

**STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
OFFICE OF CONSERVATION AND COASTAL LANDS
Honolulu, Hawai'i**

March 8, 2013

**Board of Land and
Natural Resources
State of Hawai'i
Honolulu, Hawai'i**

REGARDING: Conservation District Enforcement File OA 13-11
Placement of Rocks in the Shoreline Area

BY: Geraldine Sim Trust
48-487 Kamehameha Highway
Kaneohe, Hawaii 96744

LOCATION: Kaneohe, Island of Oahu

Tax Map Key: (1) 4-8-003:048

SUBZONE: Resource

Description of the Area:

The subject area is located on the Windward side of the Island of Oahu, TMK: (1) 4-8-003:048 (**Exhibits 1, 2 &3**). The private property is located in the State Land Use Urban District. Lands seaward of the shoreline are located in the Conservation District, Resource subzone.

The shoreline is characterized as mudflats with limited sandy beaches. The shoreline was last certified at this property in 1998 (**Exhibit 4**). There is no evidence of any shoreline structure based on a review of the 1998 shoreline certification file. The property owner has no permit or authorization from either the City and County of Honolulu, or the State of Hawaii for the placement of rocks along the shoreline.

Chronology:

This matter was brought to the attention of the Office of Conservation and Coastal Lands (OCCL) by the Division of Conservation and Resources Enforcement (DOARE). DOARE was dispatched to the site on June 4, 2012, and when on site observed rocks being placed on the shoreline by five (5) males. The officer also observed a "Bobcat" type bulldozer being operated near the shoreline. On July 7, 2012 the officer conducted a follow-up site inspection. The officer reported that multiple loads of rock had been strategically placed on the lot's shore. Photographs are attached to this report as **Exhibit 5**.

On August 31, 2012, the OCCL sent a Notice of Alleged Violation & Order to the Geraldine E. Sim Trust alleging that multiple truckloads of rocks had been placed along the shoreline (**Exhibit 6**).

In late September 2012, the OCCL received a transmittal/response from Mr. Alfred Sim (**Exhibit 7**). Mr. Sim believes that a permit was not needed to install the “riprap” structure because he believes that it is exempt from County building permit requirements.

On November 5, 2012, the OCCL sent a letter to Mr. Sim indicating that the matter would be scheduled before the Board of Land and Natural Resources (BLNR) as an alleged violation (**Exhibit 8**).

Discussion:

The Department and Board of Land and Natural Resources has jurisdiction over land lying makai of the shoreline as evidenced by the upper reaches of the wash of the waves other than storm and seismic waves, at high tide during the season of the year in which the highest wash of the waves occurs, usually evidenced by the edge of vegetation growth, or the upper limits of debris left by the wash of the waves, pursuant to §205A-1, Hawai‘i Revised Statutes (HRS).

Staff notes that the highest wash of the waves currently washes against and through the riprap structure (Structure) (**See Photographs Exhibit 5**). Thus, the Structure is within the Conservation District and within State of Hawaii submerged land. The OCCL believes there is sufficient cause to bring this matter to the Board.

Chapter 13-5, HAR and Chapter 183C, HRS, regulate land uses in the Conservation District by identifying a list of uses that may be allowed by a Conservation District Use Permit (CDUP). The chapters also provide for penalties, collection of administrative costs and damages to state land for uses that are not allowed or for which no permit has been obtained. HAR §13-5-2 defines “land use” as follows:

The placement or erection of any solid material on land if that material remains on the land more than thirty days, or which causes a permanent change in the land area on which it occurs.

Hawai‘i Coastal Erosion Management Plan:

On August 27, 1999, the Board adopted the Hawai‘i Coastal Erosion Management Plan (COEMAP) as an internal policy for managing shoreline issues including erosion and coastal development in Hawai‘i. COEMAP still serves as the primary shoreline policy for the DLNR and recommends a number of strategies to improve our State’s management of coastal erosion and beach resources.

However, COEMAP’s scope is of a general nature, more focused on broader government policy than erosion management practice. The COEMAP effort is guided by the doctrine of sustainability, promoting the conservation, sustainability, and restoration of Hawai‘i’s beaches for future generations. When assessing cases involving unauthorized shoreline structures that affect the shoreline that are constructed after the 1999, there is a “no tolerance” policy and the customary policy is to remove the structure before other actions are considered.

Staff believes that Mr. Sim is incorrect in his analysis of the permitting requirements for shoreline structures in the State of Hawaii. A shoreline structure of this type and location would require either a Shoreline Setback Variance (if located landward of the shoreline, within the 40-foot setback), or a major Conservation District Use Application (if located seaward of the shoreline). The OCCL consulted with the City and it was determined that OCCL would be the lead agency on the enforcement action since it appears that a least a portion of the Structure is located within the wash of the waves (**Exhibit 9**).

Under the Penalty Guideline Framework (**Exhibit 10**) this action is considered “Major” since the identified land use would normally require a Board Permit under the permit prefix “D” This violation follows a penalty range of \$10,000 to \$15,000. The comparable identified use in the Hawaii Administrative Rules (HAR-13-5) would be “Shoreline Erosion Control” for which a Board Permit is normally required.

Therefore under the Penalty Guideline Framework this unauthorized land use is considered:

1. a *Major* harm to resource or potential harm to resource; and
2. a *Major* comparable harm to resource.

This submittal and notice of the Board’s meeting shall be sent to the landowner by certified mail to the landowner’s address on record.

Staff believes that the landowner should be fined one time for the unauthorized land use. Staff will recommend a fine of \$10,000.¹ Staff will also recommend administrative penalties.

As such, staff recommends as follows:

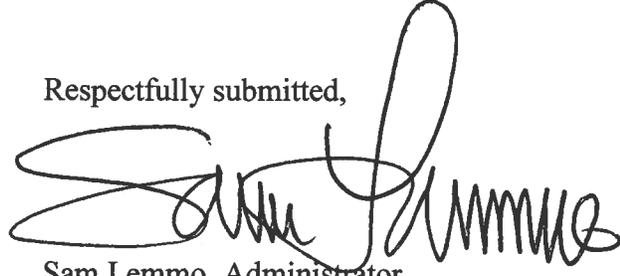
That pursuant to Chapter 183C, HRS, the Board finds the Landowner of TMK: (1) 4-8-003:048 at Kaneohe Island of Oahu, in violation of Chapter 183C-7, HRS and Chapter 13-5-6, HAR, subject to the following:

1. The Landowner is fined \$10,000.00 for the Conservation District violation, pursuant to Chapter 183C-7, HRS;
2. The Landowner is fined an additional \$500.00 for administrative costs associated with the subject violation, pursuant to Chapter 183C-7, HRS;
3. The Landowner shall pay all fines (total \$10,500.00) within sixty (60) days of the date of the Board’s action;
4. The Landowner shall remove the riprap Structure within three (3) months of the date of the Board’s decision on this matter;
5. That in the event of failure of the landowners to comply with any order herein, the landowner shall be fined an additional \$15,000.00 per day until the order is complied with; and

¹ Mr. Sim asserts that the work that was conducted did not require a permit.

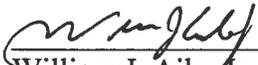
6. That in the event of failure of the landowners to comply with any order herein, the matter shall be turned over to the Attorney General for disposition, including all administrative costs.

Respectfully submitted,



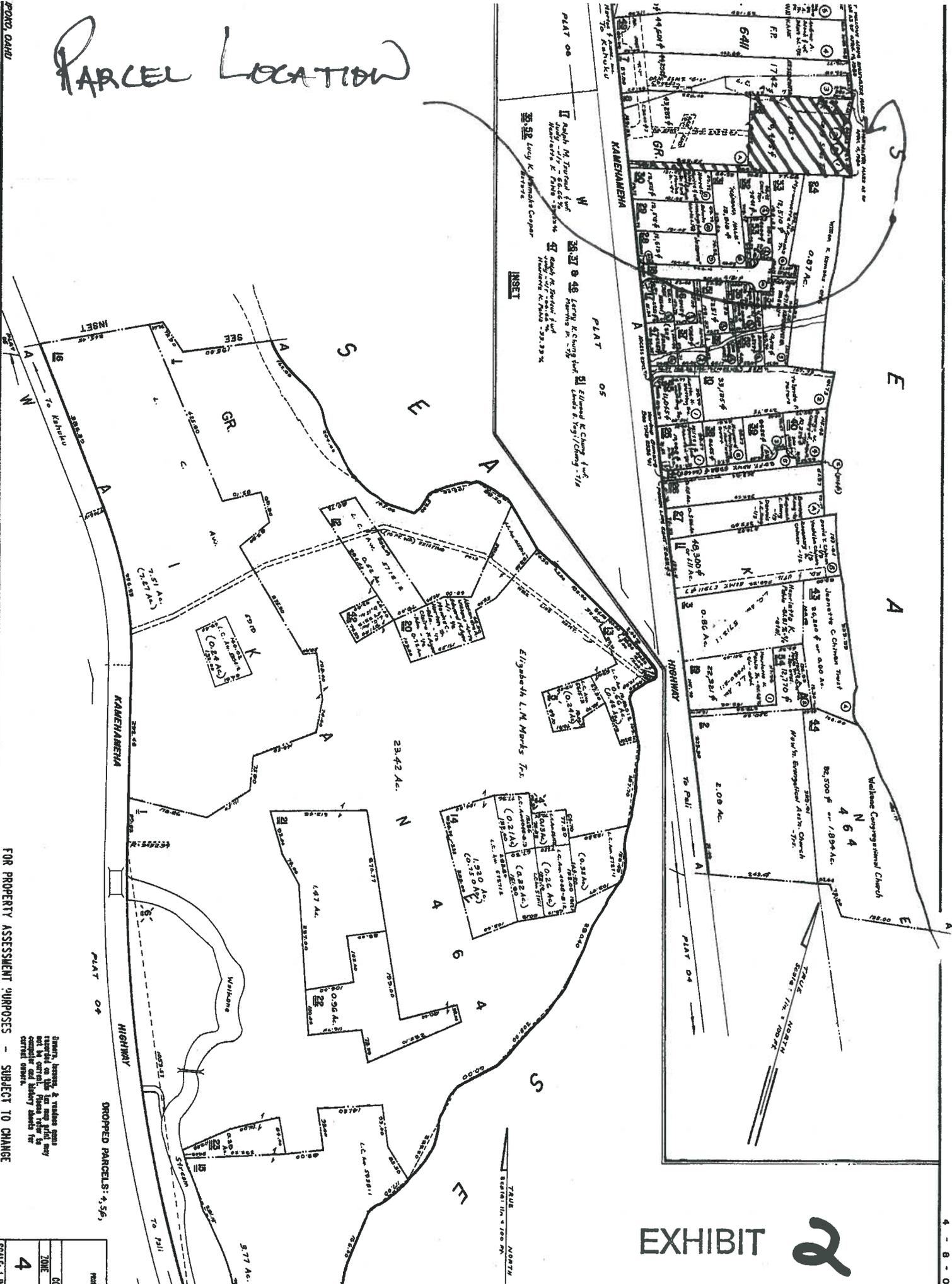
Sam Lemmo, Administrator
Office of Conservation and Coastal Lands

Approved for submittal:



William J. Aila, Jr., Chairperson
Board of Land and Natural Resources

PARCEL LOCATION



FOR PROPERTY ASSESSMENT PURPOSES - SUBJECT TO CHANGE

SCALE: 1 IN = 100 FT
ZONE: 4
PRINTED: 00

EXHIBIT 2



TMK: 4-8-03: 48

FEBRUARY 21, 1998

12:58 P.M.

EXHIBIT 4



TRK: 4-8-03: 48

FEBRUARY 21, 1998

12:58 P.M.

EXHIBIT 4

[REDACTED] [REDACTED]
Photographic Report

CLASSIFICATION: [REDACTED] **DATE / TIME:** 7-16-12

SCENE: 48-487 Kamehameha Hwy Kaneohe, HI 96744 **TAKEN BY:** [REDACTED]

EQUIPMENT: OLYMPUS STYLUS 1030 SW **SIGNATURE:** [REDACTED]

WEATHER / LIGHTING: Clear sunny afternoon

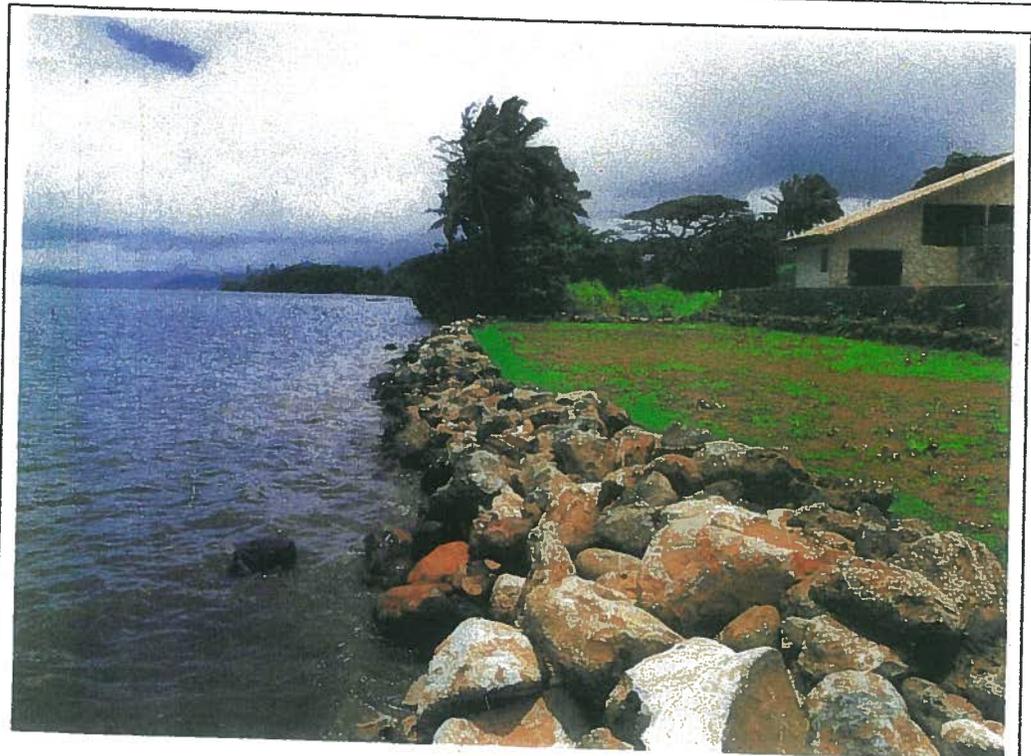
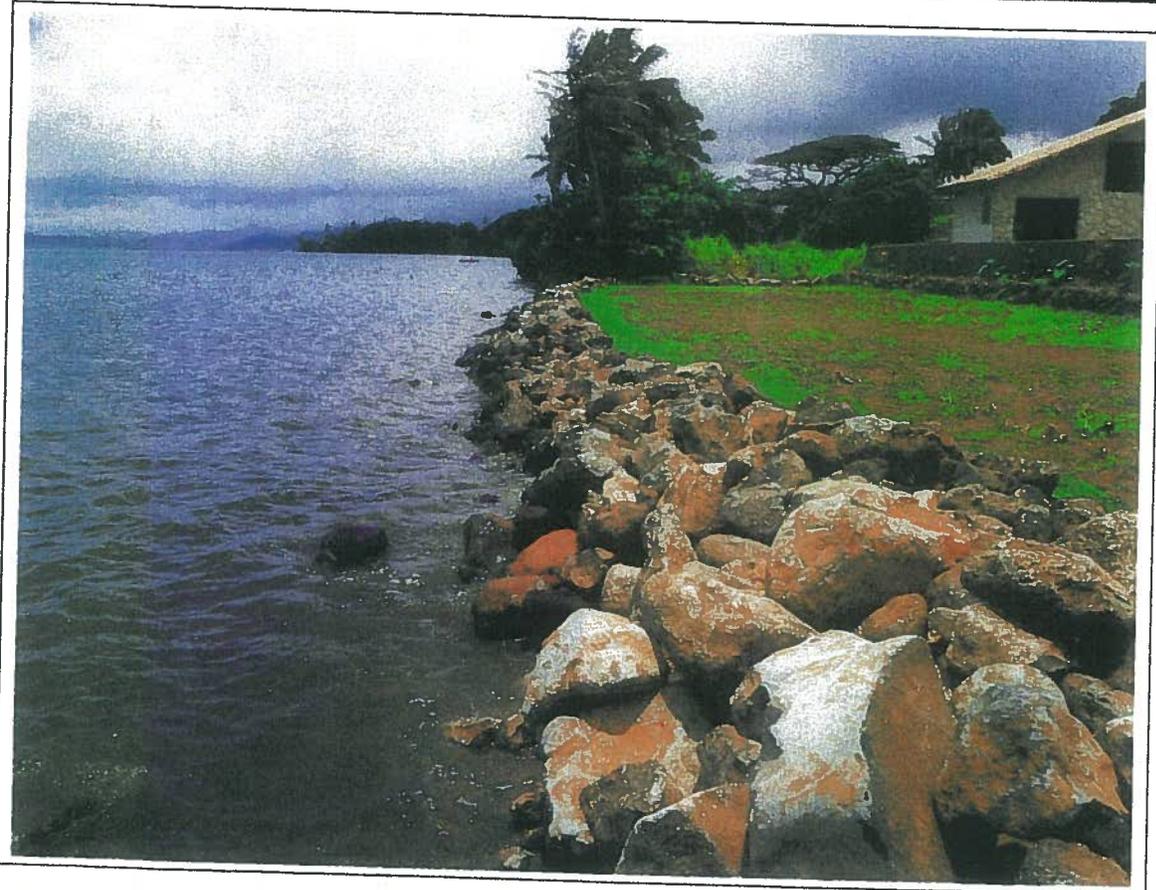


EXHIBIT 5

Photographic Report

CLASSIFICATION OF DATE / TIME: 7-16-12

SCENE: 48-487 Kamehameha TAKEN BY:

EQUIPMENT: OLYMPUS STYLUS 1005 SIGNATURE:

WEATHER / LIGHTING: CLEAR SUNNY AFTERNOON

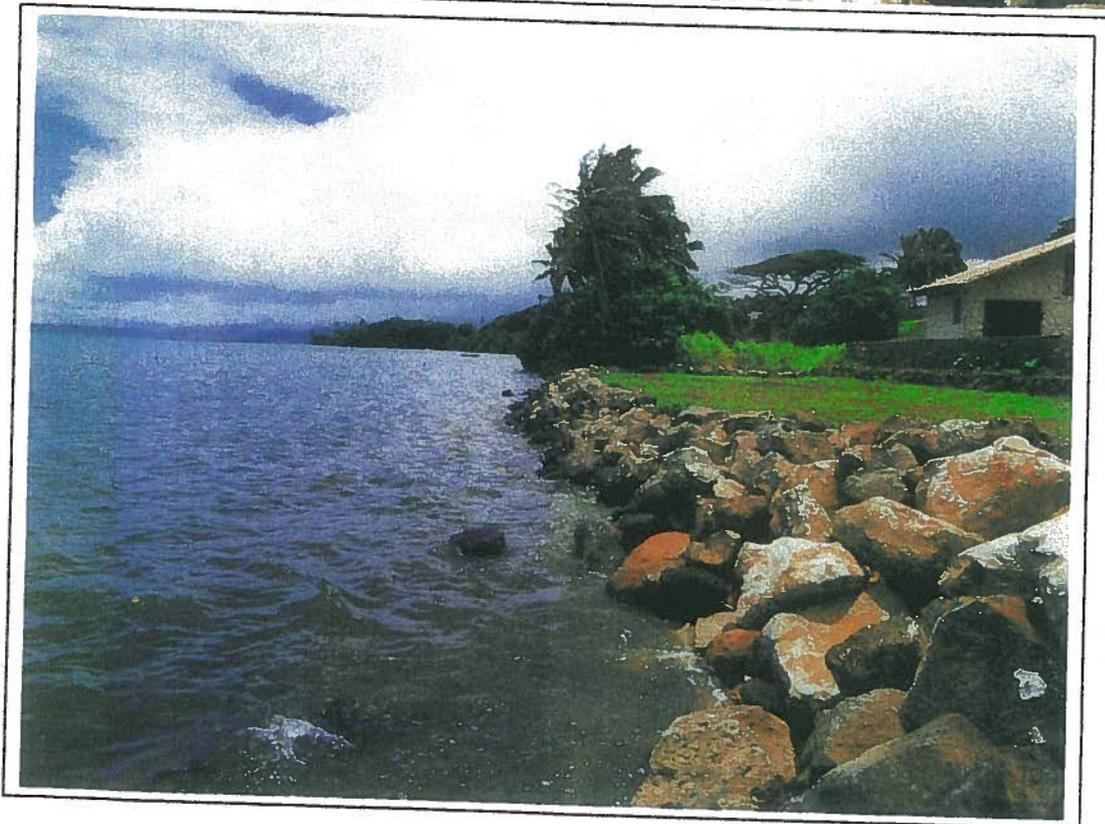
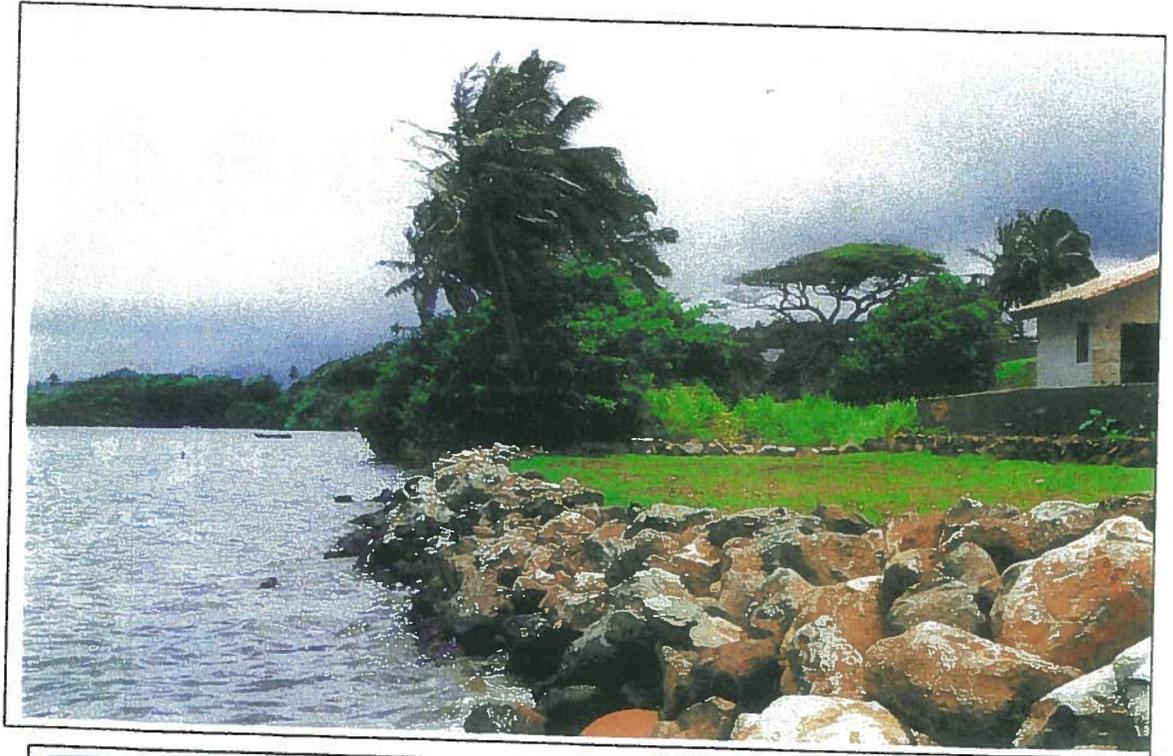


EXHIBIT **5**

Photographic Report

CLASSIFICATION: [REDACTED] DATE / TIME: 7-16-12
SCENE: 48-487 Kamchamcha Hwy TAKEN BY: [REDACTED]
EQUIPMENT: OLYMPUS STYLUS 1020 SW SIGNATURE: [REDACTED]
WEATHER / LIGHTING: Clear sunny afternoon

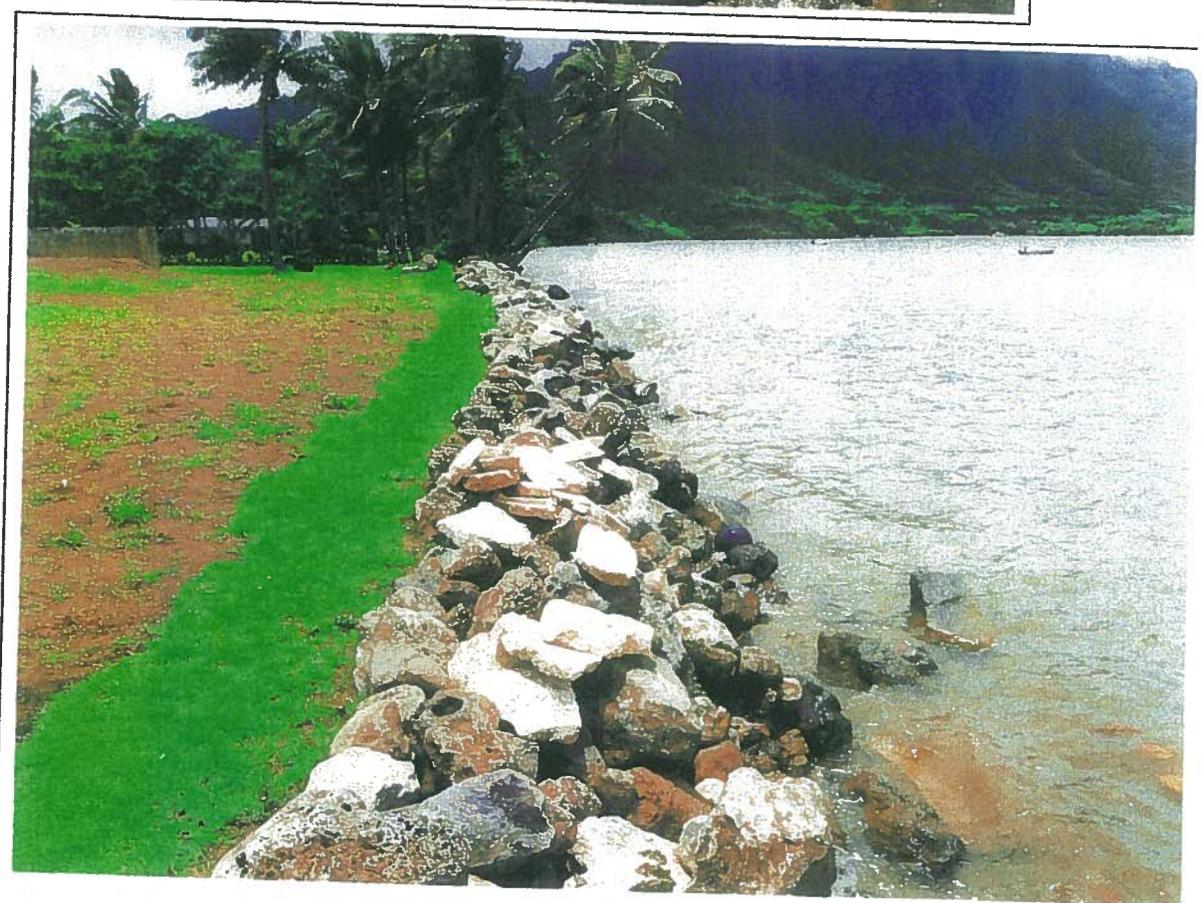
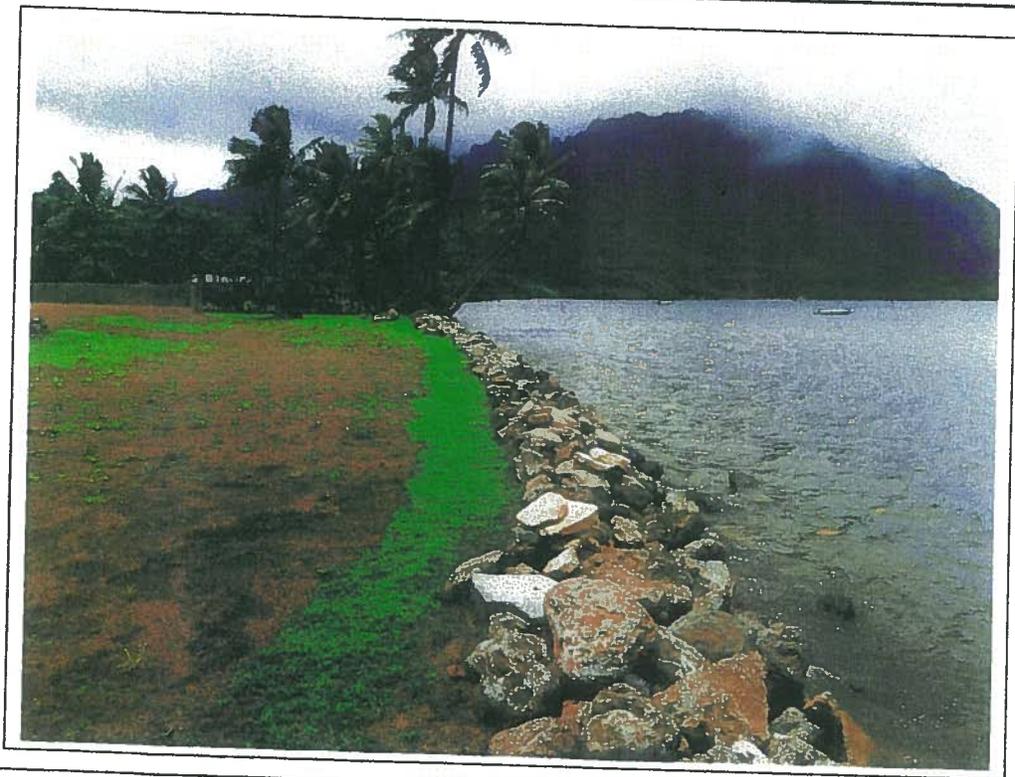
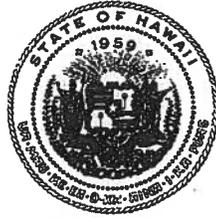


EXHIBIT 5

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



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

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

PAUL J. CONRY
INTERIM FIRST DEPUTY

WILLIAM M. TAM
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

AUG 31 2012

ENF: OA-13-11

NOTICE OF ALLEGED VIOLATION & ORDER

CERTIFIED MAIL RETURN RECEIPT

Geraldine E. Sim Trust
48-487 Kamehameha Highway
Kaneohe, Hawaii 96744

SUBJECT: Alleged Unauthorized Placement of Rocks in the Shoreline Area of the Conservation District, Located at Kaneohe, Island of Oahu, TMK: (1) 4-8-003:048

Dear Property Owner:

NOTICE IS HEREBY GIVEN that you may be in violation of Hawaii Administrative Rules (HAR) Title 13, Chapter 5, entitled "Conservation District" providing for land use within the Conservation District, enacted pursuant to Chapter 183C, Hawaii Revised Statutes (HRS). We have received a report and pictures that you have placed multiple truckloads of rocks along the shoreline.

It appears that the rocks have been placed on and seaward of the shoreline, which is located in the State Conservation District, Resource Subzone under the jurisdiction of the State of Hawaii, Department of Land and Natural Resources. The Department has not authorized any such work in this area.

Please cease from performing any work within the Conservation District. We are currently investigating this matter as an enforcement case. Be aware, pursuant to 183C-7, HRS, the Board of Land and Natural Resources may subject you to fines of up to \$15,000.00 per violation in addition to administrative costs. After written or verbal notification from the department, willful violation may incur an additional fine of up to \$15,000.00 per day per violation for each day in which the violation persists.

The Department intends to schedule this matter before the Board of Land and Natural Resources (BLNR) as an alleged violation. You will be notified of the time and place of the BLNR meeting in the near future. You may wish to contact the Office of Conservation and Coastal Lands (OCCL) to discuss the matter. Please note any information provided may be used in civil proceedings. Should you have any questions, contact Sam Lemmo of the OCCL at (808) 587-0377.

Sincerely,

A handwritten signature in black ink, appearing to read "William J. Aila Jr.", written over a horizontal line.

WILLIAM J. AILA JR., Chairperson

C: ODLO/DOCARE-Oahu
City and County of Honolulu
Dept. of Planning and Permitting

EXHIBIT 6

Scanned - s.m. 10 Steve Chung

Response from: Geraldine E. Sim Trust
48-487 Kamehameha Hwy
Kaneohe, Hawaii 96744

RECEIVED
STATE OF HAWAII
DEPARTMENT OF LAND & NATURAL RESOURCES

2012 OCT 05

Response to: NOTICE OF ALLEGED VIOLATION & ORDER

DEPT. OF LAND & NATURAL RESOURCES
HONOLULU

Dear Mr. William J. Aila Jr., Chairperson,

We received a notice from you and or your office dated Aug. 31, 2012 which states we have "placed multiple truckloads of rocks along the shoreline" and in fact we have. We followed the guidelines published in the, City and County of Honolulu Neighborhood Board information Handbook, dated April 2010 which is readily available for download on the City of Honolulu website of which I have included a copy for your convenience. This publication describes in detail the process of obtaining and the determination of requiring a building permit. Please refer to page 22, the title and bullet points from that publication which I have inserted a few lines below for your convenience;

Building Permits Are Not Required for:

- **Retaining walls, fences, and planter boxes which are not more than 30 inches in height; walkways, riprap walls, and outside paving within private property.**

The statement "Building permits are Not Required for" is unambiguous, it lists conditions where an owner of private property in this state is NOT required by the City and County of Honolulu Department of Planning and Permitting to apply, ask permissions, or otherwise obtain a permit prior to or post building certain items "within private property". "within private property" encompasses the meets and bounds of the property owned.

Riprap Walls are included in the list in which the aforementioned statement directly states that "Are Not Required for".

I have also included (attached exhibit "a & b") in this response the absolute definition, and design criteria of typical Riprap walls, below is some excerpts again for your convenience,

Merriam Webster Dictionary- "a foundation or sustaining wall of stones or chunks of concrete thrown together without order". "a layer of this or similar material on an embankment slope to prevent erosion".

Wikipedia- "Rip-rap—is rock or other material used to armor shorelines, streambeds, bridge abutments, pilings and other shoreline structures against scour, water or ice erosion". "It is made from a variety of rock types, commonly granite or limestone, and occasionally concrete rubble from building and paving demolition. It can be used on any waterway or water containment where there is potential for water erosion".

EXHIBIT

7

The DLNR officer that visited the property in the early part of June, the day the riprap wall was began, inspected the property and explained he was there due to a neighbor complaint alleging sediment was being generated and disbursed into the water. He did not find evidence to support that complaint. He took pictures and asked for detailed information on what was being done. It was explained in detail that" we were installing a riprap wall to mitigate erosion and cleaning foreign debris from the beach" he asked if we were planning on using concrete to hold the rocks together and we told him "no" we were "piling rocks on the slope". He explained "everything looks good to me" and to "be sure the wall was on private property", then spoke with Geraldine (the owner) and left. He did not say to stop, cease and desist, wait, or otherwise any verbiage that would indicate we were violating any DLNR requirement. He thoroughly inspected the site in early June, 2012. The riprap wall was completed 5 days later.

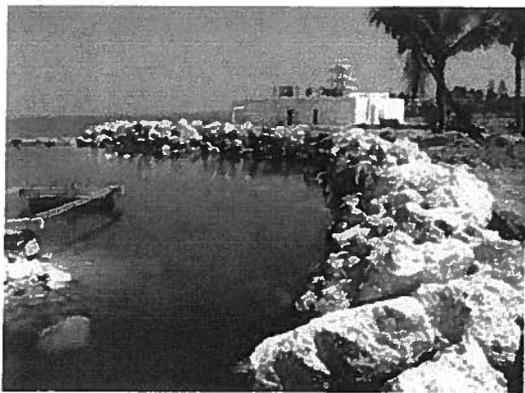
Finally, the use of riprap walls to mitigate erosion is in wide use by DLNR, and the City and County statewide. It is used in parks that abut the ocean, piers, streams and many situations to mitigate erosion exactly as we have installed and is permitted in the City and County of Honolulu Neighborhood Board information Handbook. I do not believe it would be authorized and permitted in the very documents published by the department of Planning and Permitting for guidelines the landowners are to follow and then these agencies that published the rules to follow prosecute these very same landowners "up to 15,000.00 dollars per day" for doing so. I believe it would constitute entrapment.

Very truly yours,

Alfred Sim

EXHIBIT

Below are images of typical Riprap walls that can be used as comparison to the riprap wall we installed;



EXHIBIT

I have also included (attached exhibit "C") from the State of Massachusetts .gov website the definition, purpose and typical general building practice's followed in installing typical riprap walls to use as comparison to the riprap wall we installed.

Due to erosion and coconut trees on our private property being undermined we installed a riprap wall to mitigate erosion. To the best of our knowledge the wall was placed on the private property side of the mean water line evidenced by the upward most vegetation line established over the years, in compliance with the rules and regulations derived from the publications set forth and offered by the City and County of Honolulu Department of Planning and Permitting.

The property owner adjacent to Geraldine's property has a mortared CRM over 30"/ partial riprap wall. See pictures below;



Picture 1, date taken- 6/5/2012 9:38am, CRM Retaining wall over 30", concrete bench within easement.

EXHIBIT



Picture 2, date taken- 6/5/2012 9:20am, CRM retaining wall over 30" in height, top right of picture- cabana built within 40' easement.

EXHIBIT



Picture 3, date taken 6/5/2012- 9:21 am, CRM retaining wall over 30" in height, concrete riprap. Sailboat parked within 40' easement, cabana and CRM wall over 30" in height in easement.



EXHIBIT



Picture 4, date taken, 6/5/2012-9:20am CRM and riprap, Sim Trust property in the background. The Naupaka plants are on the property line.

This wall and these other violations were brought to the attention of the DLNR officer during his initial inspection, Steve Chun during his inspection, and lastly Thomas Ah San Jr. during both his inspections yet the City, County and State has shown prejudice against the Sim Trust evidenced by the lack of concern or actions by the aforementioned governing agencies to respond to clear violations brought to their attention.

- CRM retaining wall over 30"
- Cabana within 40' easement
- Boat parked within easement
- Concrete chairs within easement

EXHIBIT

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ESTHER KIAAINA
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

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

ENF: OA- 13-11

NOV - 5 2012

Mr. Alfred Sim
Geraldine E. Sim Trust
48-487 Kamehameha Highway
Kaneohe, Hawaii 96744

SUBJECT: Alleged Unauthorized Placement of Rocks in the Shoreline Area of the Conservation District, Located at Kaneohe, Island of Oahu, TMK: (1) 4-8-003:048

Dear Property Owner:

We are in receipt of your response to our Notice of Alleged Violation & Order. We are currently investigating the legality of the CRM wall on the adjacent shoreline property and we have opened an investigation on that matter.

The Department intends to schedule your case before the Board of Land and Natural Resources (BLNR) as an alleged violation. You will be notified of the time and place of the BLNR meeting in the near future. You may wish to contact the Office of Conservation and Coastal Lands (OCCL) to discuss the matter. Please note any information provided may be used in civil proceedings. Should you have any questions, contact Sam Lemmo of the OCCL at (808) 587-0377.

Sincerely,

A handwritten signature in black ink, appearing to read "Samuel J. Lemmo".

Samuel J. Lemmo, Administrator

C: ODLO/DOCARE-Oahu
City and County of Honolulu
Dept. of Planning and Permitting

EXHIBIT

8

TM

Sims

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-8041
DEPT. WEB SITE: www.honolulu.gov • CITY WEB SITE: www.honolulu.gov

RECEIVED
OFFICE OF CONSERVATION
& COASTAL LANDS

PETER B. CARLISLE
MAYOR



2012 OCT 12 A 10:44

JIRO A. SUMADA
ACTING DIRECTOR

DEPT. OF LAND &
NATURAL RESOURCES
STATE OF HAWAII

October 11, 2012

Mr. Alfred Sim
Geraldine Sim Trust
48-487 Kamehameha Highway
Kaneohe, Hawaii 96744

Dear Mr. Sim:

Subject: Notice of Violation 2012/NOV-07-003
48-487 Kamehameha Highway – Kahaluu
Tax Map Key 4-8-003: 048 (POID 10995)

This is to provide you with an update on the status of the above Notice of Violation (NOV) dated July 02, 2012.

Following discussions of your case between the City Department of Planning and Permitting (DPP) and the State Department of Land and Natural Resources (DLNR), Office of Conservation and Coastal Lands (OCCL), it has been determined that DLNR/OCCL will be the lead agency for enforcement actions related to this matter. As such, the DPP will defer its subsequent enforcement action, i.e., issuance of a Notice of Order and assessed civil fines, to DLNR/OCCL.

However, the NOV will remain active until the violation is corrected by either removing the stockpile boulders or obtaining a Shoreline Setback Variance for the sea wall.

Should you have any questions, please contact Steve Cheung of our Code Compliance Branch at 768-8114.

Very truly yours,

for Jiro A. Sumada, Acting Director
Department of Planning and Permitting

JAS:ra

cc: State DLNR/OCCL

12NOV07-003

EXHIBIT

9

TABLE OF CONTENTS

1 INTRODUCTION1

2 CONSERVATION DISTRICT VIOLATION PENALTIES SCHEDULE GUIDELINES1

2.1 PENALTY CALCULATION.....2

2.1.1 Identified Land Use Penalties.....3

2.1.2 Non- Identified Land Use Penalties.....4

2.1.3 Tree Removal.....5

2.1.4 Vegetation Removal/Vegetation Clearing.....5

2.1.5 Additional Considerations and Factors.....6

2.1.6 Continuing Violations and Permit Non-Compliance.....6

2.1.7 In-Kind Penalties.....7

2.1.8 Penalty Adjudication.....9

3 ASSESSMENT OF DAMAGES TO PUBLIC LAND OR NATURAL RESOURCES.....10

3.1 PRIMARY RESTORATION DAMAGES.....11

3.2 COMPENSATORY DAMAGE CALCULATION.....12

3.3 ADJUDICATION OF DAMAGES.....13

APPENDIX A: GUIDELINE FRAMEWORK TABLES

APPENDIX B: DEFINITIONS

APPENDIX C: REFERENCES

APPENDIX D: DAMAGES EXAMPLES

APPENDIX E: PENALTY CALCULATION WORKSHEET

CONSERVATION DISTRICT VIOLATION PENALTIES SCHEDULE
GUIDELINES AND ASSESSMENT OF DAMAGES TO PUBLIC LAND OR
NATURAL RESOURCES

September 2009

Relating to penalties for violations within the Conservation District

Act 217

1 INTRODUCTION

Hawaii Revised Statutes (HRS) §183C-7 was amended on July 7, 2008 to increase the maximum penalty for a Conservation District violation to up to \$15,000 per violation, in addition to administrative costs, costs associated with land or habitat restoration, and damages to public land or natural resources, or any combination thereof.

This document, *Conservation District Violation Penalties Schedule Guidelines and Assessment of Damages to Public Land and Natural Resources* is intended to provide the Office of Conservation and Coastal Lands (OCCL) with a framework to systematically carry out its enforcement powers, in the determination and adjudication of civil and administrative penalties. These guidelines are to be used for internal staff guidance, and should be periodically reviewed to determine their effectiveness, and whether refinements are needed. These guidelines are consistent with HAR §13-1, Subchapter 7, Civil Resource Violation System (CRVS).

2 CONSERVATION DISTRICT VIOLATION PENALTIES SCHEDULE GUIDELINES

The charging and collecting of penalties is an enforcement tool that may be used to ensure future compliance by the responsible party and others similarly situated. The penalty amount(s) shall be enough to ensure immediate compliance with HAR §13-5 and HRS §183C, and cessation of illegal activities. Penalties will be assessed for each action committed by an individual(s) that conducts an unauthorized land use and that impairs or destroys natural resources protected under Chapter §183C, HRS.

The Staff will treat each case individually when assigning conservation district penalties using the following framework, and additional considerations and factors for upward or downward adjustments. The staff of the OCCL (Staff) will use these penalty schedule guidelines to issue violation notices and to make recommendations to the Board of Land

and Natural Resources (Board), Chairperson of the Board of Land and Natural Resources (Chairperson), or Presiding Officer, whom may ultimately adjudicate the Conservation District penalties. These guidelines presume that all cases in which a violation has occurred, the Chairperson, Board, or Presiding Officer may also assess administrative costs, damages to public land or natural resources, and costs associated with land or habitat restoration.

2.1 PENALTY CALCULATION

The penalty range for these actions will be substantially determined based on the type of permit that would have been required if the individual(s) had applied to the Department of Land and Natural Resources (Department) or Board for pre-authorization to conduct the identified use, under Hawaii Administrative Rules (HAR) §13-5-22, 23, 24, 25. Assessing the penalties according to the Conservation District permit type accounts for the level of review or scrutiny the unauthorized use would have received by the Department or Board in order to avoid damage to the natural resource. This graduated permit review framework corresponds to the level of actual or potential "harm to the resource"¹ caused by the violation.

Once the baseline for the penalty range has been established according the required permit, the penalty may be adjusted appropriately upward or downward according to the "harm to resource" caused or potentially caused by the violator's action and additional considerations and factors (Sec 2.1.4),² within the assigned penalty range. Where Staff was unable to associate the unauthorized use with a typical land use identified in HAR §13-5, Staff may try to associate the action with the most similar identified land use in HAR §13-5, or according to the "harm to the resource" caused by the violation. Table 1

¹ "Harm to resource" is an actual or potential impact, whether direct or indirect, short or long term, impact on a natural, cultural or social resource, which is expected to occur as a result of unauthorized acts of construction, site/area alteration, or landscape alteration (See Appendix B: Definitions) Adopted from Florida Department of Environmental Protection 2000 Administrative Fines and Damage Liability, Ch. 62B-54.

² Penalty amounts may be adjusted up or down, based on additional considerations, such as the actual extent of the direct damages, significance of any diffuse indirect impacts, environmental record of the violator, responsiveness of violator, etc. (Sec 2.1.4 Additional Considerations and Factors).

was created to demonstrate the penalty ranges for the type of required permit and "harm to resource" (See 2.1.1 or Appendix A).

The first two of the following sections explain the identified and non-identified land use framework. The next four sections: Tree Removal, Additional Considerations and Factors, Continuing Violations and Permit Non-Compliance, and In-Kind Penalties, provide guidance for the upward or downward adjustment of penalties based on the initial framework discussed in Section 2.1.1, Identified land use penalties.

2.1.1 Identified Land Use Penalties

The violation penalty range associated with each required permit will be assessed in accordance with the following harm to resource indices in this graduated framework.

Table 1. Penalty Guideline Framework

Harm to resource or potential for harm to resource	Identified land use permit beginning with the letter	Penalty Range
Major	D (Board)	\$10,000-\$15,000
Moderate	C (Departmental)	\$2,000-\$10,000
Minor	B (Site Plan)	\$1,000-\$2,000
Very Minor	(B) (Site Plan)	Up to \$1,000

Major Harm to the Resource/ Board Permit (D)

Violations identified with the required permit prefix (D) may incur a penalty in the range of \$10,000 - \$15,000 as a Board permit would have been required to minimize the possibility of causing "major harm to the resource." Examples of "major harm(s) to the resource" may include actions that cause substantial adverse impact to existing natural resources within the surrounding area, community, ecosystem or region, or damage to the existing physical and environmental aspects of the land, such as natural beauty and open space characteristics. Such actions may include, but are not limited to, unauthorized single-family residences or unauthorized structures, grading or alteration of topographic features, aquaculture, major marine construction or dredging, unauthorized shoreline structures, major projects of any kind, mining and extraction, etc.

Moderate Harm to the Resource/Departmental Permit (C)

Violations identified with the required permit prefix (C) may incur a penalty in the range of \$2,000-\$10,000, as a Departmental permit would have been required, due to the possibility of causing "moderate harm to the resource." Examples of "moderate harm(s) to the resource" may be adverse impacts that degrade water resources, degrade native ecosystems and habitats, and/or alter the structure or function of a terrestrial, littoral or marine ecosystem. Such actions may include, but are not limited to, unauthorized landscaping causing ground disturbance, unauthorized alteration, renovation or demolition of existing structures or facilities, such as buildings and shoreline structures, maintenance dredging, agriculture, and animal husbandry, etc.

Minor Harm to the Resource/Site Plan Approval (B) Permit

Violations identified with the required permit prefix (B) may incur penalties as a site plan approval would have been required to assure that "minor harm(s) to the resource" are minimized. "Minor harm(s) to the resource" may incur a penalty of \$1,000-\$2,000 and could be actions causing limited to short-term direct impacts including, but not limited to, small-scaled construction, construction of accessory structures, installation of temporary or minor shoreline activities or similar uses.

Very Minor Harm to the Resource/(B) Permit

In instances in which a permit with the B prefix should have been sought but are considered to have only caused "very minor harm(s) to resource" a penalty of up to \$1,000 may be incurred. These "very minor harm(s) to the resource" could be actions in which the impact on the water resource or terrestrial, littoral or marine ecosystem was temporary or insignificant, and was not of a substantial nature either individually or cumulatively.

2.1.2 Non-Identified Land Use Penalties

Violations in which an unauthorized use is not identified in HAR §13-5-22, 23, 24, 25, Staff may try to associate the action with the most similar identified land use in HAR

§13-5 or according to the "harm to the resource" caused by the violation. Refer to the above section, *Identified Land Use Penalties*, for the most similar required permit prefix. To categorize the violation as a "harm to resource" when no similar use is identified in HAR §13-5, Staff will refer to Table 1 and the definitions of the four violation types of "harm to resource" (See Appendix B: Definitions).

2.1.3 Tree Removal

Violation penalties for the removal of any federal or state listed threatened, endangered, or commercially valuable tree may incur a fine of up to \$15,000 per tree. Removal of any native tree may incur a fine of up to \$1,000 per tree. The removal of any invasive tree shall be considered as removal/clearing of vegetation.

The Board, Department, or Presiding Officer also has the option of considering the removal of more than one tree as a single violation, similar to the removal/clearing of vegetation.³ If violation is considered as one violation, a fine amount of up to \$15,000 may be incurred, utilizing the guidelines for Major, Moderate, Minor, and Very Minor outlined in this schedule. However, the removal of any federally or state listed threatened or endangered tree shall be considered on a one violation per tree basis, with a maximum penalty of up to \$15,000 per tree.

2.1.4 Vegetation Removal/Vegetation Clearing

Past Staff recommendations and Board decisions have treated some cases of tree or removal as one citation of vegetation clearing/vegetation removal, this practice may be continued in violations resulting in minor or very minor harm to the resource. In accordance with the identified land uses within HAR §13-5 the assessment of vegetation removal has been based on a single citation of removal/clearing determined by the square footage of vegetation removed (See Table 3 Vegetation Removal). However, the

³ While Staff and Board decisions in MA-01-09, OA-05-40 and HA-06-08 have treated the removal of non-native, invasive, or noxious trees as one citation of "clearing" with mandatory remediation plans.

Department may see fit to assess the removal/clearing of threatened, endangered, or commercially valuable plants similar to the modified tree removal framework and may be penalized on an individual plant basis of up to \$15,000 per plant.

Table 3. Vegetation Removal

Action	Comparable Harm to Resource	Penalty Range
Removal of more than 10,000 sq. ft.	Major	\$10,000-\$15,000
Removal of Vegetation or of 2,000-10,000 sq. ft. of vegetation	Moderate	\$2,000-\$10,000
Removal of less than 2,000 sq. ft. vegetation	Minor	\$1,000-\$2,000
Clearing of Invasive or noxious vegetation	Very Minor	Up to \$1,000*

Note: The clearing of threatened, endangered or commercially valuable plants will be addressed on a case-by-case basis, but depending on the importance of the species may incur a penalty of up to \$15,000 per plant. According to Table 2, the clearing of vegetation may incur a penalty of up to \$1/ sq. ft., as clearing 10,000 sq. ft. Staff could assess a penalty of \$10,000.

2.1.5 Additional Considerations and Factors

After Staff applies the Conservation District violation graduated penalty framework to identify the violation penalty range (1, 2, and 3 found above), the Staff may incorporate several considerations into the final assessed conservation district penalty including but not limited to, those factors identified in HAR §13-1-70 Administrative Sanctions Schedule: Factors to be Considered.

2.1.6 Continuing Violations and Permit Non-Compliance

Each day during which a party continues to work or otherwise continues to violate conservation district laws, and after the Department has informed the violator of the offense by verbal or written notification, the party may be penalized up to \$15,000 per day (penalties for every day illegal actions continue) by the Department for each separate offense.

* Provided the harm to the resource and offsite damage were minimal.

Violation of existing approved Conservation District Use Permit (CDUP) conditions will be assessed on a case-by-case basis. Existing permit violations, in which deadlines are not met, may be individually assessed by the Staff as to prior violator conduct, knowledge, and compliance. Violation of permit conditions involving initiation and/or completion of project construction, notification of start and completion dates, failure to file legal documents, etc., may be considered very minor within the existing framework, although it should be noted that such actions may result in permit revocation. Failure to perform proper cultural, archeological, or environmental impact studies or failure to implement proper best management practices as identified in the standard permit conditions may be assessed more severely by Staff, as a moderate or major harm to the resource, due to the potential of greater adverse impacts to natural resources from the violator's failure to comply with the permit conditions, may have occurred.

2.1.7 In-Kind Penalties

Once the penalty amount has been established through the framework above, the Department may determine that the full payment or some portion of the penalty may be paid as an in-kind penalty project.⁵ This would not serve as a way to avoid payment but as a way to reduce the cash amount owed while allowing the Department to consistently enforce its rules. The in-kind penalty project is not designed to credit the violator for restoration or remediation efforts that may be already required, but to offset a portion of the cash penalty assessed. The in-kind penalty should be enough to ensure future compliance with HAR §13-5 and HRS §183C, by the violator and to deter other potential violators from non-compliance.

In-kind penalties will only be considered if (1) the responsible party is a government entity, such as a federal agency, state agency, county agency, city agency, university, or school board, or if (2) the responsible party is a private party proposing an environmental

⁵ In-Kind Penalty framework has been adapted from Florida Department of Environmental Protection, 2007, Program Directive 923, Settlement guidelines for civil and administrative penalties.

restoration, enhancement, information, or education project. In-kind penalties are limited to the following specific options:

- a. **Material and/or labor support for environmental enhancement or restoration projects.** The Department will give preference to in-kind projects benefiting proposed government-sponsored environmental projects. For shoreline violations, this may include state beach nourishment projects and dune restoration projects.
- b. **Environmental Information and Environmental Education projects.** Any information or education project proposed must demonstrate how the information or education project will directly enhance the Department's, and preferably the OCCLE's, mission to protect and conserve Hawaii's Conservation District Lands.
- c. **Capital or Facility Improvements.** Any capital or facility improvement project proposed must demonstrate how the improvement will directly enhance the Department's and/or public's use, access, or ecological value of the conservation property.
- d. **Property.** A responsible party may propose to donate land to the department as an in-kind penalty. Donations will be handled by the Department's Legacy Lands program or similar program.

2.1.8 Penalty Adjudication

Violation penalties may be adjudicated similarly to the harm to resource indices in the penalty guideline framework.

Comparable Harm to Resource	Identified land use permit and Penalty Range	Penalty Adjudicator
Major	\$10,000-\$15,000	Board
Moderate	\$2,000-\$10,000	Board
Minor	\$1,000-\$2,000	Chairperson or Presiding Officer
Very Minor	up to \$1,000	Chairperson or Presiding Officer

Major and Moderate Harm to the Resource

The Board may adjudicate penalties to violations categorized as causing or potentially causing major or moderate harm(s) to the resource. The Board may also adjudicate cases in which repeat violations, repeat violators, or egregious behavior were involved, or moderate to significant actual harm to the resource occurred. The Board may also adjudicate the payment of part or all, of the penalty as part of an In-kind penalty.

Minor and Very Minor Harm to the Resource

The Board may delegate to the Chairperson or a Presiding Officer the power to render a final decision in minor and very minor conservation district violations in order to provide expeditious processing and cost effective resolution. The Chairperson or appointed Presiding Officer may adjudicate penalties to minor and very minor violations characterized by inadvertent or unintentional violations and those violations which caused minor or very minor harm to the resource.

3 ASSESSMENT OF DAMAGES TO PUBLIC LAND OR NATURAL RESOURCES

Penalties to recoup damages to public lands or natural resources for the purposes of enforcement and remediation may be assessed in addition to Conservation District violation penalties assessed by the aforementioned guidelines. The assessed total value of the initial and interim natural resource(s) damaged or lost (compensatory damages) and the cost of restoration or replacement of the damaged natural resource(s) (primary restoration cost) along with any other appropriate factors, including those named in HAR §13-1-70, may be adjudicated by the Board. The total value may be estimated on a per annum basis, and then may be used to calculate the net present value of the initial and interim loss of natural resource benefits, until the ecosystem structure, function, and/or services are restored.

The cost of a full-scale damage assessment by the Department would be an administrative cost, which could be recouped by the Board from the landowner or offender pursuant §HRS 183C-7. In some cases, the damage to public lands or natural resources may occur on more than one ecosystem or habitat type, (e.g., sandy beaches, seagrass beds, and coral reefs). In such instances, damages for all impacted systems will be handled cumulatively.

Since all the ecosystem services provided by the ecosystem in question cannot be quantified (e.g., the aesthetic value), the values obtained are lower bound estimates, and may be applied to systems similar to the referenced ecosystem using the benefit transfer method. These valuations, to account for the loss of ecosystem services and the cost to restore them, may be applied to Hawaiian ecosystems on public lands: such as Koa and Ohia forests, coral reefs, seagrass beds, wetlands, dune and beach ecosystems, and other important Hawaiian ecosystems.

While each case is unique and individual in nature, the Department may not be able to conduct detailed damage assessments in each case, and may refer to past precedent,

economic ecosystem valuations, and other published environmental valuations to estimate and assess damages on smaller scales (for valuations and publication examples see Appendix C: References and Appendix D: Damages Examples). Using the benefit transfer method to apply past precedents and published valuations in some situations would allow the Department to focus its administrative duties and time on remediation and restoration efforts. However, as ecological valuation and research continue, more comprehensive estimates may be produced and utilized.

The Board may allow restoration activities and damage penalties to be conducted and/or applied to a site different from the location of the damaged area where similar physical, biological and/or cultural functions exist. These assessed damages are independent of other, city, county, state and federal regulatory decisions and adjudications. Thus, the monetary remedies provided in HRS §183C-7 are cumulative and in addition to any other remedies allowed by law.

3.1 PRIMARY RESTORATION DAMAGES

The cost of land or habitat restoration or replacement, the cost of site monitoring, and site management may be assessed and charged as primary restoration damages. Restoration efforts will aim to return the damaged ecosystem to a similar ecological structure and function that existed prior to the violation. In cases in which the damaged ecosystem was predominantly composed of non-native species, restoration efforts must re-vegetate Conservation District land and public lands with non-invasive species, preferably native and endemic species when possible. The use of native and endemic species may thus result in the restoration of ecological structure and function critical for the survival of endemic Hawaiian species.

Returning the damaged and or severely degraded site to a condition similar to or better than its previous ecological structure and function (e.g., a terrestrial system such as a Koa (*Acacia koa*) forest) would include: (1) calculating the level of ecosystem services to be restored from carbon sequestration, climate regulation, nutrient cycling, air and water purification, erosion control, plant and/or wildlife habitat, and any other services which

may be valued; (2) purchase, production and out-planting of Koa seedlings; and (3) monitoring, maintenance, and management for the time period of mature growth of 40-60 years, to achieve mature canopy structure, native under-story, and an acceptable level of lost ecosystem structure, function and/or services restored.

3.2 COMPENSATORY DAMAGE CALCULATION

Compensatory damages to public lands or natural resources may be assessed and charged to the violator to compensate for ecosystem damage and lost initial and interim ecosystem services to the public. All Divisions of the Department may coordinate their resources and efforts along with existing ecosystem valuations and publications (See Appendix C and D for examples) to derive the estimated total value of the natural resource damaged until the ecosystem structure, function, and services are estimated to be recovered.

The total value of the natural resource that is lost or damaged may include the initial and interim values of the ecosystem services provided by the natural resource or habitat, and the social-economic value of the degraded site, until the ecosystem structure, function, and/or services are restored. Assessing the damages to the resource could include: estimating the loss of ecosystem services of carbon sequestration, climate regulation, nutrient cycling, plant and/or wildlife habitat, biodiversity, air and water purification, erosion control, coastal protection, the loss of benefits to tourism, fisheries, society, cultural inspiration and practices, and any other services which may be valued.

These natural resource damages may be assessed using economic valuation techniques to estimate the total value(s) of the natural resource(s) damaged on a per area basis, including: total ecosystem service value, total annual benefits, the market value of the natural resource, or any other factor deemed appropriate. The total value of the present and interim natural resource damage may be estimated by calculating the net present value of these lost benefits, values and services. The net present value may be calculated using a discount rate to scale the present and future costs to the public, of the interim losses of ecosystem services over the restoration time. The restoration time may be

estimated as the number of years for the damaged natural resource or ecosystem to reach maturity and/or the ecosystem structure and function to be restored similar to the pre-violation state. The discount of future losses and accrued benefits may be used in the valuation of mitigation efforts performed by the violator. For example the restoration conducted immediately after damage occurred may be calculated to have a higher present benefit worth than the benefit of restoration activities undertaken a year or two later.

In other instances, a habitat equivalency analysis (HEA) or a resource equivalency analysis (REA) may be used to scale equivalent habitat or wildlife losses for estimating both ecosystem damage penalties and restoration efforts.

3.3 ADJUDICATION OF DAMAGES

The adjudication of primary restoration damages and compensatory damages will be adjudicated by the Board due to the complexity of the assessment process and to assure proper checks and balances, including adequate public notice and a public hearing.

In addition to the damages and penalty violations assessed, the Department is allowed to recoup all administrative costs associated with the alleged violation pursuant to HRS §183C-7(b). All penalties assessed will be in compliance with HRS §183C-7(c) and will not prohibit any person from exercising native Hawaiian gathering rights or traditional cultural practices.

APPENDIX A: GUIDELINE FRAMEWORK TABLES

Table 1. Penalty Guideline Framework

Harm to resource or potential for harm to resource	Identified land use permit beginning with the letter	Penalty Range
Major	D (Board)	\$10,000-\$15,000
Moderate	C (Departmental)	\$2,000-\$10,000
Minor	B (Site Plan)	\$1,000-\$2,000
Very Minor	(B) (Site Plan)	Up to \$1,000

Table 2. Vegetation Removal

Action	Comparable Harm to Resource	Penalty Range
Removal of more than 10,000 sq. ft.	Major	\$10,000-\$15,000
Removal of Vegetation or of 2,000-10,000 sq. ft. of vegetation	Moderate	\$2,000-\$10,000
Removal of less than 2,000 sq. ft. of vegetation	Minor	\$1,000-\$2,000
Clearing of Invasive or noxious vegetation	Very Minor	Up to \$1,000 ^a

Note: According to Table 2, the clearing of vegetation may incur a penalty of up to \$17 sq. ft. as clearing 10,000 sq. ft. Staff could assess a penalty of \$10,000. The clearing of threatened, endangered or commercially valuable plants, will be addressed on a case-by-case basis, but depending on the importance of the species may incur a penalty of up to \$15,000 per plant.

APPENDIX B: DEFINITIONS

Definitions:

- (1) "Baseline" means the original level of services provided by the damaged resource.
- (2) "Benefit Transfer Method" estimates economic values by transferring existing benefit estimates from studies already completed for another location or issue.⁷
- (3) "Board" means the Board of Land and Natural Resources.
- (4) "Board Permit" means a permit approved by the Board of Land and Natural Resources.
- (5) "Chairperson" means the chairperson of the board of land and natural resources
- (6) "Civil Resource Violations System" or "CRVS" means a system of administrative law proceedings as authorized under chapter 199D, HRS, and further prescribed in Subchapter 7, 13-1, HAR, for the purpose of processing civil resource violations.
- (7) "Compensatory Damages" means damages for compensation for the interim loss of ecosystem services to the public prior to full recovery.
- (8) "Contested Case" means a proceeding in which the legal rights, duties, or privileges of specific parties are required by law to be determined after an opportunity for an agency hearing.
- (9) "Department" means the Department of Land and Natural Resources.
- (10) "Departmental Permit" means a permit approved by the Chairperson.
- (11) "Discounting" means an economic procedure that weights past and future benefits or costs such that they are comparable with present benefits and costs.
- (12) "Ecosystem Services" means natural resources and ecosystem processes, which may be valued according to their benefits to humankind.

For example: carbon sequestration, climate regulation, nutrient cycling, plant and/or wildlife habitat, biodiversity, air and water purification, erosion control, coastal protection, the loss of benefits to tourism.

⁷ Ecosystem Valuations http://www.ecosystemvaluation.org/benefit_transfer.htm

recreation, scientific discovery, fisheries, society, cultural inspiration and practices, and any other services which may be valued.

- (13) "Grossly negligent" violation means conscious and voluntary acts or omissions characterized by the failure to perform a manifest duty in reckless disregard of the consequences.⁸
- (14) "Harm to resource" means an actual or potential impact, whether direct or indirect, short or long term, acting on a natural, cultural or social resource, which is expected to occur as a result of unauthorized acts of construction, shoreline alteration, or landscape alteration as is defined as follows:
 - (a) "Major Harm to resource" means a significant adverse impact(s), which can cause substantial adverse impact to existing natural resources within the surrounding area, community or region, or damage the existing physical and environmental aspects of the land, such as natural beauty and open space characteristics
 - (b) "Moderate Harm to Resource" means an adverse impact(s), which can degrade water resources, degrade native ecosystems and habitats, and/or reduce the structure or function of a terrestrial, littoral or marine system (but not to the extent of those previously defined as those in (a)).
 - (c) "Minor Harm to Resource" means limited to short-term direct impacts from small scaled construction or shoreline or vegetation alteration activities.
 - (d) "Very Minor Harm to Resource" means an action in which the impact on the water resource or terrestrial, littoral or marine ecosystem was insignificant, and was not of a substantial nature either individually or cumulatively.

For example, "major harm to the resource(s)" would be associated with a major land use violation that would have likely required a Board Permit such as building a house, while a "minor harm to the resource(s)" may be

⁸ Definition adapted from Florida Department of Environmental Protection, 2000 Administrative Fines and Damages Liability, Ch. 62B-54.

associated with minor land uses requiring an administrative Site Plan Approval, for building a small accessory structure.

- (15) "Knowing" violation means an act or omission done with awareness of the nature of the conduct.
- (16) "Net Present Value" means the total present value (PV) of a time series of cash flows.
- (17) "OCCL Administrator" means the Administrator of the Office of Conservation and Coastal Lands.
- (18) "Party" means each person or agency named or admitted as a party.
- (19) "Person" means an appropriate individuals, partnership, corporation, association, or public or private organization of any character other than agencies.
- (20) "Presiding Officer" means the person conducting the hearing, which shall be the chairperson, or the chairperson's designated representative.
- (21) "Primary Restoration Damages" means the costs to restore the damaged site to its prior baseline state.
- (22) "Site Plan" means a plan drawn to scale, showing the actual dimensions and shape of the property, the size and locations on the property of existing and proposed structures and open areas including vegetation and landscaping.
- (23) "Willful violation" means an act or omission which is voluntary, intentional and with the specific intent to do something the law forbids, or fail to do something the law requires to be done.

APPENDIX C: REFERENCES

- Cesar, H., van Beukering, P., Pirtz, S., Dierking J. 2002. Economic valuation of the coral reefs of Hawaii. NOAA Final Report NA 160A1449.
- Conservation International. 2008. Economic Values of Coral Reefs, Mangroves, and Seagrasses: A Global Compilation. Center for Applied Biodiversity Science, Conservation International, Arlington VA, USA.
- Costanza, R. and Farley J. 2007. Ecological economics of coastal disasters: Introduction to the special issue. Ecological Economics 63 p. 249-253.
- Costanza, R., d'Arge, R., de Groot, R., Farber, S., Grasso, M., Hannon, B., Limburg, K., Naeem, S., O'Neill, R.V., Paruelo, J., Raskin, R.G., Sutton, P., van den Belt, M. 1997. The Value of the World's Ecosystem Services and Natural Capital. Nature 387 p. 253-260.
- Florida Department of Environmental Protection. Damage Costs in Seagrass Habitats. http://www.dep.state.fl.us/coastal/habitats/seagrass/awareness/damage_costs.htm
- Florida Department of Environmental Protection. 2000 Administrative Fines and Damage Liability. Ch. 62B-54. <http://www.dep.state.fl.us/legal/Rules/beach/62b-54.doc>
- Florida Department of Environmental Protection. 2007. Program Directive 923, Settlement guidelines for civil and administrative penalties. www.dep.state.fl.us/admin/depdirs/pdf/923.pdf
- Florida Department of Environmental Protection. 2000. Rules and procedures for application for coastal construction permits. Ch. 62B-41. <http://www.dep.state.fl.us/beaches/publications/pdf/62b-41.pdf>

APPENDIX D: DAMAGES EXAMPLES

Maine Land-Use Regulation Commission, 2007, 2008 Workshop Draft Comprehensive Land Use Plan, for areas within the jurisdiction.

http://www.maine.gov/doc/lurc/reference/cliprev/CLUP_PWDraft_pg5.shtml

Examples of Damage Assessments and Possible Remediation Efforts

The following are only brief past estimates used in Hawaii and other states; they are by no means comprehensive or limiting. These are intended to be examples for possible assessments and remediation efforts not as templates. As previously stated each case will be handled individually to account for unique ecological, economic and cultural impacts. The following are organized by habitat type.

Coral

Florida Department of Environmental Protection (Civil Damages):

The DEP can impose fines of up to \$1,000/m² of reef damaged and is dependent on the absence of extenuating circumstances such as weather conditions, disregard of safe boating practices, navigational error, whether the vessel operator was under the influence of drugs or alcohol etc.

Cesar et al 2002 (Ecosystem Service Valuation)

Cesar et al. used a Simple Coral Reef Ecological Economic Model (SCREEM) to assess Hawaiian coral reefs based on the annual benefits of the coral reefs to recreation/tourism, property amenities, biodiversity, fisheries and education. The annual benefits and total economic value could then be expressed on a 'per area' basis. This study found the total annual benefits of the coral reefs of Hanauma Bay to be \$37.57 million (\$2,568/m²), of the coral reefs in Kihnei to be \$28.09 million (\$65/m²) and the coral reefs on the Kona coast to be \$17.68 million (\$19/m²).

Plaia enforcement (KA-02-10) (Primary Restoration Cost)

Damage to Coral reef ecosystems was assessed for restoration activities according to Florida guidelines, as \$5,830,000 for 5,380 m² of coral reef damage. This calculation

was similar to the estimated cost of remediation efforts \$390,000 to clean 5,000 yd³ of beach sand. However between 30,000-50,000 yd³ was estimated to be impacted, totaling \$2,300,000-\$3,900,000. While cleaning the sediment from the reef was estimated to cost approximately \$845,000 (for the 13 acres, or \$65,000 for 10m²). This totaled between \$3,100,000 and \$4,700,000, and did not include coral colony re-establishment. An additional \$630,000 was estimated for the 10-year monitoring period, (however studies by Cesar et al. 2003 estimated a 25 year period for recovery of ecological impacts).

Thus damage to corals may be calculated as follows:

Number of square meters of coral damaged

X Multiplied by \$1,000 (or estimated value of coral on per/area basis)

(#m² x \$1000)

Plus the estimated net present value of ecosystem services lost until recovery. (This may be more if damage to an area such as Hanauma Bay with increased recreational economic revenue.)

- +Plus cost of Remediation
- +Plus Cost of cleaning sediment from reef
- +Plus Cost of cleaning sediment/mud from beach sand
- +Plus Cost of coral reestablishment
- +Plus Cost of Monitoring
- +Plus Cost of Management

Seagrass beds (Compensatory Damage)

The Florida DEP fines offenders \$100/yd² of damage to seagrass beds for the first yd² damaged and \$75/yd² per each additional yd² damaged.

- \$100 for the first yard damaged
- +\$75 per each additional yard
- or net present total value of ecosystem services lost until recovery
- +vegetation planting
- +monitoring

Sand Beaches (ex. Of Primary Restoration Costs)

Minimum penalty cost of restoration and potential negative ecological, social and environmental impacts should be included in the assessment of damaged, degraded or lost sandy beaches. As one of Hawaii's greatest natural resources the following should be included in the minimum penalty assessment, however, as ecological valuation and research continue, more comprehensive estimates may be produced. In KA-02-10 Piihaa, \$390,000 fine was estimated to clean 5,000 yd³ of beach.

- +Cost of lost revenue due to altered Beach resources (compensatory)
- +primary restoration costs
- +Plus cost of cleaning of sediment/mud from beach area (if necessary)
- +Plus cost of beach nourishment (sand replacement)
- +Plus cost of native dune vegetation

(In some circumstances the loss of beach resources may be assessed in conjunction with other ecological impacts listed above, such as coral reefs and sea grass beds.)

APPENDIX E: PENALTY CALCULATION WORKSHEET

Violator's Name(s): _____

TMK: _____

OCCL Staff Member: _____

Date: _____

Part 1 - Penalties

Violation Type	Penalty Prefix (D, C, B)	Harm to Resource (actual & potential)	Tree or Vegetation Status	Penalty Range	Adjustments (Mark Adj. Choice #1-8)	Multi-day (# days)	Total
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Penalty Total: _____

Penalty Adjustments and Descriptions (please attach additional adjustments and descriptions, including but not limited to those listed in §13-1-70)

1. Actual environmental damage extent (onsite)

Description: _____

2. Actual environmental damage extent (offsite)

Description: _____

3. Does the violator's have a history of violations?

4. Was the violation repetitious or of a long duration?

5. Was the violator Responsive and exhibit a level of cooperation of with the Department and/or Staff?

6. Does the Violator have a Financial Hardship?

7. Did the violator receive Economic or commercial gain through non-compliance?

8. Other:

Description: _____

Total Adjustment: up/down _____

Multi-day penalties

Number of days to multiply penalty: _____

Reasoning: _____

Total multi-day: _____