
- 3) The interior contains a waterless self composting toilet. (Sun-Mar Excel NE brand)
- 4) The deck contains a single sink and shower with a drain to the infiltration system.
- 5) Occupancy will be one person.
- 6) Water source is catchment in (2) 55 gallon drums
- 7) Wastewater output will be 10 gallons per day.



**sword engineering**

March 7, 2006

05025

Mr. Roland Tejano  
 Engineer  
 Environmental Management Division  
 State Department of Health  
 54 High Street  
 Wailuku, HI 96793

**FAX MEMO**

# PAGES \_\_\_\_\_ DATE \_\_\_\_\_ FAX # \_\_\_\_\_

TO \_\_\_\_\_

FROM 5305913

CC \_\_\_\_\_

#1 # \_\_\_\_\_ FAX # \_\_\_\_\_

Subject: Linda Dunn Septic System  
 IWS File No.

Roland:

We received your letter of February 3<sup>rd</sup>, regarding the subject and note the requirement to design the system around standard parameters. We requested a variance to the standard conditions for this special application. The project is located in a remote area on Molokai that requires that all items be carried into this remote location. As noted on our submittal, the water closet is a composting style that does not require water. The only water that will be used is for washing dishes and a portable solar shower system. The cabin is for one occupant. Linda has previously supplied you with the cabin layout and the water requirement. All items for construction, including the septic system will have to be "backpacked" in.

We are again requesting a variance for this system based upon the parameters provided in our preliminary report. We would appreciate your handling this request or forwarding it to the proper authority.

We look forward to your earliest favorable response. If you should have any questions, feel free to contact me.

Mahalo,

Michael Conway

Xc: L.Dunn

*Jo Linder*

LINDA LINGLE  
GOVERNOR OF HAWAII



CHIYOME L. FUKINO, M. D.  
DIRECTOR OF HEALTH

LORRIN W. FANG, M. D., M. P. H.  
DISTRICT HEALTH OFFICER

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
MAUI DISTRICT HEALTH OFFICE  
64 HIGH STREET  
WAILUKU, MAUI, HAWAII 96793-2102

March 17, 2006

*H. Tejano*

Mr. Michael Conway  
1371 Lower Maqin Street, Suite 2  
Wailuku, HI 96793

Dear Mr. Conway:

**SUBJECT: PROJECT :Linda Dunn  
T.M.K. (2) 5-9-005:007  
Wailau, Molokai**

We have received your request to apply for a variance regarding the above subject project. In order to proceed with our plan review, please complete attached variance application forms together with the \$300.00 filing fee and mail it to the following address:

Department of Health  
Wastewater Branch  
919 Ala Moana Blvd. Room 309  
Honolulu, Hawaii 96814-4920

If you have any questions, please call Roland Tejano at 984-8232, Wastewater Branch, Maui District Health Office.

Sincerely,

*[Signature]*  
Roland Tejano  
Wastewater Engineer

24 March 2006

I, Linda E. Dunn, authorize Michael Conway and Silversword Engineering of Wailuku, Maui, Hawaii to act on my behalf in the application for variance with the Hawaii State Department of Health, Wastewater Branch for my proposed construction on parcel TMK # (2) 5-9-005:007 in Wailau, Molokai.

Linda E. Dunn

Applicant and Property Owner



05025

TELEPHONE



TO: *M.Conway*  
FROM: *State DOH*

Page(s) 1

SUBJECT: *Dunn Septic System*

*DOH: The variance request will be a long process, however we can approve the compost water closet & gray water system w/o a variance. You will need to design the system but it has to be with a minimum of 150 gpd and not 10 gpd.*

*MC: Okay, I will let the client know and she will tell me what she wants to do. Mahalo.*

Fc: *L.Dunn*

1371 lower main street, suite 2  
walluku, maui, hawaii 96793  
phone 808 244-8239 fax 242-7746 email:ssword@maui.net



05025

Mr. Tomas See  
Engineer  
Environmental Management Division  
State Department of Health

Subject: Linda Dunn Septic System  
IWS File No.

Tomas:

I have revised the drawing to include a distribution box, as you requested. I have also revised the leach bed detail. Plz note that the attached manufacturer's recommendations allow for a separation between trenches and do not require gravel backfill. Native soil is acceptable. I have highlighted these points with a blue highlighter.

We look forward to your earliest favorable response. If you should have any questions, feel free to contact me.

Mahalo,

A handwritten signature in black ink, appearing to read "Michael Conway".

Michael Conway

Xc: L.Dunn



Environmental Onsite Wastewater Solutions



# Support Center Designers & Engineers

Information Center | Frequently Asked Questions

- Designers & Engineers
- Key Advantages
- Tech Service & Support
- Product Demos
- Training & Education
- Information Center
  - FAQ's
  - Links of Interest
  - Case Studies
  - Performance Data

**Where can I get local installation code, system designs, and product technical questions answered?**

Many installation requirements and options are governed by local codes instituted by the health department in your area. When in question, check with the local health department for specifics and follow their code instructions. Any design or installation questions not answered here can be directed to the Infiltrator Systems' Technical Services staff by calling 1-800-718-2754.

**In what types of systems can Infiltrator chambers be installed?**

Infiltrator chambers can be used in almost any septic leachfield application. Wherever stone and pipe can be installed, Infiltrator chambers can be used. This includes trench, bed, and elevated mound installations. Infiltrator chambers provide superior treatment capabilities in pressure dosing, level distribution, serial distribution, evapotranspiration, and sand filter applications.

**When I install infiltrator chambers, how much can the size of the leachfield be reduced?**

System sizing is determined by each local health departments. Typically, health departments have approved sizing reductions of 25 to 50 percent when Infiltrator chambers are specified. Check your local health codes for the specifics in your area.

**What is the required distance between trenches? What is the required distance between chambers installed in a bed system?**

Trench spacing requirements are determined by local health codes so check with your local health department. In beds, Infiltrator Systems recommends a minimum of 6 inches separation between the feet of the chambers.

**What is the SideWinder® sidewall?**

The SideWinder sidewall is an improved sidewall design that provides greater system performance. The sidewall features MicroLeaching™ louvers that run along the entire wall of the Infiltrator chamber. This creates up to a 35 percent increase in open area on the sidewall as compared with a flat sidewall construction.

**What is the difference between the Standard Infiltrator chamber and the Standard SideWinder chamber?**

These two chambers have the same dimensions (34" W x 75" L x 12" H). The SideWinder chamber features the patented SideWinder sidewall design, while the Standard Infiltrator chamber does not.

**What is the difference between the High Capacity Infiltrator chamber and the High Capacity SideWinder chamber?**

These two chambers have the same dimensions (34" W x 75" L x 16" H). The SideWinder chamber features the patented SideWinder sidewall design, while the High Capacity Infiltrator chamber does not.

**Can chambers be installed under a driveway or paved surface?**

Some health codes do not allow septic leachfields to be installed under impervious surfaces such as a driveway. This is because the surface pressure can compact the soil, resulting in a negative affect on the soil's ability to treat effluent (wastewater). Check with your local health department for the specific codes for your area. If this type of installation is allowed, call Infiltrator Systems' Technical Services staff at 1-800-718-2754 for design and installation instructions.

**What is Infiltrator Systems' specification for minimum and maximum system cover?**

Infiltrator Systems recommends a minimum of 12 inches of compacted cover over the chambers. Maximum allowable cover over the chambers in a trench system is 96 inches. In bed systems, the maximum cover is 48 inches. If the drainfield is located in a non-traffic area, minimum cover can be reduced to six inches. Exercise caution with equipment when installing a system at the 6-inch depth. Infiltrator Systems does offer a line of Shallow Cover (SC) Chambers that allow for six inches of cover with an H-10 equivalent loading rate, however these are only available in specific markets. Always check with your local health codes for specific cover requirements.

**Can Infiltrator chambers be installed around obstacles?**

Yes. To accommodate existing obstacles in system installation, Infiltrator offers the Contour™ Wedge. The wedge is connected to a chamber, allowing for a 15-degree turn in the design. Multiple wedges can be connected together for additional design

Your leachfield system is constructed with Infiltrator leaching chambers. These units, manufactured of PolyTuuff™, a proprietary blend of polyolefin plastic, interlock together to form a continuous drainage area. This state-of-the-art system offers many advantages over old-fashioned stone and pipe systems. The chambers treat more effluent, more efficiently, in a smaller area. They also have a much greater storage volume than a gravel-filled trench and offer a very large surface area for effluent infiltration into the soil.



*Infiltrator chamber systems' design eliminates the need for stone. The entire trench bottom is open for unobstructed infiltration.*

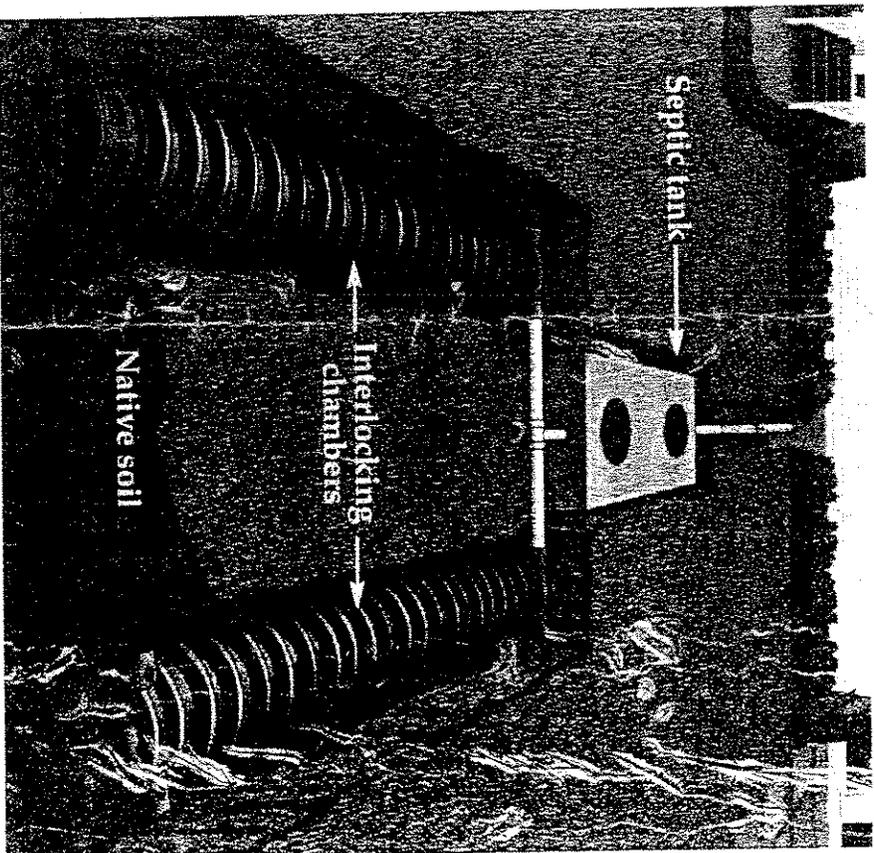
## The Infiltrator Chamber System.

In 1987, Infiltrator Systems introduced an innovative new technology in septic leachfields, which is now the number one choice in the United States. Infiltrator® chambers are hollow structures that attach end-to-end. They are installed in trenches or beds without gravel (except where local codes require the use of gravel). The entire bottom of the trench is open for unobstructed infiltration of water. The large storage volume within the hollow chambers accommodates peak flows of effluent from the home. Infiltrator chambers also feature patented sidewall louvers that allow lateral leaching of effluent into the soil.

## **System Components: The Leachfield.**

From the septic tank, partially treated effluent flows into a leachfield, which typically has two or more trenches. This is where effluent is naturally purified as it percolates down through the soil.

For proper effluent purification, the distance between the trench bottom and the water table should be equal to or greater than the minimum distance allowed by your local health department. The soil acts as a biological filter, removing harmful substances before the effluent reaches the groundwater.



*Effluent flows into the leachfield where it is naturally purified as it percolates down through the soil.*

Dunn Cabin; IWS File No. 6084; Compost Toilet & Graywater System

*FAX L. DUNN  
COMPLIMENTATIONS*

Conway

**From:** See, Tomas S [tomas.see@doh.hawaii.gov]  
**Sent:** Wednesday, May 31, 2006 3:39 PM  
**To:** M Conway  
**Cc:** Tejano, Roland C.  
**Subject:** RE: Dunn Cabin; IWS File No. 6084; Compost Toilet & Graywater System

Mr. Conway-  
Thank you for your submittal. The Department will process the approval for the subject compost toilet & graywater system.  
Regards,

Tomas S. See, M.S., P.E.  
Supervisor, Planning & Design Section  
Wastewater Branch  
Department of Health  
919 Ala Moana Blvd. Room 309  
Honolulu, Hawaii 96814  
Tel. No. (808) 586-4294  
Fax No. (808) 586-4300

FAX MEMO		
# PAGES	DATE	FAX #
TO	[Handwritten: 5/31/06]	
FROM	[Handwritten: 608 536 9949]	
CC		
#1#	FAX #	

-----Original Message-----

**From:** M Conway [mailto:ssword@maui.net]  
**Sent:** Tuesday, May 23, 2006 11:46 AM  
**To:** See, Tomas S  
**Subject:** RE: Dunn Cabin; IWS File No. 6084; Compost Toilet & Graywater System

- 1). The toilet is a Sun-Mar Model Excel NE and is NSF certified ([www.sun-mar.com](http://www.sun-mar.com)). I can send a letter certifying that it can handle the waste load since there is only one adult that will be using this. The attached email address gives the particular on the model.
- 2). I have attached a tif file of the drawing. I will send a hard copy with catalog cut.
- 3). The site evaluation seems to have been left out. I am sending another copy of our Preliminary Design Report (page 4 has the site evaluation and it is stamped & signed).
- 4). The drawing shows the chamber bed design.

Thank you for your help with this.

Mahalo,  
M Conway p.e.  
silversword  
abc 16922  
1371 lower main street  
suite 2  
walluku, hi 96793  
ph (808)244-8239  
fx (808)242-7746  
ssword@maui.net

**From:** See, Tomas S [mailto:tomas.see@doh.hawaii.gov]  
**Sent:** Tuesday, May 23, 2006 8:59 AM

Dunn Cabin; IWS File No. 6084; Compost Toilet & Graywater System

Cc: Tejano, Roland C.

Subject: Dunn Cabin; IWS File No. 6084; Compost Toilet & Graywater System

The following are the DOH comments that you need to address before we can grant approval of the subject IWS:

- 1) Please provide catalogue cut of the compost toilet. Compost toilet must be NSF certified & pre-approved by DOH.
- 2) Please provide site plan showing the actual size of the absorption bed (143 sq.ft) & location of compost toilet. The current site plan only showed one chamber.
- 4) Provide details/cross-section of the chamber bed design. Please note requirements of HAR Section 11-62-34(f)(3)(D). If chambered systems are used, the chamber units shall be placed up against the sidewall of the excavation. In absorption beds, the adjacent chambers shall abut one another.

Thanks,  
Tom See  
DOH-WWB

LINDA LINGLE  
GOVERNOR OF HAWAII



CHIYOME L. FUKUDA, M.D.  
DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. Box 3378  
HONOLULU, HAWAII 96801-3378

In reply, please refer to:  
File:

June 5, 2006

Mr. Michael Coonway  
Silversword Engineering  
1371 Lower Main St., Suite 2  
Wailuku, Maui 96793

**RECEIVED**

**FAX MEMO**

# PAGES \_\_\_\_\_ DATE \_\_\_\_\_ FAX # \_\_\_\_\_

TO: # 2006-2451B

FROM: # 2006-2451B

CO: # 2006-2451B

#1# \_\_\_\_\_ FAX# \_\_\_\_\_

Dear Mr. Conway:

Subject: Individual Wastewater System (IWS) Plans for  
Dunn Cabin  
Project Site: Wailau, Molokai  
TMK: (2) 5-9-005: 007  
File No.: 6084

IWS plans consisting of a sun Mar Compost toilet and graywater soil absorption bed to serve a 1 bedroom dwelling located at the above site have been reviewed by the Wastewater Branch for conformance to applicable provisions of Hawaii Administrative Rules, Title 11, Chapter 62, entitled "Wastewater Systems." The IWS plan conforms to applicable provisions of Chapter 11-62 provided that the following is complied with:

Per Section 11 62-31.2(c), the minimum depth of soil profile observation shall be at least five feet. Please provide the required soil profile information in your final inspection report.

The Department of Health will sign an applicable county building permit application provided that all information submitted as part of the IWS plan and county building permit application are consistent with each other and meet applicable provisions of Chapter 11-62 at the time of permit signature.

As the professional engineer responsible for the design of the above wastewater plan, it is your responsibility to inform the owner/lessee of the property that a) the IWS plans must be attached to each set of permit construction plans, b) the IWS must be installed by a licensed contractor, c) inspected by the engineer, and d) authorized in writing by the Department before use.

Should you have any questions, please feel free to contact Roland Tejano of the Wastewater Branch at 984-8232.

Sincerely,

  
HAROLD K. YEE, CHIEF  
Wastewater Branch

ATTACHMENT G

LINDA LINGELE  
GOVERNOR OF HAWAII



CHRISTINE L. PUKONO, M.D.  
DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH

P.O. BOX 3378  
HONOLULU, HAWAII 96801

In reply, please refer to:  
EMD / WB

Return to: Mr. Roland Tejano  
Wastewater Branch  
Maui District Health Office  
Department of Health  
54 High Street  
Wailuku, Maui, Hawaii 96793  
(808) 984-8232

Date: \_\_\_\_\_

File No. 60024

County of Maui

Subject: Individual Wastewater System (IWS) for:

DUNN

TMK: (2) 5-9-005-007

11-62-08(G) All wastewater systems, shall be constructed or expanded by a person meeting the requirements of Section 444, HRS and any pertinent rules promulgated by the Department of Commerce and Consumer Affairs, State of Hawaii.

I, \_\_\_\_\_, the owner of the subject system, have read  
(please print name)  
the above and understand that my wastewater system must be constructed or expanded by a licensed contractor meeting the above requirements.

The following person has constructed or expanded my wastewater system:

Name of Contractor / Company (print): \_\_\_\_\_

Contractor's Signature: \_\_\_\_\_ Dated: \_\_\_\_\_

License Number: \_\_\_\_\_

Homeowner's Name (print): \_\_\_\_\_

Homeowner's Signature: \_\_\_\_\_ Dated: \_\_\_\_\_

LINDA LINGLE  
GOVERNOR OF HAWAII



CHIYOME L. FUKINO, M.D.  
DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. Box 3378  
HONOLULU, HAWAII 96801-3378

In reply, please refer to:  
File:

June 5, 2006

RECEIVED

Mr. Michael Coonway  
Silversword Engineering  
1371 Lower Main St., Suite 2  
Wailuku, Maui 96793

**FAX MEMO**

# PAGES \_\_\_\_\_ DATE \_\_\_\_\_ FAX # \_\_\_\_\_

TO \_\_\_\_\_

FROM 1908 526573

CO. \_\_\_\_\_

PH # \_\_\_\_\_ FAX # \_\_\_\_\_

Dear Mr. Conway:

Subject: Individual Wastewater System (IWS) Plans for  
Dunn Cabin  
Project Site: Wailau, Molokai  
TMK: (2) 5-9-005: 007  
File No.: 6084

IWS plans consisting of a sun Mar Compost toilet and graywater soil absorption bed to serve a 1 bedroom dwelling located at the above site have been reviewed by the Wastewater Branch for conformance to applicable provisions of Hawaii Administrative Rules, Title 11, Chapter 62, entitled "Wastewater Systems." The IWS plan conforms to applicable provisions of Chapter 11-62 provided that the following is complied with:

Per Section 11-62-31.2(c), the minimum depth of soil profile observation shall be at least five feet. Please provide the required soil profile information in your final inspection report.

The Department of Health will sign an applicable county building permit application provided that all information submitted as part of the IWS plan and county building permit application are consistent with each other and meet applicable provisions of Chapter 11-62 at the time of permit signature.

As the professional engineer responsible for the design of the above wastewater plan, it is your responsibility to inform the owner/lessee of the property that a) the IWS plans must be attached to each set of permit construction plans, b) the IWS must be installed by a licensed contractor, c) inspected by the engineer, and d) authorized in writing by the Department before use.

Should you have any questions, please feel free to contact Roland Tejano of the Wastewater Branch at 984-8232.

Sincerely,

HAROLD K. YEE, CHIEF  
Wastewater Branch

26 March 2005

To: Laurie Buchanan, Chairperson  
Molokai Planning Commission

From: Linda Dunn  
2411 Makiki Hts. Dr.  
Honolulu, HI 96822

Re: TMK#(2) 5-9-005:007 and 081  
Single Family Residence in Wailau, Molokai

Aloha!

I write this in hopes of answering your questions re: my process and plans for my cabin in Wailau Valley as we discussed them after the wetlands meeting at Kilohana School, March 16, 2005. I feel it is important that the Molokai Planning Commission be aware of what I am doing to obtain permits and my plans for this parcel.

First, some personal information. I was born in Albany, New York and came to Hawaii in 1984 with my husband, who was in the Navy. We divorced in 1988 but I chose to stay in the islands, as I feel this is home. I first went backside in 1990 with a group including Wayne and Lori Meyer and Peter Dudoit. I immediately fell in love with the Valley and felt as though I had found "home". I have returned every year since, spending as much time as I could, camping in different areas but mostly along Kahawaiiki stream. I am currently employed

as Security Manager at The Contemporary Museum on Oahu, a private non-profit art museum. I am not "rich", earning less than \$27,000 a year, but I have managed to save over the last 15 years to make my dream of living in Wailau a reality.

In 1997, after 5 years of searching, I located a parcel owned by the Magoon Estate, which they were willing to sell - provided I also bought several other parcels. I could not afford to do this, so I found buyers on Molokai for the extra parcels, including Wren Westcott and Judy Capatida. I then completed title searches for all the parcels and we completed the purchases in June 1998.

From 1998 to 2002, I continued to save money and research the process for building on my parcel in Conservation District/Special Management Area. Sarah Sykes was a great source of information on the proper permitting process.

In 2002, I contacted Maui Planning Commission to obtain my exemption for building in an SMA, on the grounds of my parcel being designated Kuleana lands. The Commission informed me that exemptions were no longer automatic and an Assessment Application For Exempted Action must be completed.

I filed the application and received the attached letter from the Department of Planning. I have completed the SHPD portion and am in the process of completing the DGH and topographical map portions. When these are

Completed, I will re-submit my Assessment Application for Exempted Action/SMA and at the same time submit a Conservation District Use Application to DLNR. (see attached letter from DLNR.)

The way I understand the process for building on Kuleana Lands in an SMA/Conservation District, DLNR will review my application and request any additional information (as Maui Department of Planning did). Once DLNR accepts the application as complete, there will be a public hearing (I assume on Molokai) and a Board Permit is issued. I will then have 2 years to complete construction.

As to the actual construction, I am planning a 14x14 foot cabin with an 8x14 foot attic/loft and 14x14 foot deck (approx 500 sq ft.) on less than 1/3 of the parcel. I will install a self composting waterless toilet and catchment water system as well as a simple greywater distribution system. My access is a path from the beach, arriving by boat from Halawa. All construction materials will be dropped by helicopter.

I will be the sole occupant and will be planting a small garden for personal consumption. As a vegetarian, I will not be hunting or fishing. I plan to live simply and quietly, an early retirement while I am strong and healthy enough to enjoy it. I am budgeting my savings to support me until I can begin Social Security in 2015.

I understand the Commission's concerns

and hope this letter will give you the information  
you need on this proposed project. If there  
are any other questions, please contact me.

Aloha,

Linda Dunn

Linda Dunn

2411 Makiki Hts. Dr.

Honolulu, HI 96822

Home - ~~597-5667~~

Work - 237-5228

Fax - 536-5973

26 June 2006

To: Current Chairperson  
Molokai Planning Commission

From: Linda Dunn

Re: TMK #(2) 5-8-005, 007 and 081

Single Family Residence (proposed)

Wailau, Molokai

Aloha!

I am writing to update the Molokai Planning Commission on my progress for my proposed cabin in Wailau Valley.

In March 2005, I spoke with then Chairperson Laurie Buchanan about the Commission's concerns, raised by a letter from SHPD in March 2005 meeting, which stated their acceptance of an archeological survey conducted on my parcels. (At that time the Commission was not aware of my proposed plans, as an Assessment Application For Exempted Action had not been accepted as complete by Maui County Planning Department.) I assured Ms. Buchanan that the application was in progress as well as compiling the necessary papers for Dept. of Land and Natural Resources Conservation District Use Application. (See attached letters.)

I have finally completed the requests from Maui County Department of Planning re: my 2002 SMA Assessment and have resubmitted an Assessment Application for Exempted Action /SMA as well as submitting a Conservation District Use Application to State DLNR. These were both filed on 14 June 2006.

I am awaiting the acceptance as complete of both these applications. I believe a public hearing will then be held before DLNR Board makes a decision. Will this be done through the Molokai Planning Commission?

If any of the Commissioners have any questions or would like further information please contact at the address or phone numbers below.

Thank you for your assistance and consideration of this matter.

Linda Dunn

2411 Makiki Hts. Dr.

Honolulu, HI 96822

Home - 524-9389

Work - 237-5228 (voice mail)

Fax - 536-5973

Aloha,  
Linda Dunn

24 July 2006

To: Chairperson  
Moloka'i Planning Commission

From: Linda Dunn  
2411 Makiki Hgts. Dr.  
Honolulu, HI 96822

Re: TMK#(2)5-9-005:007  
Single Family Residence (proposed)  
Wailau, Moloka'i

Aloha!

I am writing to once again update the Moloka'i Planning Commission on my progress on my proposed structure in Wailau Valley. Since my last letter of 26 June 2006, I have re-submitted my Assessment Application For Exempted Action/ SMA to Maui County Planning Office. This application was accepted and is awaiting the Conservation District Use Permit from DLNR to be considered complete.

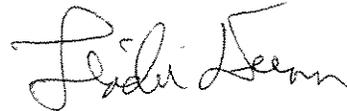
My Conservation District Use Application was rejected by DLNR as deficient, I believe you received a copy of this letter from Administrator Lemmo dated 14 July 2006. On 21 July, 2006, I met with K. Tiger Mills of the Dept. Of Conservation and Coastal Lands to review the deficiencies. Enclosed please find a copy of my follow-up letter to that department. I will be re-submitting my CDUA as soon as I am able to complete the suggested/requested changes and additions.

One of the requests for the resubmittal is the inclusion of all correspondence with any State or County Agencies. I will be attaching copies of my letters to the Moloka'i Planning Commission Chairperson of 26 March 2005 and 26 June 2006 as well as this letter and would also like to include any response from the Chairperson or other Commission Members regarding my proposal.

If any of the Commissioners have question or would like further information, please contact me at the address or phone numbers below.

Thank you once again for your assistance and consideration in this matter.

Aloha,



Linda Dunn  
2411 Makiki HGts. Dr.  
Honolulu, HI 96822

Home 524-9389  
Work-237-5228(voicemail)  
Fax-536-5973

LINDA LINGLE  
GOVERNOR OF HAWAII

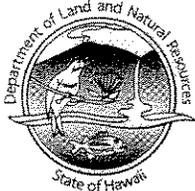


PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

DAN DAVIDSON  
DEPUTY DIRECTOR - LAND

ERNEST Y.W. LAU  
DEPUTY DIRECTOR - WATER

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



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
OFFICE OF CONSERVATION AND COASTAL LANDS

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

Ref:PB:DH

Correspondence: MA-03-127

**CERTIFIED / RETURN RECEIPT**

111 17 2008

Linda Dunn  
2411 Makiki Heights Drive  
Honolulu, Hawaii 96822

Dear Ms. Dunn,

SUBJECT: Special Management Area (SMA) Permit for Single Family Residence (SFR), Wailua, Koolau, Molokai, TMK: (2) 5-9-005:007 and 081

The Department has received a letter from the County of Maui, Department of Planning for a SMA permit request for a 529 square foot, single story Single Family Residence (SFR), located at Wailua, Koolau, Molokai, TMK: (2) 5-9-005:007 and 081.

Departmental records indicate the subject parcels are located in the State Land Use Conservation District, Resource subzone. A Conservation District Use Application (CDUA) must be filed with the Department *prior to any work that takes place on the subject parcels*. The proposed project is an identified land use, pursuant to Section 13-5-24, identified land uses in the Resource subzone, R-8, SINGLE FAMILY RESIDENCE, "a single family residence that conforms to design standards as outlined in this chapter." This requires a Board Permit.

The Department looks forward to reviewing a CDUA for the proposed project in the future. The Department is attaching Chapter 13-5, Conservation District Rules and Regulations for your perusal and a CDUA. Should you have further questions, please contact Dawn Hegger of the Office of Conservation and Coastal Lands at 808-587-0380.

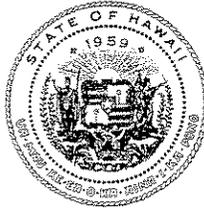
Sincerely,

A handwritten signature in cursive script, appearing to read "Dierdre S. Mamiya".

Dierdre S. Mamiya, Acting Administrator  
Office of Conservation and Coastal Lands

CC: Maui District Land Agent  
Maui County Department of Planning

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
OFFICE OF CONSERVATION AND COASTAL LANDS  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

DEAN NAKANO  
ACTING DEPUTY DIRECTOR - WATER

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

REF:OCCL:TM

CDUA: MO-3354

Linda Dunn  
2411 Makiki Heights  
Honolulu, Hawaii 96822

JUL 14 2006

Dear Ms. Dunn,

SUBJECT: Conservation District Use Application (CDUA) MO-3354

The Office of Conservation and Coastal (OCCL) is in receipt of your application and correspondence dated June 14, 2006 for a Single Family Residence located at Wailau, island of Moloka'i, TMK: (2) 5-9-005:007.

The Office of Conservation and Coastal Lands is rejecting your CDUA and Environmental Assessment because it is deficient. The application is incomplete and the materials presented are insufficient. Documentation of State and County agencies, consultants and field investigators conferred with should be included. All proposals need to be described. Demonstration that the proposed use is consistent with the Conservation District is incomplete. The subject area is within the Special Management Area and the entire State is within the coastal management area. Please review Chapter 205A, Hawaii Revised Statutes and respond to this conservation criteria.

The project is described as a 14' x 14' **cabin** with a 14' x 14' attached deck containing a self-composting toilet, catchment water system, solar and propane power, adjacent greywater infiltrator system and a fruit and vegetable garden. Your drawings of the structure in "Attachment F" do not coincide. The drawings are of two different structures. Please insure that plans are consistent. Building plans must comply with your County's building codes. Should your application be for a cabin, at this time a cabin is not an identified land use that could be applied for within the Conservation District.

Please describe the water catchment system(s). What are the dimensions and volume? Please describe the solar and propane power. Please describe the self-composting toilet. The included State Department of Health correspondence has stated that pursuant to the Hawaii Administrative Rules, §11-62-31.2(c) the minimum depth of soil profile observation shall be at least five feet for the Individual Wastewater System (IWS). However, plans provided in Attachment G, the IWS appear to be at a depth of two feet. Please clarify Attachment G.

The map of Royal Patent 2304 (Attachment H) defines a *perculation test site*. Please clarify what this is.

Your application states that access to the parcel will be by a path from the shoreline area. It is assumed that you will gain access to the area by boat and then by foot. Please note Wailau has been defined as having very high coastal hazard intensity with a rating of 6 on a scale of 1 to 7, with 7 being the highest rating. Sea conditions are often very rough and according to information provided by you, the beach is described as rocky.

How will you get material and equipment to the site? How will the trenching for the Individual Wastewater system be done? Regarding the proposed trail that crosses four properties, do you have permission from the landowners to create a trail and utilize the proposed area? The proposed site is described as densely vegetated. Will there be any tree removal? Grubbing and grading? Land clearing? Please provide this information in detail.

Regarding your Environmental Assessment. Please describe the environment in detail. Descriptions of the flora, fauna, land, soil, streams, climate, etc. should be included. Are there any threatened, endangered or endemic species in the area such as damselflies, avifauna, aquatic species, or bats? What potential affects may the proposal have to the environment? What potential affects may the environment have to the proposal? Does the area flood?

You may wish to contact a consultant to help in the preparation of the Conservation District Use Application (CDUA) and Environmental Assessment for submittal to the Department for processing. For Environmental Assessment requirements, the State Office of Environmental Quality Control (OEQC) should be contacted (phone 586-4185) regarding questions you may have concerning Environmental Assessments or you may go to their website at [www.state.hi.us/health/oeqc/index](http://www.state.hi.us/health/oeqc/index) for guidance.

Wailau is a remote possibly uninhabited valley except for the presence of hikers, hunters and campers who use the area mostly during the summer months. There is no public infrastructure. Garbage, sewage, drinking water, fire, the ability to access the area during poor weather and rough seas, the unavailability of medical services, lack of communications and in case of emergencies are a public, health safety and welfare concern. Fully explain how you will mitigate these challenges. In addition, please consult with the Molokai Planning Commission and/or community organizations to discuss your proposal.

CDUAs that have been approved by the Board of Land and Natural Resources (BLNR) are a part of the public record and are made available for review at the Department of Land and Natural Resources, located in Room 131 of the Kalanimoku Building, 1151 Punchbowl Street, Honolulu, Hawaii. We are returning your check. Should you have any questions, please feel free to contact Tiger Mills of our Office of Conservation and Coastal Lands at (808) 587-0382.

Aloha,



Samuel J. Lemmo, Administrator

Office of Conservation and Coastal Lands

c: Chairperson's Office  
Maui Board Member  
Maui District Land Office/DOCARE (Molokai)  
Maui County, Department of Planning  
Molokai Planning Commission

23 July 2006

To: Samuel J. Lemmo  
Administrator  
Office of Conservation and Coastal Lands

From: Linda Dunn  
2411 Makiki Hts. Dr.  
Honolulu, HI 96822

Subject: CDUA for TMK(2)5-9-005:007  
Single Family Residence at Wailau, Moloka'i

Aloha!

In response to your letter of 14 July 2006, I met with Tiger Mills of your office on 21 July 2006 to discuss the deficiencies in my application for a Single Family Residence at TMK(2)5-9-005:007 Wailau, Moloka'i.

My understanding, from this discussion, is that the following corrections and clarifications need to be included in my application upon re-submittal:

1)"Documentation of State and County agencies, consultants and field investigators conferred with should be included."

The only correspondence not currently included is from the Maui County Planning Department and the Moloka'i Planning Commission, which I will include.

2)"All proposals need to be described."

Details of my solar oven, propane stove, water catchment barrels, self-composting toilet will be included.

3)"Demonstration that the proposed use is consistent with Conservation District is incomplete."

I will elaborate on this.

4)"The subject area is within Special Management Area."

The SMA Exemption application has been accepted by Maui County Planning Dept. and is awaiting the CDUP for completion.

5)With regards to the "cabin", I will obtain cleaner drawings of the structure and eliminate the word "cabin", which is the suppliers terminology.

I will obtain proof of compliance with the Maui County building codes.

6)As stated in #2, I will detail the various "appliances".

7)"The included State Department of Health correspondence" refers to the 5 ft. soil profile observation (aka percolation test referred to in Attachment H). This is a requirement in the final report to the Department of Health by the greywater engineer after installation of the system.

This is not the "depth of 2 ft." on Attachment G. That refers to the depth the system is to be installed.

I will elaborate on this in the section describing the greywater system.

8)I have been visiting and camping in Wailau Valley for extended periods and at various times of the year for 15 years and I am familiar with the coastal hazards. (The surf in the winter months is spectacular!)

9)Access will be by boat and by foot on an existing path from the shore (one of many in the valley which are not official trails). Materials will be slung in

by helicopter in the same manner as was done during construction of the other structures in the valley. No heavy equipment will be used. This is a small structure and all work will be done by hand, including the trenching for the greywater system. Trees will be cut back but not removed, no grubbing or grading. The only area that will be affected will be the 1/3 of the 3/4 acre parcel where the structure will be. I will find an appropriate place in the application to elaborate on this.

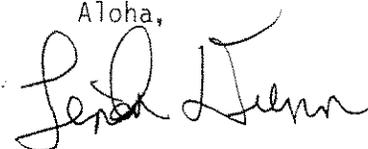
- 10) I will expand my Draft Environmental Assessment using the Environmental Guidebook and sample approved DEA's.
- 11) As I stated in #8, I am familiar with the hazards and lack of public infrastructure in the valley. That is one of the things that draws me to the area, the isolation. I did not comment on this aspect in my application because I saw nowhere that this information was asked for. (unlike the SMA Exemption application where it is asked for in detail.) I will elaborate on this and include it in a separate mitigation Attachment.
- 12) As I stated in #1, I will include my correspondence with Moloka'i Planning Commission.

I would like to add that most of my omissions were an attempt to be concise and to the point in answering the question in the application, not an attempt to be evasive. My interpretation of the application instructions was that long explanations and excess information was not requested. I will correct this in my re-submittal.

I would also like to state that I do not feel that I need a different planner to review my re-submittal at this time, since Tiger Mills is already familiar with my original application and the requested/suggested changes,

Mahalo nui loa for your time and consideration in this matter.

Aloha,



cc: K: Tiger Mills  
Office of Conservation and Coastal Lands

Moloka'i Planning Commission

Maui County Planning Department  
Special Management Area Office

To: The Francis H.I. Brown Trust  
P.O. Box 939  
Honolulu, HI 96808

From: Linda Dunn  
2411 Makiki Hgts. Dr.  
Honolulu, HI 96822

Re: Proposed Construction in Wailau, Moloka'i  
Single Family Residence  
TMK(2)-5-9-005:007

Aloha!

I am in the process of submitting my Draft Environmental Assessment and Conservation District Use Application to the State Dept. of Land and Natural Resources for my proposed construction of a Single Family Residence on my 0.68 acre parcel in Wailau Valley.

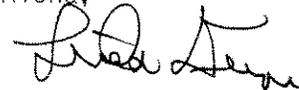
One of the requirements in the application is that I contact the owners of adjacent parcels to ask for their comments regarding this project.

Since the Trust has several small parcels in the vicinity of my proposed construction, I would appreciate any comments or concerns you would like to express about my proposed residence.

I am enclosing a short narrative about my project, a sketch of the proposed structure and a map of the proposed location for your review.

If you have any questions please feel free to contact me. Mahalo for your assistance with this process.

Aloha,



Home 524-9389  
Work 237-5228 (voicemail)  
Fax 536-5973

NARRATIVE SUMMARY OF PROPOSED ACTION

Owner/Occupant; Linda Dunn

Location: Wailau, Moloka'i  
TMK(2)-5-9-005:007

Proposed Action: Construction of Single Family Residence

Approving Agencies: Maui County Dept. of Planning  
Special Management Area Division

State of Hawaii Dept. of Land and Natural Resources  
Department of Conservation and Coastal Lands

State of Hawaii Office of Environmental Quality Control

I am proposing to build a single story cedar wood structure 14'x14' with a 8'x14' loft area and a 14'x14' attached cedar wood deck, both raised 4' above ground level, for a structure height of 18'8".

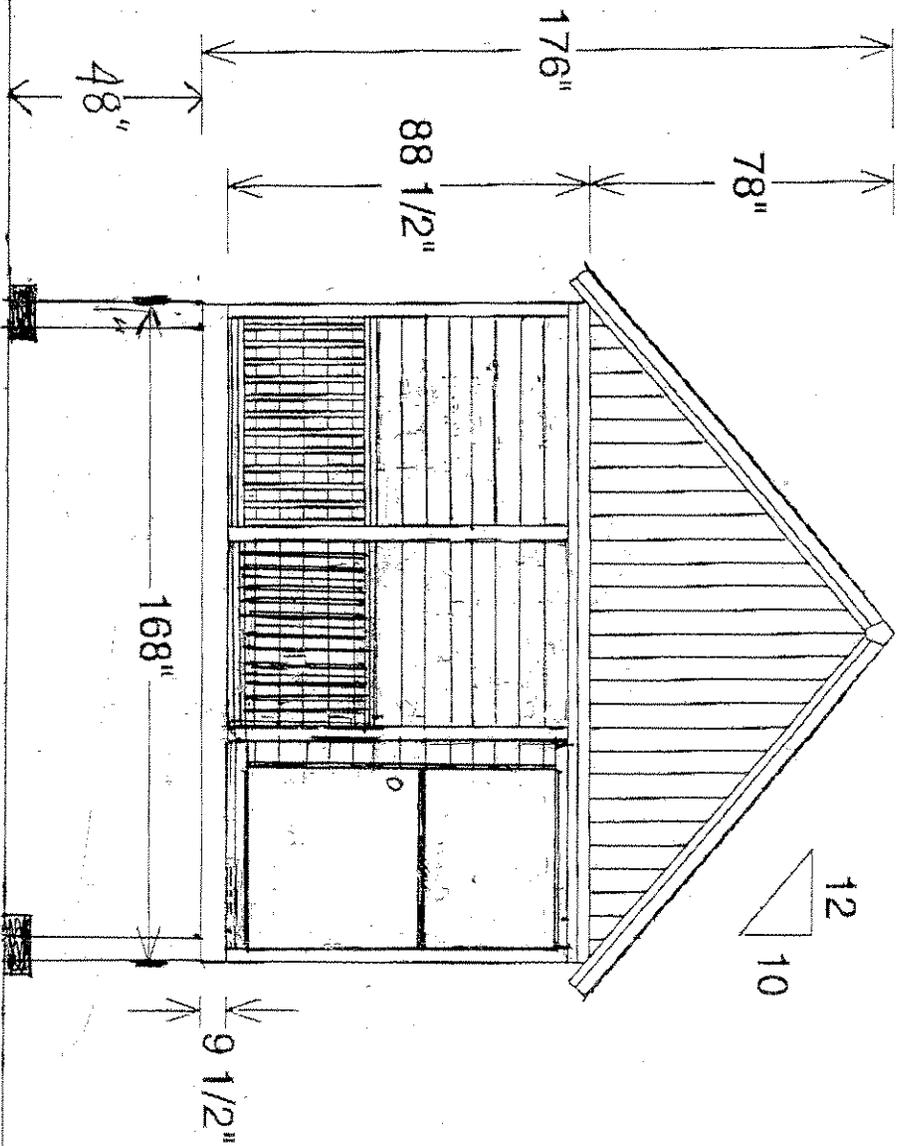
Contained in or on the structure will be a non-electric waterless self-composting toilet, solar oven, propane camp stove, solar battery rechargable lanterns and a simple water catchment system.

Adjacent to the structure will be a State Dept. of Health approved greywater infiltrator system for the sink and shower. I will also plant a small contained fruit and vegetable garden for personal consumption. (As a vegetarian, I will not be hunting or fishing.)

All activity will be confined to the NE 1/3 of the 0.68 acre parcel at least 100' from Kahawaiiki Stream and set back 40' to 50' from the adjoining parcels.

Access will be by boat from Halawa to the shore and by existing foot path from the shore to the parcel. All building materials will be slung in by helicopter. All work will be done by hand.

I intend to be the sole occupant of this Single Family Residence, to live simply and quietly in an early retirement. I have been camping and visiting for extended periods in various seasons in Wailau Valley for 15 years and I am aware of the remoteness and limitations of the valley. This is what has drawn me to the area and why I wish to make my home there.

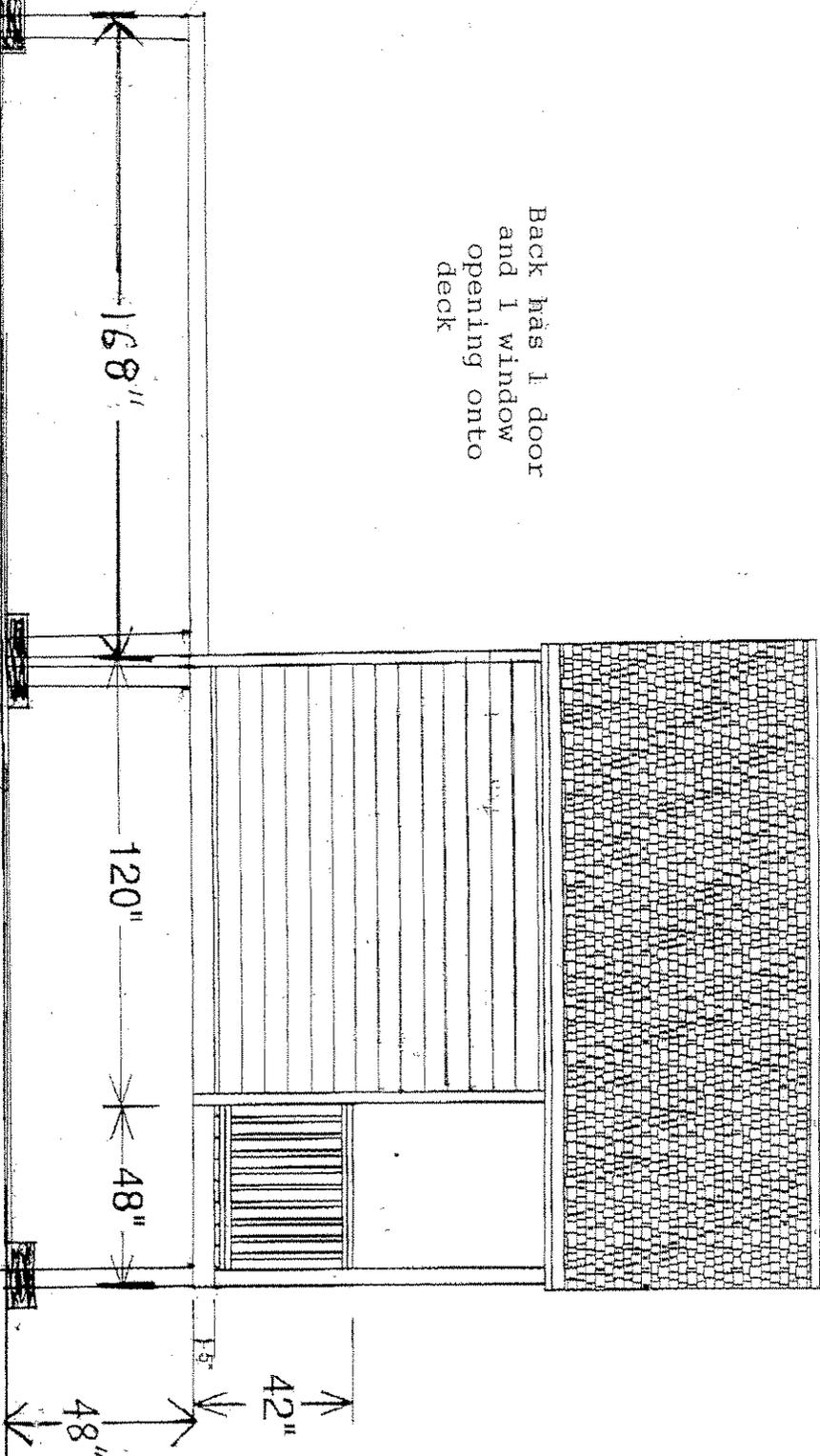


735 Progress Ave.  
 Toronto, M1H 2W7  
 Ontario, Canada  
 design@summerwood.com  
 www.summerwood.com  
 PRODUCTS  
 A Division of Progress International, Ltd.

14' X 14'  
 Telluride  
 Front View

Notes:  
 Scale: 1/4" (Inch) = 1' (Foot)  
 Drawn By: DMCC  
 05/05

Back has 1 door  
and 1 window  
opening onto  
deck



Right side has  
1 window

**Notes:**

Scale: 1/4" (inch) = 1' (foot)  
Drawn By: DMC  
05/05

**14' X 14'**  
**Telluride**  
**Side View**

735 Progress Ave.  
Toronto, M1H 2W7  
Ontario, Canada  
design@summerwood.com  
www.summerwood.com  
As Made Products of Ontario, Inc.

**Summerwood**  
PRODUCTS

THE FRANCIS H. I. BROWN TRUST

P. O. Box 939  
HONOLULU, HAWAII 96808

ROBERT B. BUNN  
TRUSTEE

-----  
TELEPHONE 521-9207

FAX 540-5062

E-MAIL [rbunn@caedes.com](mailto:rbunn@caedes.com) (office)

[rbb@hawaii.rr.com](mailto:rbb@hawaii.rr.com) (home)

August 2, 2006

Ms. Linda Dunn  
2411 Makiki Heights Drive  
Honolulu, HI 96822

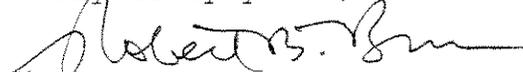
Dear Ms. Dunn,

I have received your undated letter, relating to your proposed construction of a small cabin on a kuleana in Wailau valley, Molokai, that adjoins land owned by this trust.

The trust has no objection to your construction, providing you get all the necessary permits.

The trust hopes you have carefully reviewed all the extant surveys of the valley, and that you will have a licensed surveyor mark out the kuleana you own, and your cabin location, to be sure it does not encroach onto the land owned by the trust.

Very truly yours,



Robert B. Bunn

To: The Francis H.I. Brown Trust  
P.O. Box 939  
Honolulu, HI 96808

From: Linda Dunn  
2411 Makiki Hgts. Dr.  
Honolulu, HI 96822

6 August 2006

Re: Proposed Construction  
TMK(2)-5-09-005:007

Mr. Bunn,

Mahalo for your prompt response of 2 August 2006 to my letter regarding my Proposed Construction on my property in Wailau Valley, Moloka'i which is adjacent to and in the area of parcels owned by The Francis H.I. Brown Trust.

I want to assure the Trust that I have studied all of the existing survey notes and maps from the area (Meyer, Podmore, Monseratt) as well as having a new survey of the parcel done by Valley Isle Surveyors Inc. of Maui in March 2005. The Proposed Construction will in no way encroach on the adjacent Trust parcel. The setback from our common boundary will be at least 50'.

I would also like to assure the Trust that all applicable approvals and permits required by Maui County Special Management Area regulations as well as State Dept. of Land and Natural Resources Conservation District Use Permit regulations will be acquired before construction.

Mahalo for your time and consideration in this matter.

*Mahalo,  
Linda Dunn*

To: Meyer Family  
P.O. Box 454  
Kaunakakai, HI 96748

From: Linda Dunn  
2411 Makiki Hgts. Dr.  
Honolulu, HI 96822

Re: Proposed Construction in Wailau, Moloka'i  
Single Family Residence  
TMK(2)-5-9-005:007

Aloha!

I am in the process of submitting my Draft Environmental Assessment and Conservation District Use Application to the State Dept. of Land and Natural Resources for my proposed construction of a Single Family Residence on my 0.68 acre parcel in Wailau Valley.

One of the requirements in the application is that I contact the owners of adjacent parcels to ask for their comments regarding this project.

Since your parcel (TMK(2)-5-9-005:006) is in the area makai of my proposed construction, I would appreciate any comments or concerns you would like to express about my proposed residence.

I am enclosing a short narrative about my project, a sketch of the proposed structure and a map of the proposed location for your review.

If you have any questions please feel free to contact me. Mahalo for your assistance with this process.

Aloha,



Home 524-9389  
Work 237-5228 (voicemail)  
Fax 536-5973

August 7, 2006

To: Maui County Dept. of Planning  
Special Management Area Division

State of Hawaii Dept. of Land and Natural Resources  
Department of Conservation and Coastal Lands

State of Hawaii Office of Environmental Quality Control

SUBJECT: Linda Dunn, Construction of Single Family Residence  
Wailau, Molokai, TMK (2)-5-9-005:007

To Whom It May Concern:

We, Dennis W. Meyer and Lorraine U. Meyer, purchased a parcel of land, TMK (2)-5-9-005-006 in Wailau Valley, Molokai, Hawaii which is adjacent to Linda Dunn's parcel.

We had the pleasure of meeting Linda 15 years ago in Wailau Valley which she refers to as "home." Both of us are summer campers to Wailau. Without fail, Linda spent every year at Wailau during her vacations. The seasons never bothered her. She would put up her tent and stay until it was time to return to work on Oahu.

Linda is an environmentalist; loves Wailau and is a caretaker of her surrounding. She can best be described as a hard worker, good neighbor and of fine character. We knew that Linda's plans and dreams would someday include building a home in Wailau as soon as finances allowed it.

We received a copy of Linda's proposal to construct a single-family residence. As we reviewed her plans, we noticed that it is a simple home which would blend into the environment. This letter is submitted to encourage your approval of her proposal. We would appreciate your support. Both of us support Linda's wholeheartedly.

Sincerely yours,

  
Dennis W. Meyer

  
Lorraine U. Meyer  
P.O. Box 454  
Kaunakakai, HI 96748-0454

To: Hanson/Ellithorpe Family  
P.O.Box 288  
Willow, AK 99688

From: Linda Dunn  
2411 Makiki Hgts. Dr.  
Honolulu, HI 96822

Re: Proposed Construction in Wailau, Moloka'i  
Single Family Residence  
TMK(2)-5-9-005:007

Aloha!

I am in the process of submitting my Draft Environmental Assessment and Conservation District Use Application to the State Dept. of Land and Natural Resources for my proposed construction of a Single Family Residence on my 0.68 acre parcel in Wailau Valley.

One of the requirements in the application is that I contact the owners of adjacent parcels to ask for their comments regarding this project.

Since your parcel (TMK(2)-5-9-005:016) is in the area west of my proposed construction, I would appreciate any comments or concerns you would like to express about my proposed residence.

I am enclosing a short narrative about my project, a sketch of the proposed structure and a map of the proposed location for your review.

If you have any questions please feel free to contact me . Mahalo for your assistance with this process.

Aloha,



Home 524-9389  
Work 237-5228 (voicemail)  
Fax 536-5973

August 7, 2006

Susan J. Hansen  
Dennis H. Ellithorpe  
P.O. Box 288  
Willow, Alaska 99688  
(907) 495-5797

To whom it may concern:

We own a parcel of land (TMK(2)-5-9-005:0/16) adjacent to property owned by Linda Dunn. She is presently applying for a permit to build a single family small home on her .68 acres in Wailay Valley and she has asked that we respond to her proposal.

We have known Linda Dunn for 2 years now. She has a great appreciation for the valley of Wailay that any neighbor would applaud. Dedication to the environment and awareness of its health is important to Linda. That makes her someone that we would not only be proud to have as a neighbor, but someone that may become a true friend, since we too share those values.

Wailay is a sensitive, unique, spiritual and historically important valley. We know

that Sinda Dunn is extremely aware of this. Therefore, we feel very comfortable with Sinda presiding in Wailau Valley.

Sinda has sent us a detailed description of her proposed home and building site. It is very modest and simple. With her composting toilet and use of solar power, we see it as no strain on the Wailau Valley. And we are certain that Sinda is the sort of person who will be absolutely meticulous of any grey water. We really appreciate any neighbor planting fruit trees and a garden, as Sinda plans.

Overall, our opinion is that Sinda Dunn will be a positive force to the valley of Wailau, Molokai. She will be the one picking up others' trash (as we often do). She will be the thoughtful neighbor - quiet, sharing and aware that Wailau is very, very precious.

Thank you,  
Susan J. Hansen  
D. A. Hansen

## CULTURAL ASSESSMENT

INTRODUCTION- At the request of the Moloka'i Planning Commission, a more detailed description of the methods and sources of information used in the preparation of the assessment concerning the cultural resources of Wailau Valley, Moloka'i is added to the Final Environmental Assessment attached to the Conservation District Use Application for the construction of a Single Family Residence at TMK (2)-5-9-9:007 Wailau, Moloka'i by applicant/owner Linda Dunn.

METHODOLOGY- This assessment was prepared following the guidelines for cultural assessment in the Environmental Guidebook from the State of Hawaii Office of Environmental Quality Control. Included is information obtained from historic documents, archeological surveys, journals, newspapers, magazines, Moloka'i cultural experts and interviews with Moloka'i residents with family ties to Wailau Valley in past and current generations.

While all the information obtained refers to Wailau Valley in general, none refers to the specific parcel of proposed construction.

VALLEY HISTORY- Pre-contact Hawaii political land divisions consisted of ahupua'a, whose boundaries tended to follow topographical features to include areas from mountain top to off shore. Wailau Valley was an exception. The northeastern portion of the Valley was part of the Halawa Ahupua'a to the east, as illustrated on the survey map drawn for Bishop Estate by G. Podmore, August 1915 (attachment #5). The parcel of proposed construction is within this Halawa Ahupua'a.

From pre-contact into historic times, Wailau Valley was known for cultivation of kalo and wauke. Estimates of 80 to 200 acres of the Valley planted in kalo are given in historic botanical and archeological surveys. The remnants of lōi walls are abundant in all areas of the Valley.

Wailau kapa makers specialized in pa'ikukui and mahunali'i cloth, the latter being reserved for royalty and ceremonial practices.

Remains of settlement areas and ceremonial features are present in the Valley, along with the remains of the extensive agricultural systems. The State Historic Preservation Division of DLNR has designated the entire Wailau Valley as site 50-60-04-272, "Wailau Agricultural Complex".

There are a limited number of maps (Monsarrat 1903, Podmore 1915) and archeological surveys (Summers 1971, Reeves 1973, McElroy 2004, 2005) compiled between contact and the present day.

During the Mahele in 1848, 35 awards were made in Wailau, mostly along the Wailau and Kahawai'iki Streams, including Award #10869, the current TMK (2)5-9-9:007, site of proposed construction. (attachment #5- Native Register)

There are only sporadic records for Wailau in the Hawaii State Archives. The Tax Assessment and Collection Ledgers from 1855 through 1865 indicate the total number of males, dogs, horses and (sometimes) boys in the Valley and how much was collected in poll, school and road taxes. The 1865 entry included 14 mules. There are large gaps in the records for many rural areas all across Hawaii.

Wailau Valley is mentioned briefly in various late 19th century travelers journals, including Robert Louis Stevensons in 1889.

## Valley History(cont.)

Hawaii State Library (Main, Manoa, Moloka'i branches) and the Bishop Museum Archives contain 19th and early 20th century newspaper, magazine articles and reports which have references to Wailau Valley. Most of these speak of the beauty of the land and the declining population in the Valley. Most state that the Valley was being "abandoned" because the residents could no longer make a living exporting their taro and were moving to "the cities".

Among the Oral History Tapes in Bishop Museum Archives are interviews with North Shore Moloka'i residents by Mary Kawena Pukui and Rubelite Johnson. Most have only small references to Wailau and speak only of the lifestyle in the Valley. The Naki family is the last Hawaiian 'Ohana mentioned to be residing in the Valley.

Rachael Naki was interviewed in 1973 by Dortehea Curtis and in 1993 (for the Moloka'i Dispatch) by Anna Goodhue. She spoke of being raised in Wailau until a 1914 flood destroyed the last of the shoreline settlement. Kupuna Naki spoke of the family lifestyle and traditions of the early 1900's before the taro production ceased and the population left for other areas, mostly for financial reasons.

**ORAL TRADITIONS**— Several oral traditions concerning Wailau Valley have been recorded to date. These include proverbs, legends and songs.

Mary Kawena Pukui refers to Wailau, Moloka'i in 6 of her 'Ōlelo No'eau.

There are several mo'olelo associated with Wailau, including some passed down from pre-contact times, such as: Ko'ona the eel god, 'Ai'ai and the 'Ōpae, and Hi'iaka kills the mo'o Kikipua.

A few mele have been written in modern times about Wailau: 'Aina Moloka'i by Kai Davis, E'Hihiwai and Nā Makani 'Ehā by Denis Kamakahi.

**INFORMANTS**— Many of the families on Moloka'i today are descendants of former Wailau residents. Their family traditions include use of the Valley for recreational camping as well as subsistence hunting, fishing and gathering. These families still visit the area for extended periods related to these activities but none reside permanently in Wailau.

Informal interviews and "talk story" sessions over the last 15 years with various Kupuna and younger members of these families have produced numerous stories of early 20th century lifestyle and resource use in Wailau Valley but no references to religious or spiritual practices in the area.

This may be due to the reluctance of family members to share this information outside the 'ohana. If any customary or traditional Native Hawaiian practices (aside from the camping, hunting, fishing or gathering) are being exercised in the Valley, they are not observable to those outside the 'Ohana.

Kumuhula John Kaimikaua spoke with the applicant several times in the late 1990's regarding the mo'olelo and traditions of Moloka'i and of Wailau in particular. Kaimikaua was an expert on pre-contact Moloka'i society, beliefs and practices. The legends previously mentioned in the Oral History section of this assessment are among those he told, along with information on the pre-contact lifestyle of the Valley, similar to that included from other sources.

Informants(cont)

None of the informants related any information on the specific parcel of the proposed construction or the parcel Mahele claimant and possible descendents.

IMPACTS AND MITIGATIONS-

This assessment has found no observable traditional or customary Native Hawaiian practices being exercised in Wailau Valley or being referred to by informants as being exercised with the exception of recreational camping, or subsistence hunting, fishing and gathering by Moloka'i residents.

Access for these activities will not be affected by the proposed construction as the parcel is located away from the areas of these activities. The structure will not be visible to those using the resources of Kahawai'iki Stream as the stream bed is approximately 6' below the level of the northeastern portion of the parcel. All related activities will be confined to the northeastern 1/3 of the .58 acre parcel.

If it can be determined that Native Hawaiian rights are associated with the parcel containing the proposed construction, the applicant will allow access through the parcel to access these resources.

DOCUMENT SOURCES

Bishop Museum Archives  
Hawaii Mission Children's Society  
Hawaii State Archives  
Hawaii State Department of Land and Natural Resources  
Bureau of Conveyances  
Hawaii State Library  
Main Branch  
Manoa Branch  
Moloka'i Branch  
Kamehameha Schools/Bishop Estate  
Map Department

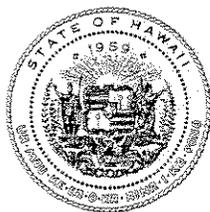
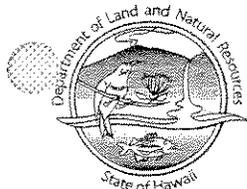


## REFERENCES

- American Board of Commissioners for Foreign Missions  
1937 *Molokai Station Reports 1833-1849*. Typescript on file at the Hawaiian Mission Children's Society, Honolulu.
- Anonymous  
1908 "Locals and Personals," in *Maui News*, August 22, 1908 5:2.  
1935 "Wailau Area May Relieve Poi Shortage," in *Maui News*, July 13, 1935 1:1.  
1939 "Buffalo Herd is Recalled by Aged Chinese Settler," in *Maui News*, September 9, 1939 3:3.
- Beckwith, Martha  
1970 *Hawaiian Mythology*. Honolulu: University of Hawai'i Press.
- Curtis, Dorothe  
1973 Rachel Naki Interview, Unpublished Audiotape. August 19, 1973.
- Davis, Kai  
n.d. *'Aina Moloka'i*. Lyrics
- Dresner, Ed  
1952 "Hiking in Wailau Valley" in *Paradise of the Pacific*, Vol. 64 pp. 66-69
- Fornander, Abraham  
1996 *An Account of the Polynesian Race*. Rutland, Vermont: Charles E. Tuttle Company.
- Goodhue, Anna D.  
1993 "Talking Story with Rachel Naki," in *The Dispatch*, February 18, 1993:16.
- Handy, E.S. Craighill  
1940 *The Hawaiian Planter*. Honolulu: Department of Anthropology, Bernice P. Bishop Museum.
- Handy, E.S. Craighill and Elizabeth Handy  
1972 *Native Planters of Old Hawaii: Their Life, Lore, and Environment*. Honolulu: Department of Anthropology, Bernice P. Bishop Museum.
- Hyde, C.M.  
1885 "A Visit to Molokai," in *Hawaiian Gazette*, September 16, 1885. 3:4.
- Judd, Henry P.  
1938 "A Visit to Wailau, Molokai," in *Paradise of the Pacific*, March 1938. 50:6.
- Kamakahi, Dennis  
n.d. *Nā Makani 'Ehā*. Lyrics  
1978 *E Hihiwai*. Lyrics
- Keola, James N.K.  
1893 "Molokai, A Local Tourist's Impression," in *Pacific Commercial Advertiser*, June 7, 1893.
- Kirch, Patrick and Marion Kelly (editors)  
1975 *Prehistory and Ecology in a Windward Hawaiian Valley: Halawa Valley, Molokai*. Pacific Anthropological Records 24. Honolulu: Department of Anthropology, Bernice P. Bishop Museum.
- Krauss, Beatrice H.  
1993 *Plants in Hawaiian Culture*. Honolulu: University of Hawai'i Press.
- Kuda, Kimu  
1912 "Tramping on Molokai," in *Mid-Pacific*, April 1, 1912. 3(4):327.

- McElroy, Windy K.  
2004 *Archaeological Inventory Survey of TMK:(2)-5-9-005:007 & 081, Wailau Valley, Halawa Ahupua'a, Ko'olau District, Moloka'i Island*. Honolulu: T.S. Dye & Colleagues, Archaeologists, Inc.
- McElroy, Windy K.  
2005 Wailau Archeological Research Project, Preliminary Report Wailau and Halawa Ahupua'a, Ko'olau District, Moloka'i (Preliminary Report)
- Monsarrat, M.D.  
1903 Part of Wailau Valley Molokai, August 1903. Scale 1 in. = 200 ft.
- Ne, Harriet  
1970 *Tales of Molokai*. Lā'ie: The Institute for Polynesian Studies.
- Podmore, G.  
1915 Portion of Wailau Valley, Halawa, Molokai, August 1915. Bishop Estate Survey Map. Scale 1:600.
- Pukui, Mary Kawena  
1983 *Ōlelo No'eau Hawaiian Proverbs and Poetical Sayings*. Bernice P. Bishop Museum Special Publication No. 71. Honolulu: Bishop Museum Press.
- Pukui, Mary Kawena, Samuel H. Elbert, and Esther T. Mookini  
1974 *Place Names of Hawaii*. Honolulu: The University of Hawai'i Press.
- Reeve, Rowland  
1973 Ms. *Wailau: An Archaeological Site Survey of Wailau Valley, Molokai*. Unpublished manuscript on file with the Bernice P. Bishop Museum, Honolulu.
- Remy, Jules  
1893 *The Island of Molokai Before Leprosy*. Arcus-sur-Aube. Translated by Mildred Knowlton, Oct. 1975.
- Reppun, Molly  
1951 "Molokai-A-Hina," in *Ka Leo O Molokai*, November 23, 1951:2.
- Skinner, Jeane K.  
1933 "Forgotten Trails of Molokai" in *Paradise of the Pacific*, Vol. 45 No.9 pp.7-8
- Stone, John Franklin  
1919 "Glimpses of Windward Molokai," in *Paradise of the Pacific*, December 1919: 98-100.
- Summers, Catherine  
1971 *Molokai: A Site Survey*. Pacific Anthropological Records Number 14. Honolulu: Department of Anthropology, Bernice P. Bishop Museum.
- Sutherland, Audrey  
1978 *Paddling My Own Canoe*. Honolulu: University of Hawai'i Press.
- Stevenson, Robert Louis  
1973 *Travels in Hawaii*. Honolulu: The University of Hawai'i Press.
- Thrum, Thomas G.  
1907 *Hawaiian Folk Tales*. Chicago: A.C. McClurg & Co.
- W.C.H.  
1934 Por. Wailau, Molokai. Hawai'i State Survey Map No. 2124, August 1934. Scale 1:2400.

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
OFFICE OF CONSERVATION AND COASTAL LANDS  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

PETER T. YOUNG  
CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

DEAN NAKANO  
ACTING DEPUTY DIRECTOR - WATER

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

REF:OCCL:TM

CDUA: MO-3376

Acceptance Date: August 29, 2006  
180-Day Exp. Date: February 25, 2007

Ms. Linda Dunn  
2411 Makiki Heights Drive  
Honolulu, Hawaii 96822

OCT 26 2006

Dear Ms. Dunn:

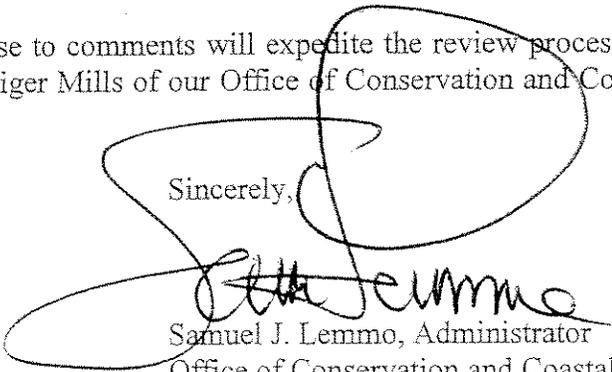
SUBJECT: Conservation District Use Application (CDUA) MO-3376 for Kuleana Land Use Single Family Residence and Sustainable Agriculture Located at Kiaoao, Wailau, Halawa, Island of Molokai, TMK: (2) 5-9-005:007

This letter is regarding the processing of CDUA MO-3376. The public and agency comment period on your application has closed (October 23, 2006). Attached to this letter are copies of the comments received by the Office of Conservation and Coastal Lands (OCCL) regarding the CDUA. Please send copies of your responses to the questions raised in these letters directly to the authoring agency as well as to the OCCL.

The final copy of your Environmental Assessment (EA) needs to include your responses to address the queries raised in these letters. These responses can be attached to the end of the Final EA document. Upon completion of your final EA, please send 6 (six) copies of the Final EA to the OCCL. Include a hard copy and a diskette of the submitted Office of Environmental Quality Control (OEQC) Publication Form for the Final EA, and if the project summary has changed, a new summary.

Early submittal of your response to comments will expedite the review process. Should you have any questions, please contact Tiger Mills of our Office of Conservation and Coastal Lands at (808) 587-0382.

Sincerely,

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

c: Chairperson  
MDLO  
County of Maui, Planning Department

LINDA LINGLE  
GOVERNOR OF HAWAII



GENEVIEVE SALMONSON  
DIRECTOR

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

235 SOUTH BERETANIA STREET  
SUITE 702  
HONOLULU, HAWAII 96813  
TELEPHONE (808) 566-4185  
FACSIMILE (808) 586-4186  
E-mail: oeqc@health.state.hi.us

October 11, 2006

Sam Lemmo  
Department of Land & Natural Resources  
Office of Conservation & Coastal Lands  
PO Box 621  
Honolulu, HI 96809

Attn: Tiger Mills

Subject: Draft Environmental Assessment (EA) for **Dunn Single Family Residence, Molokai**

Dear Mr. Lemmo:

We have the following comments:

Two-sided pages: Please print on both sides of the pages in the final document to reduce bulk and save on paper. HRS 342G-44 requires double-sided copying in all state and county agencies, offices and facilities.

Permits and approvals: In the final EA list all required permits and approvals for this project and the status of each.

If you have any questions, call Nancy Heinrich at 586-4185.

Sincerely,

*Genevieve Salmonson*  
GENEVIEVE SALMONSON  
Director

c: Linda Dunn

DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

2006 OCT 11 A 8:46

OFFICE OF CONSERVATION  
& COASTAL LANDS



ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

DEAN NAKANO  
ACTING DEPUTY DIRECTOR - WATER

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

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
OFFICE OF CONSERVATION AND COASTAL LANDS  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

REF:OCCL:TM

CDUA: MO-3376

Acceptance Date: August 29, 2006  
180-Day Expiration Date: February 25, 2007  
SUSPENSE DATE: 21 Days from  
stamped date SEP - 1 2006

**MEMORANDUM:**

TO: The Department of Land and Natural Resources Divisions of:

- Aquatic Resources
- Maui District Land Office
- Conservation & Resource Enforcement
- Forestry & Wildlife
- Engineering
- Historic Preservation

2006 SEP 25 P 2:42  
 RECEIVED  
 OFFICE OF CONSERVATION  
 AND COASTAL LANDS  
 DEPT. OF LAND &  
 NATURAL RESOURCES  
 STATE OF HAWAII

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

SUBJECT: REQUEST FOR COMMENTS  
Draft Environmental Assessment/Conservation District Use Application MO-3376 For Kuleana Land Use Single Family Residence and Sustainable Agriculture

APPLICANT: Linda Dunn

TMKs: (2) 5-9-005:007

LOCATION: Kiaoao, Wailau, Halawa, Island of Molokai

PUBLIC HEARING: YES NO X

Please contact Tiger Mills at 587-0382, should you have any questions on this matter.

If no response is received by the suspense date, we will assume there are no comments. The suspense date starts from the date stamp.

Comments Attached

No Comments

Attachment(s)

*Samuel J. Lemmo*  
Signature

DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

Ref. OCCL:TM CDUA: MO-3376  
Maui.350

COMMENTS

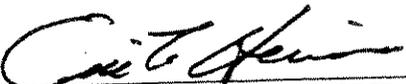
- ( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone \_\_\_\_.
- (X) Please take note that according to the Flood Insurance Rate Map (FIRM), the project site is located in Zone A6. The National Flood Insurance Program regulates developments within Zone A6 as indicated in bold letters below.
- ( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is \_\_\_\_.
- (X) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- ( ) Mr. Robert Sumimoto at (808) 523-4254 or Mr. Mario Siu Li at (808) 523-4247 of the City and County of Honolulu, Department of Planning and Permitting.
  - ( ) Mr. Kelly Gomes at (808) 961-8327 (Hilo) or Mr. Kiran Emler at (808) 327-3530 (Kona) of the County of Hawaii, Department of Public Works.
  - (X) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.
  - ( ) Mr. Mario Antonio at (808) 241-6620 of the County of Kauai, Department of Public Works.
- ( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- ( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

- ( ) Additional Comments: \_\_\_\_\_
- ( ) Other: \_\_\_\_\_

Should you have any questions, please call Ms. Alyson Yim of the Planning Branch at 587-0259.

Signed:   
ERIC T. HIRANO, CHIEF ENGINEER

Date: 9/24/06



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P.O. Box 3378  
HONOLULU, HAWAII 96801-3378

In reply, please refer to:  
EPO-06-152

October 11, 2006

Mr. Samuel J. Lemmo, Administrator  
State of Hawaii  
Department of Land and Natural Resources  
Office of Conservation and Coastal Lands  
P. O. Box 621  
Honolulu, Hawaii 96809

DEPARTMENT OF LAND & NATURAL RESOURCES  
STATE OF HAWAII

2006 OCT 17 A 12:50

OFFICE OF CONSERVATION & COASTAL LANDS

Dear Mr. Lemmo:

SUBJECT: CDUA: MO-3376  
Draft Environmental Assessment and Conservation District Use Application  
for Kuleana Land Use Single Family Residence and Sustainable Agriculture  
Kiaoo, Wailau, Halawa, Island of Molokai, Hawaii  
Applicant: Linda Dunn  
TMK: (2) 5-9-005: 007

Thank you for allowing us to review and comment on the subject document. The document was routed to the various branches of the Environmental Health Administration. We have the following Wastewater Branch comments.

Wastewater Branch

We have reviewed the subject application and environmental assessment which proposes the construction of a single story cedar wood 14' x 14' structure on the above mentioned property.

The subject project is located in the Critical Wastewater Disposal Area (CWDA) as determined by the Maui County Wastewater Advisory Committee where no new cesspools will be allowed.

The Department of Health granted construction approval for an individual wastewater system (IWS) serving the subject property on May 31, 2006. The treatment IWS consisted of a composting toilet and a trench (gravelless chambers) for graywater disposal. Per the requirement of Hawaii Administrative Rules, Chapter 11-62, the IWS must be installed by a licensed contractor, inspected by the design engineer, and authorized in writing by the Department of Health before being placed in use. We request that the above requirements relating to the construction and operation of the proposed wastewater system be placed in the Conservation District Use permit.

Mr. Lemmo  
October 11, 2006  
Page 2

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater System." We reserve the right to review the detailed wastewater plans for conformance to applicable rules. Should you have any questions, please contact the Planning & Design Section of the Wastewater Branch at (808) 586-4294.

We strongly recommend that you review all of the Standard Comments on our website: [www.state.hi.us/health/environmental/env-planning/landuse/landuse.html](http://www.state.hi.us/health/environmental/env-planning/landuse/landuse.html). Any comments specifically applicable to this project should be adhered to.

If there are any questions about these comments please contact Jiakai Liu with the Environmental Planning Office at (808) 586-4346.

Sincerely,



KELVIN H. SUNADA, MANAGER  
Environmental Planning Office

c: EPO  
WWB  
EH-Maui



ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND

DEAN NAKANO  
ACTING DEPUTY DIRECTOR - WATER

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

RECEIVED  
OFFICE OF CONSERVATION  
AND COASTAL LANDS  
2006 SEP 21 A 11-01  
DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
601 KAMOKILA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96707

September 20, 2006

Mr. Sam Lemmo, Administrator  
Department of Land and Natural Resources  
Office of Conservation and Coastal Lands  
P.O. Box 621  
Honolulu, Hawai'i 96809

LOG NO: 2006.2798  
DOC NO: 0609NM09  
Archaeology

Dear Mr. Lemmo:

**SUBJECT: Chapter 6E-11 Historic Preservation Review [State/Linda Dunn] –  
DEA and CDUA MO-3376 for Kuleana Land Use Single Family Residence  
Kiaoao, Wailua, Hailawa, District, Island of Moloka'i  
TMK: (2) 5-9-005: 007**

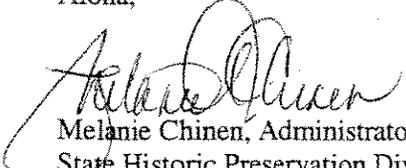
The aforementioned project is for a single family residence.

We believe that "no historic properties will be affected" by this undertaking because:

- a) intensive cultivation has altered the land
- b) residential development/urbanization has altered the land
- c) previous grubbing/grading has altered the land
- d) an acceptable archaeological assessment or inventory survey found no historic properties
- e) this project has gone through the historic review process, and mitigation has been completed
- f) other: *As submitted in the DEA T.S. Dye and Colleagues found site 50-60-04-272-d, an agricultural terrace within the entire project area. The deposits have been well documented by this approved inventory (Ltr. dated 11/10/2004 Log No 2004.3258 Doc No 0411SC03).*

In the event that historic resources, including human skeletal remains, are identified during the construction activities, all work needs to cease in the immediate vicinity of the find, the find needs to be protected from additional disturbance, and the State Historic Preservation Division, Kauai Section, needs to be contacted immediately at (808) 742-7033.

Aloha,

  
Melanie Chinen, Administrator  
State Historic Preservation Division

NM:gvf

LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
OFFICE OF CONSERVATION AND COASTAL LANDS  
POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
  
ROBERT K. MASUDA  
DEPUTY DIRECTOR - LAND  
  
DEAN NAKANO  
ACTING DEPUTY DIRECTOR - WATER  
  
AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAHOOLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

REF:OCCL:TM

CDUA: MO-3376  
Acceptance Date: August 29, 2006  
180-Day Expiration Date: February 25, 2007  
SUSPENSE DATE: 21 Days from  
stamped date SEP - 1 2006

**MEMORANDUM:**

TO: The Department of Land and Natural Resources Divisions of:

- Aquatic Resources
- Maui District Land Office
- Conservation & Resource Enforcement
- Forestry & Wildlife
- Engineering
- Historic Preservation

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

SUBJECT: REQUEST FOR COMMENTS  
Draft Environmental Assessment/Conservation District Use Application MO-3376 For Kuleana Land Use Single Family Residence and Sustainable Agriculture

APPLICANT: Linda Dunn

TMKs: (2) 5-9-005:007

LOCATION: Kiaoao, Wailau, Halawa, Island of Molokai

PUBLIC HEARING: YES NO X

Please contact Tiger Mills at 587-0382, should you have any questions on this matter.

If no response is received by the suspense date, we will assume there are no comments. The suspense date starts from the date stamp.

( ) Comments Attached

No Comments

Attachment(s)

Signature  
PAUL J. CONRY, ADMINISTRATOR  
DIVISION OF FORESTRY AND WILDLIFE



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPI'OLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

DEPT. OF LAND &  
NATURAL RESOURCES  
STATE OF HAWAII  
2006 SEP 29 AM 10:38  
HRD0672691

September 25, 2006

Samuel J. Lemmo, Administrator  
Department of Land and Natural Resources  
Office of Conservation and Coastal Lands  
P.O. Box 621  
Honolulu, Hawai'i 96809

**RE: Draft Environmental Assessment/Conservation District Use Application; Linda  
Dunn; Wailau, Moloka'i; 5-9-005:007 (CDUA MO-3376)**

Dear Mr. Lemmo,

The Office of Hawaiian Affairs (OHA) is in receipt of your September 1, 2006 request for comments regarding the above referenced Draft Environmental Assessment (DEA) and Conservation District Use Application (CDUA). OHA does not object at this time to a finding of no significant impact for the proposed project, nor to the issuance of the CDUA.

We appreciate the care that that the applicant has taken in complying with environmental and cultural laws. We also applaud the applicant's plan to locate the proposed structure away from existing cultural structures, such as the remnants of lo'i walls, and the applicant's willingness to allow access through the property for the practice of Native Hawaiian traditional and customary rights. DEA at page 10.

Thank you for the opportunity to comment. If you have any further questions or concerns please contact Koa Kaulukukui at (808) 594-0244 or [koalanik@oha.org](mailto:koalanik@oha.org).

Sincerely,

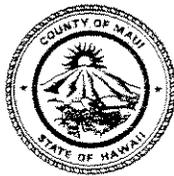
Clyde W. Nāmu'o  
Administrator



ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

Don Couch  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

October 24, 2006

Ms Linda Dunn  
2411 Makiki Heights Drive  
Honolulu, HI 96822

Dear Ms. Dunn:

RE: Comments on a Draft Environmental Assessment (EA) for the Proposed Dunn Residence (CDUA MO-3376) located at TMK: 2-5-9-005:007, 121 Wailau Trail, Halawa, Island of Molokai, Hawaii (EAC 2006/0030)

The Maui Planning Department (Department) is in receipt of the above-referenced document for the proposed Dunn Residence. The Department understands the proposed action includes the following:

- Construction of a 196 square foot single family residential cabin, a 196 square foot attached deck, and sustainable agricultural uses on a .58 acre parcel, approximately 1200 feet from the shoreline, which lies in the Resource subzone of the State Land Use Conservation District in Wailau Valley, Molokai. The cabin will be raised on concrete footings four feet above grade, total structure height of 18 feet 8 inches, and the project will include a self-composting toilet, a catchment water system, solar and propane for cooking, a grey water infiltration system and a small garden. Access will be by boat and an existing footpath from the shoreline. The proposed project will require a Special Management Area Assessment.

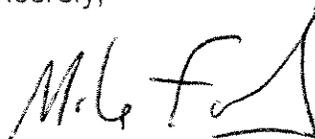
Based on the foregoing, the Department provides the following comments on the Draft EA:

1. The land use designations for the project area are as follows:
  - a. State Land Use – Conservation, Resource Subzone
  - b. Community Plan – Conservation
  - c. County Zoning – None

- d. Other – Flood Zone C / within 100 year flood inundation limits of Kahawaiiki Stream.
2. An adequate cultural impacts assessment is required as of April 26, 2000. This is an analysis of impacts to cultural practices and resources, past and current. Expand on analysis of impacts to cultural activities, following the guidance provided by the OEQC publication "The Environmental Guidebook" pp 47-48. Discuss methodology followed in obtaining cultural information on Wailau Valley, with particular attention paid to the six step protocol outlined for identification, consultation and investigation of cultural resources traditions and practices on an ahupua'a level. Describe informants consulted, including traditional cultural and subsistence practitioners and opportunities for review of research results by informants.

Thank you for the opportunity to comment. Please include the Department on the distribution list for the Final EA/FONSI. Should you require further clarification, please contact Nancy M. McPherson, Molokai Planner by email at [nancy.mcpherson@co.maui.hi.us](mailto:nancy.mcpherson@co.maui.hi.us) or (808) 553-3221.

Sincerely,



MICHAEL W. FOLEY  
Planning Director

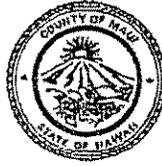
MWF:NMM:sls

c: Tiger Mills, State Dept. of Land & Natural Resources,  
Office of Conservation & Coastal Lands  
Nancy M. McPherson, Staff Planner  
TMK File  
General File  
K:\WP\_DOCS\PLANNING\EAC\2006\0030\_Dunn\_Residence\_Wailau\EAC\_Comments.wpd

ALAN M. ARAKAWA  
Mayor

MICHAEL W. FOLEY  
Director

DON COUCH  
Deputy Director



COUNTY OF MAUI  
**DEPARTMENT OF PLANNING**

November 14, 2006

Ms. Linda Dunn  
2411 Makiki Heights Drive  
Honolulu, Hawaii 96822

Dear Ms. Dunn:

RE: Draft Environmental Assessment For The Proposed Dunn Residence  
At TMK: (2) 5-9-005:007, Located At 121 Wailau Trail, Halawa,  
Molokai, Hawaii (EAC 2006/0030)

At the regular meeting of October 25, 2006, the Molokai Planning Commission (Commission) reviewed the above-referenced document and provided the following comments:

1. Discuss cultural impacts to Native Hawaiian community of a year-round, single-family residence in one of the last intact Hawaiian places. Discuss how change in the valley and possible cumulative impacts of increased development could be managed in order to minimize impacts to Native Hawaiian recreational and subsistence uses.
2. Discuss the extent to which surrounding landowners have been contacted and their opinions sought as to the project.
3. Provide finalized building plans or structural design plans. Clarify, and make consistent throughout, information on structure's height above grade.
4. Provide a more complete, but clear and uncluttered, site plan that includes, in a single drawing, siting of all structures, landscaping and other activities as well as locations of existing archaeological resources, auwai, vegetation etc.

Ms. Linda Dunn  
November 14, 2006  
Page 2

5. Discuss security issues, how medical emergencies will be dealt with, etc. Discuss plans for future dispensation of property – what planning is being done to influence how future generations will handle the project and assure continued minimization of impacts to the valley?

Public comment reinforced the concerns expressed about "setting a precedent" and increasing pressure on the valley contained in Comment 1. Commissioners commended the applicant for her persistence, patience and desire to do things the correct way and be responsive to community concerns.

Thank you for your cooperation. Should you require further clarification, please contact Ms. Nancy McPherson, Molokai Staff Planner, at 270-1768 (Wailuku), or 553-3221 (Molokai).

Sincerely,



MICHAEL W. FOLEY  
Planning Director

MWF:NMM:bv

c: Donald G. Couch, Deputy Planning Director  
Clayton I. Yoshida, AICP, Planning Program Administrator  
Nancy M. McPherson, Molokai Planner  
Project File  
General File  
K:\WP\_DOCS\PLANNING\EAC\2006\0030\_Dunn\_Residence\_Wallau\MoPC\_DEAComments.wpd

November 12, 2006

Genevieve Salmonson  
Director  
State of Hawaii  
Office of Environmental Quality Control  
235 S. Beretania St.  
Suite 702  
Honolulu, Hawaii 96813

Attn: Nancy Heinrich

Subject: Comments regarding: DEA for Dunn Single Family Residence  
TMK(2) 5-9-5:007 Moloka'i

Dear Ms. Salmonson,

Thank you for your review and comments regarding the DEA for my proposed construction of a Single Family Residence in Wailau, Moloka'i.

Per your comments, I will make the following changes in the Final EA:

- 1) The document will be printed 2 sided.
- 2) An addition will be made to page 1 listing all permits and approvals for the project including the status of each.

Thank you for your assistance in this matter.

Sincerely,

Linda Dunn



cc: Final Environmental Assessment/L.Dunn  
DLNR-OCCL T. Mills

November 12, 2006

Eric Hirano, Chief Engineer  
State of Hawaii  
Department of Land and Natural Resources  
Engineering Division

Re: Comments on OCCL:TM CDUA:MO-3376  
Maui.350  
Kuleana Land Use, Wailau, Moloka'i  
Applicant: Linda Dunn

Dear Mr. Hirano,

Thank you for your review and comments regarding the Draft Environmental Assessment attached to my Conservation District Use Application for my proposed construction in Wailau, Moloka'i.

As per your suggestion, I have contacted NFIP Coordinator Carol Tyau-Beam of your department for clarification on the appropriate regulations for my project site. She has referred me to NFIP Coordinator Francis Cerizo at the Maui County Department of Planning for more specific information on the zone location of the project parcel in Wailau, Moloka'i.

Mr. Cerizo has determined that the area of proposed construction is in Flood Zone C, an area of minimal flooding. I have been advised by Mr. Cerizo that the project as outlined in the Draft Environmental Assessment meets the appropriate standards for this designation.

Thank you for your assistance in this matter.

Sincerely,



Linda Dunn

cc: Final Environmental Assessment/L.Dunn  
DLNR-OCCL T.Mills

November 12, 2006

Kelvin H. Sunada  
Manager  
State of Hawaii  
Department of Health  
Environmental Planning Office  
P.O. Box 3378  
Honolulu, Hawaii 96801-3378

Attn: Jiakai Liu

Re: Comments on CDUA:MO3376 DEA&CDUA for Kuleana Land Use  
TMK:(2)5-9-5:007  
Linda Dunn

Dear Mr. Sunada,

Thank you for your review and comments regarding my proposed project in Wailau, Moloka'i.

As stipulated in the Department of Health Wastewater Branch letter of June 5, 2006 (attachment #9 of DEA), the IWS which was approved will be installed by a licensed contractor, inspected by Silversword Engineering of Wailuku, Maui, and reports reviewed by Roland Tejano of the Maui County Wastewater Division.

Thank you for your time and consideration in this matter.

Sincerely,



Linda Dunn

cc: Final Environmental Assessment/ L.Dunn  
DLNR-OCCL T.Mills

November 12, 2006

Melanie Chinen  
Administrator  
State of Hawaii  
Department of Land and Natural Resources  
State Historic Preservation Division  
601 Kamokila Boulevard, Room 555  
Kapolei, Hawaii 96707

Subject: Comments re:DEA and CDUA MO-3376  
Kuleana Land Use  
Kiaoo, Wailau, Halawa District, Island of Moloka'i  
TMK: (2) 5-9-5 .007  
Linda Dunn

Dear Ms. Chinen,

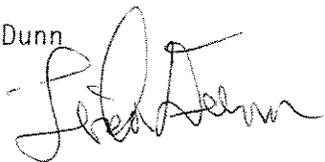
Thank you for your comments regarding my proposed construction in Wailau, Moloka'i. As you stated, this project has gone through historic review process and mitigation was completed (letter dated 11/10/04).

In accordance with your current comments, if any historic resources, including human skeletal remains, are found during construction activities all work will cease and the proper authorities will be contacted.

Thank you for your time and consideration in this matter.

Sincerely,

Linda Dunn



cc: Final Environmental Assessment/L. Dunn  
DLNR-OCCL T. Mills

November 12, 2006

Clyde W. Nāmu'o  
State of Hawaii  
Office of Hawaiian Affairs  
711 Kapiolani Boulevard  
Honolulu, Hawaii 96813

Attn: Koa Kaulukukui

Re: Comments on DEA/CDUA Linda Dunn/ Wailau, Moloka'i  
TMK:(2)5-9-5:007 (CDUA MO-3376)

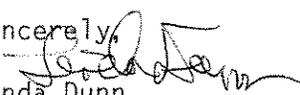
Dear Mr. Nāmu'o,

Thank you for your comments regarding my proposed construction in Wailau, Moloka'i. During the review of the above referenced documents by the Moloka'i Planning Commission, a more detailed description of the methods and results of the Cultural Assessment was requested.

I am enclosing a copy of this information for your files. This additional information will be incorporated into the Final Environmental Assessment as attachment #15.

Thank you for your time and consideration in this matter.

Sincerely,

  
Linda Dunn

CC: Final Environmental Assessment/ L.Dunn  
DLNR-OCCL T. Mills

November 14, 2006

Michael Foley  
Planning Director  
County of Maui  
Department of Planning  
250 South High Street  
Wailuku, Hawaii 96793

Re: Comments on Draft E.A. for Proposed Dunn Residence  
(CDUA MO-3376)  
Wailau, Moloka'i (EAC 2006/0030)  
TMK (2)-5-9-5:007

Attn: Nancy McPherson

Dear Mr. Foley,

Thank you for your comments regarding my proposed project in Wailau, Moloka'i.

In response to your comments and the concerns voiced by the Moloka'i Planning Commissioners, a Cultural Assessment Attachment will be incorporated into the Final E.A. (attachment #15).

This Cultural Assessment was conducted using the OEQC guidelines and will detail the research methods, sources and information obtained on cultural traditions and practices in Wailau Valley.

This assessment attachment will explain the data supporting the finding of "no impact on the cultural resources in the area" stated in the EA/CDUA/SMAA.

I will insure that your Department is included in the Final w/FONSI distribution list from DLNR-OCCL.

I would like to add that the "address" attached to this TMK of "121 Wailau Trail" is inaccurate and very misleading. The parcel is on the opposite side of the Valley, far from the actual Wailau Trail.

Thank you again for your time and consideration in this matter.

Sincerely,



Linda Dunn

cc: Final Environmental Assessment/Dunn  
DLNR-OCCL T.Mills

November 14, 2006

Chairperson Robert Ribao  
Moloka'i Planning Commission

Re: Commissioners Comments and Concerns  
Draft Environmental Assessment for CDU Application  
Linda Dunn Wailau, Moloka'i  
TMK #(2)5-9-5:007

Dear Chairperson Riabo,

I wish to thank you and the Commissioners again for taking the time to review and comment on the DEA for my proposed project in Wailau Valley. Your questions and concerns expressed at the October 25, 2006 meeting will be very helpful in the completion of my Final Environmental Assessment.

I hope the attached information will answer the Commissioners questions and mitigate the concerns they expressed.

I will be incorporating this information into the Final Environmental Assessment at the points in the DEA notated after each item.

Thank you for your time and consideration in this matter.

Sincerely,

Linda Dunn



cc: Final Environmental Assessment/Dunn  
DLNR-OCCL T.Mills



Questions and Concerns of the Moloka'i Planning Commission  
Re: Draft Environmental Assessment  
Linda Dunn Wailau, Moloka'i  
TMK# (2) 5-9-5:007

Changes and Mitigations for Final Environmental Assessment

\*\*\*\*\* List all permits and approvals for the project and the approving agencies.

<u>Permit</u>	<u>Approving Agency</u>
Final Environmental Assessment w/ <u>F</u> inding <u>O</u> f <u>N</u> o <u>S</u> ignificant <u>I</u> mpact	DLNR as part of the CDU Application after DEA review comments & concerns are incorporated
Special Management Area Exempted Action or Minor Permit	Maui County Planning Dept. after DLNR approval of Final EA w/FONSI
Individual Wastewater Disposal System	State Dept. of Health plan approval
Conservation District Use Permit	DLNR Board approval after SMAP issued
Building Permits or plans review	Maui County Building Permit Dept. after CDUP issued by DLNR

(To be added to page 1 Introduction of DEA)

\*\*\*\*\* Cultural Assessment documentation and expansion.

A more detailed Cultural Assessment has been compiled showing the data and sources of information used to reach the conclusion of no significant impact on the cultural resources in the Valley.  
(To be added as Attachment #15 of DEA)

\*\*\*\*\* Impact on future construction in Wailau Valley

The SMA and CDU permit processes are complex and expensive which will deter many landowners from building on their properties. Construction costs in such a remote, hard to access area is another deterrent.

Further, the majority of the parcels large enough to meet CD Use Standards in the Valley have multiple owners or are part of family trusts or estates. Many of these are in legal contention of wills etc.

(To be added in section #6 on page 13 of DEA)

(continued)

## Changes and Mitigations for Final Environmental Assessment (cont)

## \*\*\*\*\* Surrounding landowners

The landowners of parcels in the area around the parcel of the proposed construction (see attachment #2) were contacted by phone and by mail regarding the applicants proposed project. The landowners were sent a packet with map, building drawings and details of the proposed project. All those contacted responded in writing (see end of attachment #13) and allspoke positively about the impact of the proposed project on the area.

## \*\*\*\*\* Building plan approval/permits

The applicant was misinformed in August regarding building permits in Conservation District. The Maui County Building Permit Dept. will review the plans and issue an approval/permit but not until after the CDUP is issued by DENR.

## \*\*\*\*\* Infiltrator System

The Individual Wastewater System approved by the State Dept. of Health (attachment #9) uses a set of plastic chambers to replace a leachfield or septic tank. (attachment #12)

This will be installed and inspected by a licensed engineer. It does not require pumping or annual inspections and is designed for years of maintenance free use.

## \*\*\*\*\* 4' or 5'?

A clarification of the "4' or 5'" height of the building is as follows:  
 The 4' referred to is the height of the building floor above ground level.  
 The 5' referred to is the depth of the soil test area of the wastewater system (percolation test)

## \*\*\*\*\* Clarify site plan of construction area

An additional drawing showing the location of the proposed construction on the site, without the clutter of survey and engineers notations will be drawn.  
 (To be added as a second page to Attachment #4 of DEA)

## \*\*\*\*\* Personal Security

Illegal drug use has been a problem in the Valley in recent years, as in all areas of Mo'loka'i. The applicant is aware of the risks involved in the remoteness of the area from experience in the Valley over the last 15 years. The applicant will continue to keep a low profile in the Valley, "You don't bother me, I won't bother you."

(This information is detailed on page 22 of the CDUA)

## \*\*\*\*\* Future provision for proposed project

The applicant, as the fee owner of the parcel, is making provisions for the property to be placed in a conservation land trust at the time of her death.

(To be added as section #8 on page 10 of DEA)