

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Land Division
Honolulu, Hawaii 96813

February 24, 2012

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

Hawaii

Issuance of Right-of-Entry Permit to Malama O Puna For Alien Red Mangrove and Pickleweed Eradication Project on Unencumbered Lands at Kealakehe, North Kona, Hawaii, Tax Map Key: (3) 7-4-08:71 por.

APPLICANT:

Malama O Puna, a Hawaii non-profit corporation.

LEGAL REFERENCE:

Sections 171-55, Hawaii Revised Statutes, as amended.

LOCATION:

Portion of Government lands of Kealakehe situated at North Kona, Hawaii, identified by Tax Map Key: (3) 7-4-08:71, as shown on the attached map labeled Exhibit A.

AREA:

0.71 acres, more or less.

ZONING:

State Land Use District: Conservation (Resource Subzone)
CZO: Open (and within SMA)

TRUST LAND STATUS:

Section 5(b) lands of the Hawaii Admission Act

DHHL 30% entitlement lands pursuant to the Hawaii State Constitution: NO

CURRENT USE STATUS:

Vacant and unencumbered.

CHARACTER OF USE:

Not applicable.

TERM OF RIGHT-OF-ENTRY:

One year.

CONSIDERATION:

Gratis.

CHAPTER 343 - ENVIRONMENTAL ASSESSMENT:

The "Division of Land Management's Environmental Impact Statement Exemption List", approved by the Environmental Council and dated April 28, 1986, is inapplicable to the present request since it involves land in the conservation district. The Office of Coastal and Conservation Lands has determined that project is exempt from conducting an environmental assessment pursuant to Hawaii Administrative Rules (HAR) Section 11-200-8(A)(4), which provides a general exemption for "Minor alterations in the conditions of land, water or vegetation." Staff is proposing that the Board find the project exempt under the same HAR provision. See Exhibit B attached.

DCCA VERIFICATION:

Place of business registration confirmed:	YES <u>X</u>	NO <u> </u>
Registered business name confirmed:	YES <u>X</u>	NO <u> </u>
Applicant in good standing confirmed:	YES <u>X</u>	NO <u> </u>

REMARKS:

Malama O Puna (Applicant), an Internal Revenue Code Section 501(c)(3) membership-based environmental organization, has requested a right-of-entry onto the subject State lands to remove alien red mangrove (*Rhizophora mangle*) and pickleweed (*Batis maritime*) and replant the area with native species. An aerial photograph of the proposed project area is included with Exhibit C.¹

Red mangrove threatens coastal ecosystems in Hawaii. Applicant proposes to remove the

¹ The copy of Conservation District Use Permit No. HA-3602 attached as Exhibit C omits Exhibits 4-8 of the permit.

red mangrove with chain saws, hand saws and machetes, and to cut and remove smaller seedlings and pickleweed with sickles. Regrowth will be cut or burned with a weed torch.²

The project will be a joint partnership between Applicant and the Big Island Invasive Species Committee (BIISC). Applicant will provide the field expertise learned from its previous projects, and supervise any field personnel provided by BIISC, as well as volunteers. Other than personnel, BIISC will assist with data expertise and field equipment (e.g. saws, machetes, etc.). Applicant will be the funding lead.

On August 25, 2011, the County of Hawaii Planning Department issued Special Management Area (SMA) Minor Permit No. 11-000189 for the project.

On January 9, 2012, the Office of Conservation and Coastal Lands issued departmental Conservation District Use Permit (CDUP) No. HA-3602 for the project. See Exhibit C. The permit advises Applicant to consult with Land Division to determine whether a right-of-entry is needed for the work. Land Division has determined that a right-of-entry permit is required.³

Normally, the Chairperson issues rights-of-entry onto unencumbered lands without Land Board review pursuant to the authority delegated to the Chairperson at the Board's meeting of September 28, 2001, Item D-4. However, because the proposed project area is in a conservation district and special management area, near documented archaeological sites and within the authorized boundaries of the Kaloko-Honokohau National Historical Park, staff took the precaution of obtaining agency review on the requested right-of-entry and presenting the request to the Board.⁴

Comments were solicited on Applicant's original eradication project from various

² Applicant originally planned to kill the larger mangroves using a drill-and-inject method of herbicide delivery, and use a foliar spraying system of the lawns of smaller mangrove seedlings. This method, using shoreline-approved herbicides, was utilized for previous projects on the Puna coast. However, Applicant switched to a manual removal method at the request of the State Historic Preservation Division.

³ CDUP No. HA-3602 covers both the eradication of invasive species and the installation of a permanent sign regarding the protection of coral reefs. However, the right-of-entry covers only the invasive species eradication. The installation of a sign at the site will require an easement from the Board. Applicant will need to submit a separate application for such an easement.

⁴ The project area is within the authorized boundary of the Kaloko-Honokohau National Historical Park pursuant to Public Law 95-625 (1978), as amended, and the Honokohau Settlement National Historic Landmark designation made in 1962. The Federal legislation does not give NPS jurisdiction over State-owned lands within the park boundary, but does allow for agreements to be made between NPS and the State as to the management of the lands. However, there is no agreement relating to the proposed project area.

agencies on October 12, 2009.⁵ The State Historic Preservation Division (SHPD) responded that Applicant would need to consult with appropriate Native Hawaiian groups or individuals to determine whether the project would impact the use of the Maka'opio Heiau at the site, and that an archaeological monitoring plan must be submitted. Additionally, DLNR's Engineering Division cautioned that cut mangroves should not be placed in a Special Flood Hazard area without the approval of the County Flood Plain manager. The National Park Service (NPS) opposed the project due to the previously proposed use of herbicides, which would have entailed leaving dead trees in place. NPS was also concerned about archaeological monitoring.

The concerns of SHPD, Engineering and NPS have been addressed in the CDUP process. The CDUP states that no herbicides will be used, that an archaeological monitoring plan has been accepted by SHPD, and that cut mangroves will be removed from the site. The CDUP explains that SHPD and NPS now support the project. The CDUP additionally explains that Applicant has consulted with a halau that uses the site and the lineal descendants of the early inhabitants of the area, who support the project.

While there is no agency opposition to the project, there are private parties and organizations opposed to it. OCCL published notice of the conservation district use application in the July 23, 2011 edition of the Office of Environmental Quality Control's *Environmental Notice*. In addition, a copy was available for review at the Hawai'i State Library and Kailua-Kona Public Library. A number of negative comments were received and addressed in the CDUP.

Staff further notes that when Applicant began its mangrove eradication project on the Puna coast in 2009 after receiving agency approvals and a right-of-entry permit, Sydney Ross Singer filed a lawsuit in 2010 against the Applicant, DLNR and the County of Hawaii alleging that defendants failed to comply with Hawaii Revised Statutes (HRS) Chapter 343 on Environmental Impact Statements. The lawsuit was settled in 2011. As explained in the CDUP, OCCL has not required an environmental assessment for this project because OCCL has determined that the project is exempt under HAR Section 11-200-8(4) "Minor alterations in the conditions of land, water or vegetation." Land Division staff concurs in this determination, and is including a recommendation below that the Board find the project exempt from the preparation of an environmental assessment under HRS Chapter 343.

Applicant requests that the right-of-entry be of a one-year duration. Staff is including a recommendation below that the Chairperson be authorized to grant extensions of up to one year per extension.

⁵ The consulted agencies were: DLNR's Division of Aquatic Resources, OCCL, State Historic Preservation Division, Division of Boating and Ocean Recreation, Commission on Water Resource Management, Engineering, Department of Health, Clean Water Branch, NPS, Army Corps of Engineers, County of Hawaii Planning Department, County Division of Environmental Management, and Office of Hawaiian Affairs.

As mentioned above, there are no current encumbrances on the property. Formerly, the property was covered by a development agreement with Jacoby Development, Inc. (JDI). However, JDI terminated the agreement effective as of July 1, 2008, and the termination was reported to the Board at its meeting of September 26, 2008, Item D-5.

Since the project is designed to remove an invasive species from State land, thereby directly benefiting the State, staff is recommending that the right-of-entry issue on a gratis basis.

Staff recommends that the Chairperson be given authority to extend the right-of-entry as necessary to ensure that Applicant's goal of eradication of invasive red mangrove and pickleweed in the subject area is achieved and restoration with native plant species completed. Staff is including a recommendation below that the Applicant be required to comply with the conditions of (i) SMA Minor Permit No. 11-000189; and (ii) CDUP No. HA-3602.

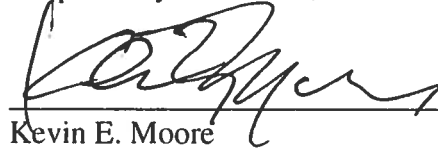
RECOMMENDATION:

That the Board:

1. Declare that, after considering the potential effects of the proposed disposition as provided by Chapter 343, HRS, and Chapter 11-200, HAR, this project will probably have minimal or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment.
2. Authorize the issuance of a right-of-entry permit to Malama O Puna covering the subject area under the terms and conditions cited above, which are by this reference incorporated herein and further subject to the following:
 - a. The standard terms and conditions of the most current right-of-entry permit form, as may be amended from time to time;
 - b. Applicant shall comply with all the conditions of: (i) Special Management Area Minor Permit No. 11-000189; and (ii) Conservation District Use Permit No. HA-3602, as either may be amended from time to time;
 - c. Such other terms and conditions as may be prescribed by the Chairperson to best serve the interests of the State; and

- d. The right-of-entry shall be for a duration of one year. The Chairperson may issue extensions of up to one year per extension.

Respectfully Submitted,



Kevin E. Moore
Assistant Administrator

APPROVED FOR SUBMITTAL:



William J. Aila, Jr., Chairperson



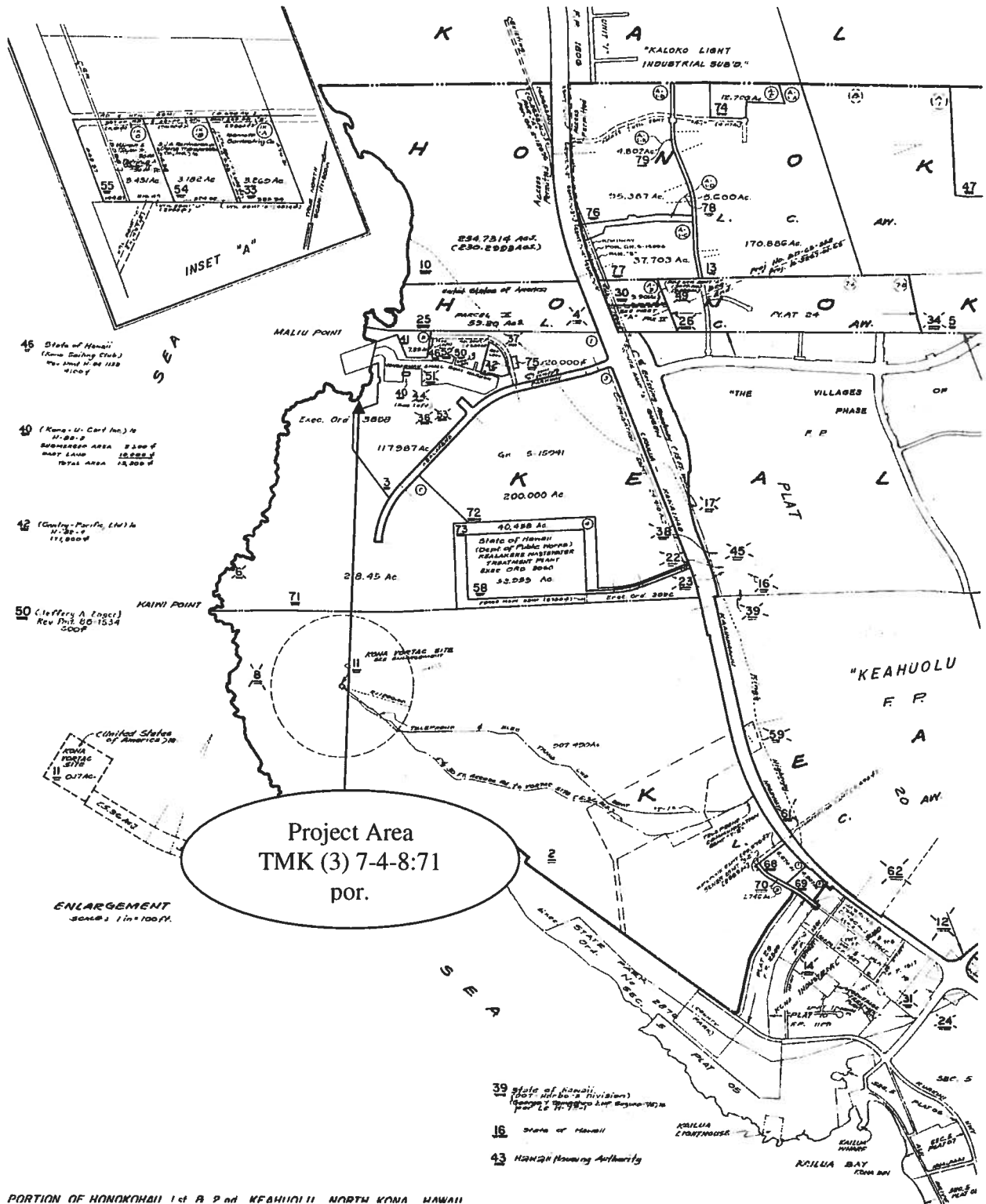


EXHIBIT A

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

GUY H. KAULUKUKUI
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

EXEMPTION NOTIFICATION

From the preparation of an environmental assessment under the authority of Chapter 343, HRS and Chapter 11-200, HAR

Project Title: Issuance of Right-of-Entry Permit to Malama O Puna For Alien Red Mangrove and Pickleweed Eradication Project on Unencumbered Lands

Project Number: None

Project Location: Kealakehe, North Kona, Hawaii, Tax Map Key: (3) 7-4-08:71 por.

Project Description: Applicant proposes to remove alien red mangrove and pickleweed from State unencumbered lands and replant with native coastal flora

Consulted Parties: Office of Conservation and Coastal Lands

Exemption Class No.: In accordance with the "Exemption List for the State of Hawaii, Department of Land and Natural Resources, as Reviewed and Concurred Upon by the Environmental Council (Docket 91-EX-2, December 4, 1991), the subject request is exempt from the preparation of an environmental assessment pursuant to Exemption Class No. 4, "Minor alterations in the conditions of land, water, or vegetation [HAR § 11-200-8(a)(4)]."

This exemption is appropriate because the permittee, Malama O Puna, has requested the right-of-entry to remove alien red mangrove and pickleweed from an area of approximately 0.71 acre and replant it with native coastal flora.

The grant of a revocable permit for the limited purpose will result in no material change or significant cumulative impact. If further actions are taken that result in a material change, Malama O Puna will be required to be in compliance with Chapter 343.

EXHIBIT B

Recommendation:

It is recommended that the Board find that the issuance of a revocable permit to Malama O Puna will probably have minimal or no significant effect on the environment and is presumed to be exempt from the preparation of an environmental assessment.



William J. Aila, Jr., Chairperson

11/31/12

Date

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Office of Conservation and Coastal Lands
Honolulu, Hawai'i

FILE NO.: Cдуа HA-3602
REF: OCCL: MC

Acceptance Date: July 19, 2011
180 Exp. Date: January 9, 2012

To: Chairperson's Office, Department of Land and Natural Resources

REGARDING: Landscaping (Mangrove and Pickleweed Removal)

APPLICANT: Malama O Puna, Ann Kobsa, 15-2929 Pāhoa Road #1, Pāhoa, HI 96778

LANDOWNER: State of Hawai'i; unencumbered

LOCATION: `Alula Bay, Kealakehe, North Kona, Hawai'i

TMK: (3) 7-4-008:071

AREA OF USE: 0.71 acres

SUBZONE: Resource

DESCRIPTION OF AREA:

`Alula Bay is located approximately three miles north of Kailua-Kona, in the ahupua`a of Kealakehe. The ahupua`a runs from Kaiwi Point in the south to Honokōhau Harbor in the north. Kaloko-Honokōhau National Park lies to the north, in the ahupua`a of Kaloko and Honokōhau. The landscape is dominated by pāhoehoe flows and a rocky shoreline with a small white sand beach, while the cove hosts a relatively robust coral reef ecosystem. Significant cultural and environmental resources on the parcel include anchialine ponds, a fishermen's heiau, a small koa, and a single petroglyph that is thought to represent one of the fishermen's gods.

There are over 700 anchialine pools in the State, and 82 in the Kaloko-Honokōhau-Kealakehe area. These pools are one of the more threatened ecosystems in the islands. A 1997 study of sixty four pools in these ahupua`a found that water quality levels remained high, but that the presence of endemic species such as `ōpae`ula (*Halocaridna rubra*) had plummeted – a 1972 study found `ōpae`ula in 75% of the ponds, while the 1997 study found them in only 16%. This shrimp is a keystone herbivorous species whose removal can lead to a collapse of pool's ecosystem diversity and their dominance by macroalgal species.

The study recommended an active management regime be implemented to protect that pools through the removal of alien fish species (primarily the predacious guppy *Poecilia*

EXHIBIT C

reticulate), a pool restoration program, and the removal of alien vegetation and associated accumulated sediments.¹

The area is also rich in cultural resources. Historians believe that Kekaha was first settled in the A.D. 900s². The initial settlements were small. This stretch of the coast has calm seas, good canoe landing spots, and rich fishing grounds; but large-scale agriculture was limited by low rainfall and the poor soil of the a'a and pāhoehoe fields.

The Kona coast grew significantly after the 15th Century with the establishment of the royal residence of 'Umi a Līloa in Kona. The fishponds at Kaloko and Honokōhau, as well as more advanced inland agriculture fields, were built during this period.

The population plummeted during the 19th Century due to a multitude of factors, including the abolishment of the kapu system, the relocation of residents to the port towns of Kailua and Kealahou, disease, the mahele land distribution and replacement of family holdings with larger fenced ranches, and the removal of central government to Maui and O'ahu. By the end of the century the coastal trail had been abandoned and the fishponds fallen into disrepair.

Honokōhau was inhabited as a Hawaiian village until around 1920, and was subsequently reoccupied by a community of Filipino fisherman. Kaloko, meanwhile, functioned as a fishpond throughout the modern period. The 1965 River and Harbor Act authorized the construction of the Honokōhau boat harbor in the Kealahou ahupua'a. The harbor was finished in 1970. The creation of the harbor resulted in the destruction of some archaeological sites.

Archeological sites that remain at 'Alula Bay include the remnants of the Hale o Lono-class Maka'ōpio Heiau, which contains a vertical slab with a 24-inch high petroglyph of a man or god; and a *ko'a* shrine composed of a large smooth stone kū'ula mounted on a platform. Nearby associated features that are outside the work area include house sites, additional petroglyphs, and bathing pools.

The project site is in the 175-mile Ala Kahakai National Historic Trail corridor.

PROPOSED USE:

The goal of the project is to restore the native anchialine pool ecosystem. The applicant proposes to remove the red mangrove (*Rhizophora mangle*) and pickleweed (*Batis maritima*) that have overrun the area, and replant it with native species.

The applicant proposes to remove the mangroves using chain saws, hand saws, and machetes, and to cut and remove smaller seedlings and pickleweed with sickles. Regrowth will be cut or burned with a weed torch.

¹ Brock RE, Kam AKH. 1997. *Biological and water quality characteristics of anchialine resources in Kaloko-Honokohau National Historical Park*. Honolulu (HI): Cooperative National Park Resources Studies Unit, University of Hawaii at Manoa, Department of Botany. PCSU Technical Report, 112.

² Historical information taken from: Rhodes, Diane Lee. 1993. *A Cultural History of Three Traditional Hawaiian Sites on the West Coast of Hawai'i Island*. Denver (CO): United States Department of the Interior, National Park Service, Denver Service Center

No herbicides will be used. All biomass will be brought to a nearby facility where it will be converted to compost or biochar for long-term carbon sequestration and use as a soil amendment. No cut material will be left on the site.

The applicant will then plant `ākulikuli (*Sesuvium portulacastrum*) near the edge of the pools, and naupaka (*Scaevola sericea*), hala (*Pandanus tectorius*), kou (*Cordia subcordata*), milo (*Thespesia populnea*), pōhuehue (*Ipomoea pescaprae*), maiapilo (*Capparis sandwichiana*), `ōhai (*Sesbania tomentosa*), and `ilima (*Sida fallax*).

No rare or endangered native flora and fauna are known to be found in the area. The indigenous `auku`u (black-crowned night heron, *Nycticorax nycticorax hoactli*) has a rookery in the mangroves. Removal will be done outside the breeding season. The birds occupy a wide-range of wetland habitats, and the birds are expected to find an alternative location for the rookery. In addition, no cutting will be done during the July and August pupping season for `Ōpe`ape`a (Hawaiian hoary bat, *Lasiurus cinereus*), although no bats have been seen in the area.

A wildlife biologist from the Department of Forestry and Wildlife (DOFAW) was consulted in developing the project. DOFAW will be assisting in coordinating a cat and mongoose removal project once the mangroves are removed.

An archaeological monitoring plan has been accepted by the State Historic Preservation Division (SHPD); it can be found online at www.malamaopuna.org. The applicant submitted a letter from SHPD indicating their support for the project. In addition, the project has the support of Kumu Keala Ching's foundation, Nā Wai Iwi Ola. Kumu Ching's halau uses the area for ceremonial purposes. Support has also been secured by lineal descendants of the early inhabitants of the area.

The applicant also proposes to install an interpretive sign on coral reef etiquette on the site. The sign would be 36" x 24" full color laminate, with a ten-year warranty against fading. Its painted-steel pedestal would be attached with tamper-proof bolts to a concrete footing.

The application lists a number of potential benefits from the project:

- the mangroves at `Alula Bay have been acting as a seed bank which can potentially undo recent eradication efforts across the island, where community and government groups have eradicated the majority of the infested areas;
- the project will improve lateral coastal access;
- the project will help protect Maka`ōpio Heiau, whose platforms are currently surrounded by the mangroves; and
- the project will restore an indigenous coastal ecosystem.

The following Exhibits are attached:

- 1: `Alula Bay Region, and Conservation Subzones
- 2: Area of Mangrove Growth
- 3: Site Photographs (from applicant)
- 4: Historical, Archaeological, and Cultural Resources
5. Proposal for Interpretive Sign

SUMMARY OF COMMENTS:

OCCL sought review and comment from the following agencies: Office of Hawaiian Affairs; Hawai'i County Planning Department; DLNR- DAR, DOFAW, Land Division, Historic Preservation, DOBOR; Department of Transportation, Harbors Division; DOH - Environmental Planning Office, Office of Environmental Quality Control; Kaloko-Honokōhau National Historic Park; Nā Wai Iwi Ola (Kumu Keala Ching); and Kona Hawaiian Civic Club.

A notice of the application was placed in the July 23, 2011 edition of the Office of Environmental Quality Control's *Environmental Notice*. In addition, a copy was available for review at the Hawai'i State Library and Kailua-Kona Public Library.

Comments were received from the following agencies:

DLNR – DOFAW, Land Division, DAR, DOBOR

No comments.

DLNR – State Historic Preservation Division (SHPD)

SHPD has been consulted pursuant to the National Historic Preservation Act Section 106. SHPD believes that the removal of the mangroves will have a beneficial effect on historic properties located within the areas impacted by the invasive species. During the 106 consultation SHPD recommended that an archeological monitor be present during vegetation removal.

Due to the presence of Maka'ōpio Heiau, cultural practitioners might request that protocols be followed prior to the initiation of work. SHPD recommends that the applicant consult with the agencies noted in the application – OHA, Kona Hawaiian Civic Club, Nā Wai Iwi Ola – regarding any protocols that would be appropriate.

SHPD believes that no historic properties will be harmed by the project.

County of Hawai'i, Department of Public Works

The Department notes that the project area is in the Flood Zone VE and AE, which are subject to the requirements of Chapter 27 – Flood Plain Management – of the Hawaiian County Code. However, the proposed project is exempt from this regulation.

National Park Service

The project area is within the Ala Kahakai National Historic Trail Corridor. The National Park Service supports this project, and appreciates that the applicant has included measures to protect aquatic life, the black-crowned night heron and the Hawaiian hoary bat. The Park Service does have one significant concern regarding outplanting. Their concern is that outplanting might involve ground disturbances around archaeological sites, and request that any activities be monitored closely by a qualified archaeologist.

They also note that the removal of the native seed bank might preclude the need for extensive outplanting if follow-up maintenance efforts are sufficient.

Office of Hawaiian Affairs (OHA)

OHA agrees that the project will contribute to the restoration of native anchialine pool and coastal ecosystems, and is pleased to offer their support to the project. OHA concurs with OCCL's determination that, while mangroves are beneficial to other ecosystems with large river deltas and marine estuaries, they have proven to be destructive to Hawaiian coastal ecosystems.

OHA appreciates that SHPD is requiring that a qualified archaeologist be present during project activities.

OHA notes that removing the mangroves will facilitate lateral shoreline access.

The following comments came in after the public comment deadline:

Nani K M Pogline

Ms. Pogline would like the opportunity to participate in the decision making process as provided by law. The same organization conducted mangrove eradication on the Hilo side of the island where public safety and interests were disregarded, herbicides used without warning in swimming areas, and dead mangroves were left to rot to ruin the beautiful coastal views. Ms. Pogline states that "suspicious evidence remains of environmental damage caused by the removal of beneficial mangroves."

Soma Grismaijer

Ms. Grismaijer submitted a 25-page petition in support of her opposition to the project. She notes that, following previous Malama O Puna projects, "acres of coastline are now ugly with the remnant of tons of dead mangrove tree" and that "brown scum on the water's surface and algal blooms followed the poisoning of the mangroves, along with the massive leaf litter from the rapid defoliation of the poisoned trees."

She states that the mangroves are left to decay over decades, and that many residents are angry. She notes that a lawsuit to stop the project and demand an Environmental Assessment had failed, but states that an Environmental Assessment should be done anyway.

Sydney Ross Singer, Director, The Good Shepherd Foundation

Mr. Singer opposes the project as it will destroy a rookery of rare black-crowned herons; that a waste treatment facility near Honokōhau Harbor dumps treated sewage into a hole in the ground near the harbor and the mangroves might mitigate some of the potential damage; that mangroves are not listed as highly invasive in Hawai'i; that OCCL rules require a draft EA or draft EIS for all permit applications and that EA exemptions are not

allowed under the current rules; that the action was classified as “Noxious Weed Removal;” and that Malama O Puna only cited one study to support their claim that mangroves harm native fish.

Mr. Singer also forwarded numerous articles and clippings backing his thesis that mangroves are beneficial to Hawai`i, and submitted an article for the Hawai`i Reporter intitled “Hawai`i Government Approves Destruction of Rare Bird and Endangered Bat Habitat: Public Shut Out.” (21 Feb 2011).

OCCL’s Response

The Pacific Island Ecosystems at Risk (PIER) lists *Rhizophora mangle* as a “high risk” invasive species. The supporting documentation for the assessment includes the following studies:

Pratt, 1998: *Mangrove is recognized as one of the most detrimental alien plants to the integrity of Hawaiian fishponds (Apple and Kikuchi, 1975), and the tree also reduces wetland habitat available to native water birds (Morin 1994).*

Fronde, 2008: *Since early Hawaiians used no mortar in their structures mangrove plants (at Kaloko) grew between the boulders and the pond walls. This historic structures were dismantled and destroyed as plant growth pushed the rocks apart. Left uncontrolled, mangrove would have overgrown much of the pond, destroying and masking the historical site, and creating an anoxic pond of slowly decomposing litter killing fish and aquatic biota (much of it endemic and rare) and changing the bird habitat in the feeding and breeding areas of the pond.*

Demopoulos, 2010: *In Hawai`i, they interfere with recreational and commercial use of the shore and displace other habitats (e.g. mud and sandflats) that have significant ecological value.*

Allen, 1998: *In Hawaii ... known negative impacts include reduction in habitat quality for endangered waterbirds such as the Hawaiian stilt (*Himantopus mexicanus knudseni*), colonization of habitat to the detriment of native species (e.g. in anchialine pools), overgrowing native Hawaiian archaeological sites, and causing drainage and aesthetic problems. Mangroves in areas with restricted water flows, such as fishponds and anchialine ponds, may have significant negative effects on water quality. Leaf litter input without subsequent export...is suspected of decreasing dissolved oxygen concentrations Cox & Jokiel, 1996).*

Cox, 1999. *(Mangroves) are known to have several important negative impacts, especially the occupation of prime foraging and nesting habitat for four endangered waterbird species and the tendency to overgrow native Hawaiian archaeological sites (Allen 1998).*

Demopoulos, 2010. *Introduced mangroves substantially altered benthic community structure, in part by enhancing the structural complexity of the Hawaiian coastal environment. Because macrobenthos provide a variety of ecosystem services, e.g. serving as prey for fish and birds and promoting detrital decomposition, mangrove-induced changes in sediment community composition will likely have far-reaching consequences in Hawaii.*

A complete summary of the supporting documentation is included as **Exhibit 6: Pacific Islands Ecosystems at Risk**. OCCL notes that the preponderance of scientific evidence is that *R. mangle* in Hawai'i has a negative impact on water quality, cultural resources, recreational resources, coastal access, and native plant and animal communities.

OCCL does note that Malama O Puna's earlier approvals for mangrove removal projects in Hawai'i required that dead hulks be removed so that they did not become storm wrack, and concurs that this condition was not followed through with at Pohoiki. However, we are compelled to note that the reason work stopped was that Mr. Singer had filed a "citizen's lawsuit" in the Third Circuit Court against Malama O Puna, DLNR, the Big Island Invasive Species Committee, the County of Hawai'i, and others. OCCL deferred all action on the active and proposed projects for the duration of the unsuccessful lawsuit, and outside funding also dried up as a result of the lawsuit.

OCCL also notes the petitions Ms. Grismaijer submitted contain numerous entries that appear to have been signed by the same person, as shown in **Exhibit 7: Petition to Save Coral Reefs and Mangroves**. The complete petitions are on file with OCCL. We also note that twenty of the twenty-five pages are against "the poisoning (of) the intertidal zone and waters of Pohoiki."

In terms of the specific issues Mr. Singer raised:

An `auku`u rookery will be destroyed

OCCL's Response: OCCL, DOFAW, and the applicant are aware of the rookery. DOFAW and the applicant have taken steps to minimize impact, including not conducting work during the breeding season. OCCL notes that the `auku`u are able to thrive in a wide variety of wetland habitats, and is confident that the removal of the mangroves will not harm the species. The known threats to `auku`u are introduced predators, loss of wetland habitat, and loss of their preferred feeding grounds to mangrove, pickleweed, and water hyacinth. This project will involve a temporary disturbance to the rookery, but will also bring improved predator control, the preservation of a wetland, and a restoration of a preferred feeding ground.

Mangroves might treat sewage from the waste treatment facility near Honokōhau Harbor

OCCL's Response: The National Park Service report that Mr. Singer quotes lists numerous anthropogenic threats and stressors on the region's ecosystem and groundwater quality and quantity including "the presence of an expanding light industrial area directly upslope from the park, a wastewater treatment facility and Honokōhau Harbor to the south, and a planned resort/golf course development adjacent to the north side of the park. Development of golf courses has also been proposed upslope of park

boundaries, with potential associated problems of groundwater depletion and nutrient enrichment.”³

OCCL concurs that these are significant threats that need to be addressed. However, nowhere in the report does the Park Service indicate that raw sewage is being pumped into a hole in the ground, or that 0.71 acres of mangrove are having any type of mitigative affect on development-related stressors.

Mangroves are not listed as highly invasive in Hawai`i

OCCL's Response: Mangroves are listed as a “high risk” species.. cf: **Exhibit 6.**

OCCL rules require a draft EA or draft EIS for all permit applications and that EA exemptions are not allowed under the current rules.

OCCL's Response: Exemptions are addressed by Hawai`i Revised Statutes Chapter 343 and HAR §11-200-8.

The action was classified as “Noxious Weed Removal” and mangroves are not listed as a noxious species by the State Department of Health.

OCCL's Response: The permit request is being processed pursuant to Hawai`i Administrative Rules (HAR) §13-5-23, *Identified Land Uses in the Limited Subzone, L-4 LANDSCAPING AND REMOVAL OF NOXIOUS PLANTS, (C-1), Landscaping, defined as alteration (including clearing) of plant cover.*

Malama O Puna only cited one study to support their claim

OCCL's Response: OCCL has attached eleven pages of research summaries supporting this.

Hawai`i Government Approves Destruction of Rare Bird and Endangered Bat Habitat: Public Shut Out

OCCL's Response: OCCL is processing a permit for the *restoration* of bird habitat, `Alula is not a known bat habitat, the permit application was noticed in the *Environmental Notice*, and public comments were gathered have been included in this report.

³ DeVerse, K. 2006. *Appendix A: Kaloko-Honokohau National Historical Park resource overview.* In: HaySmith, L., F. L. Klasner, S. H. Stephens, and G. H. Dicus. *Pacific Island Network vital signs monitoring plan. Natural Resource Report NPS/PACN/NRR—2006/003* National Park Service, Fort Collins, Colorado.

OCCL will keep the articles that Mr. Singer forwarded on file, but we note that most of the studies he cites do not address Hawaiian or Pacific Island ecosystems. One exception, that Mr. Singer has cited in phone conversations, court documents, and written comments, is the “Allen article” from Species Profiles for Pacific Islands Agroforestry⁴ that states *R. mangle has unfortunately now taken the public status of invasive weed and pest species in Hawai‘i. To alleviate public concern, eradication efforts have been carried out in several locations on O‘ahu and Hawai‘i. It is not clear about the success or effectiveness of this campaign, as it appears to have been based on subjective information and no monitoring.*

OCCL was unable to find the above quote in the article, but did find the following:

- “In the Hawaiian Islands, mangroves have reportedly overgrown channels, reduced tidal flows, and overgrown archeological sites.”
- “In Hawai‘i, for example, several important negative effects have been documented, including reduction in the habitat quality for endangered water birds such as the Hawaiian stilt (*Himantopus mexicanus knudensi*), colonization of habitats to the detriment of native species (e.g., in anchialine pools), overgrowing native Hawaiian archaeological sites, and causing localized drainage problems by reducing the flow through tidal creeks or drainage channels.”
- “Red mangroves extend notably beyond their native range. *Rhizophora mangle* has been introduced to the Hawaiian and Society Islands from Atlantic populations in Florida. In each case, founder populations have increased and expanded dramatically, especially in the Hawaiian Islands. Plants introduced in the early 1900s to Moloka‘i and O‘ahu now extend to most islands of the group, and the expectation is that they will spread further. Accordingly, *R. mangle* is treated as an invasive species in these islands.”
- “The very successful introduction and rapid spread of red mangroves in the Hawaiian Islands clearly demonstrates the potential for invasiveness of mangroves in areas where suitable habitat is available.”
- “Susceptibility to pests and diseases is believed to be low, with the exception of insect borers and crabs that prey on propagules. For introduced stands in the Hawaiian islands, damage to propagules and leaves is notably lower than within the species’ native range, and productivity (as expressed in litter fall) is higher.”
- “In Hawai‘i, however, *R. mangle* stands have served as ideal sites for the non-native cattle egret (*Bubulcus ibis*) and also sometimes harbor significant populations of rats.”
- “In Hawaiian populations, there appears to be excessive leaf accumulation in some locations, suggesting that normal associated fauna and other decompositional biota are lacking.”

⁴ Duke, N.C., and J.A. Allen. 2006. *Rhizophora mangle*, *R. samoensis*, *R. racemosa*, *R. × harrisonii* (Atlantic–East Pacific red mangroves), ver. 2.1. In: Elevitch, C.R. (ed.). Species Profiles for Pacific Island Agroforestry. Permanent Agriculture Resources (PAR), Hōlualoa, Hawai‘i. <<http://www.traditionaltree.org>>.

OCCL feels that this article, when read in its entirety, offers strong arguments for unequivocally *supporting* mangrove removal projects in Hawai'i. The complete Species Profile is attached as **Exhibit 8, Species Profiles for Pacific Island Agroforestry**.

ANALYSIS:

Following review and acceptance for processing, the Applicant's Agent was notified, by letter dated July 19, 2011 that:

1. The proposed use is an identified land use in the Limited Subzone of the Conservation District, pursuant to Hawai'i Administrative Rules (HAR) §13-5-23, *Identified Land Uses in the Limited Subzone, L-4 LANDSCAPING AND REMOVAL OF NOXIOUS PLANTS, (C-1), Landscaping, defined as alteration (including clearing) of plant cover*. The final authority to grant, modify, or deny the permit rests with the Chair of the Board of Land and Natural Resources (BLNR).
2. Pursuant to HAR §13-5-40, a Public Hearing will not be required;
3. This project is exempt from conducting an Environmental Assessment pursuant to HAR §11-200-8 (4) *Minor alterations in the conditions of land, water, or vegetation*.

§13-5-30 CRITERIA:

The following discussion evaluates the merits of the proposed land use by applying the criteria established in HAR §13-5-30.

- 1) *The proposed use is consistent with the purpose of the Conservation District.*

The objective of the Conservation District is to conserve, protect and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare.

Staff is of the opinion that the proposed action will not negatively impact the natural resources of the area. The area is overgrown with invasive species that threaten the marine, anchialine, and historic resources of the area. The project will remove the invasive species and replace them with appropriate native species. OCCL feels that this is an appropriate management action.

- 2) *The proposed land use is consistent with the objectives of the Subzone of the land on which the use will occur.*

Pursuant to HAR §13-5-12, 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 project is designed to protect the cultural and environmental resources of the area. Once the mangroves are cleared the area should only require routine maintenance over the long term.

- 3) *The proposed land use complies with the provisions and guidelines contained in Chapter 205A, HRS entitled "Coastal Zone Management (CZM)", where applicable.*

Pursuant to HRS §205A (b) Objectives (3) Scenic and open space resources, one of the goals of CZM is to *Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.* The proposal is consistent with this objective, as the coastal parcel is currently overgrown with invasive species. The final landscaping plan will be more open, and provide less habitat to rats, mongoose, and other vermin. It will also allow for the future restoration of the anchialine ponds.

The County of Hawai'i issued Special Management Area Minor Permit No. 11-0000189 for the project on August 25, 2011.

- 4) *The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.*

Staff does not believe that the landscaping will negatively impact the area's natural resources. State biologists and archaeologists have assisted in developing a process that is designed to protect the existing environmental and cultural resources during the active phase of the project.

- 5) *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

The replanting will be done with native species appropriate for this environment. A proposed interpretative sign is similar in style and design to other signs at important natural areas in the State. No other development is being proposed.

- 6) *The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable.*

As discussed above, the proposal will improve upon the natural beauty of the pools and surrounding area. The removal of this large mangrove seed bank will also make it easier to protect other coastal areas on the island from invasive species.

- 7) *Subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.*

The proposed project does not involve subdivision of Conservation District land.

- 8) *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

Some community members have expressed concern in the past regarding applying this exemption to mangrove removal projects and similar invasive-species control programs in Hawai'i. They point to significant negative environmental impacts that the loss of mangrove ecosystems has had in Southeast Asia, the Western Pacific island nations, the Caribbean, and East Africa; and argue that we must therefore offer mangroves in Hawai'i the highest levels of protection.

OCCL notes that mangroves do play a valuable ecological role in the above regions – they protect the coast from storm and tsunami waves; they protect near-shore waters from runoff and sedimentation; they provide critical habitat for endangered turtles and manatees; they provide refuge for a multitude of fish, reptiles, and invertebrates; and provide nesting and resting spots for hundreds of migratory bird species.

However, these mangrove forests can be hundreds of meters thick and span thousands of square kilometers. They are part of a larger integrated ecosystem that has evolved over millennia.

Hawai'i, by contrast, lacks the large river deltas and wide marine shorelines that allow for such extensive mangrove forests. Mangroves here only occupy a relatively narrow coastal ecocline. They thus cannot offer the protection from storm and tsunami waves that extensive mangrove forests do. As a relatively new species to the island – they were introduced by Hawai'i Sugar Planters Association between 1902 and 1922 – they are not integrated into the wider Hawaiian ecosystem.

Rather, they have a negative impact on critical habitat for native Hawaiian species: their smothering root systems allow them to out-compete native coastal plants, they accumulate sediment in coastal regions, the accumulated sediment in affected areas is anoxic and cannot support life, and they provide habitat for rat colonies.

Staff does not believe that the project will be detrimental in any way to the public's health, safety, or welfare.

DISCUSSION:

Staff is of the opinion that the proposed landscaping project meets the Conservation District criteria established in HAR §13-5-30.

The project area is on State-owned unencumbered land; if a Conservation District Use Permit (CDUP) is granted then a right of entry from DLNR's Land Division will be needed for the work, and an easement might be required for any signs or permanent structures.

The project, along with other similar mangrove removal projects conducted by Malama O Puna, has attracted active opposition from the Good Shepherd Foundation, a non-profit organization "dedicated to promoting human, animal, and environmental health." The

Foundation has accused DLNR of being involved in bio-xenophobia and “species supremism,” Malama O Puna of conducting experiments in Hawaiian waters on behalf of Monsanto Corporation and leaving “hundreds of thousands of dead trees” rotting on the shoreline, and a city council member of wanting to destroy mangroves to create a “white sand beach for keiki.”⁵

OCCL has reviewed the documents that the Good Shepherd Foundation sent in support of their arguments, and finds that they are based on significant distortions of the scientific research regarding mangroves in Hawai‘i.

As noted in the previous section, the preponderance of evidence shows that *Rhizophora mangle* is an invasive species that can cause significant damage to the coastal environmental, cultural, and historical resources of Hawai‘i.

The proposed interpretive sign would measure 36” x 24”, and be placed at reading level, which is less than the twelve-square foot maximum area and 8-foot maximum height for signs that is set by §13-5.

Based upon the comments received, OCCL would recommend that the Chair incorporate the following conditions to the permit if granted:

- That an archaeological monitor be present during vegetation removal.
- That the permittee consult with cultural organizations – OHA, Kona Hawaiian Civic Club, or Nā Wai Iwi Ola – regarding any protocols that would be appropriate for work near Maka`ōpio Heiau.
- That vegetation removal not be conducted during the breeding season of `auku`u (black-crowned night heron, *Nycticorax nycticorax hoactli*).
- That no cutting will be done during the July and August pupping season for `Ōpe`ape`a (Hawaiian hoary bat, *Lasiurus cinereus*),
- That DLNR – Land Division be consulted to determine if a *Right of Entry* is needed for the work.

RECOMMENDATION:

Based on the preceding analysis, Staff recommends that the Chair of the Board of Land and Natural Resources APPROVE this application for the landscaping project, including the removal of mangrove and pickleweed, the planting with indigenous species, and the placement of an interpretive sign, at `Alula Bay, Kealakehe, North Kona, Hawai‘i, TMK (3) 7-4-008:071, subject to the following conditions:

1. The applicant shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, State and county governments, and the applicable parts of HAR §13-5-42;

⁵ These statements are taken from petitions distributed by the Good Shepherd Foundation and from articles that Foundation members have written for the Hawai‘i Reporter in 2011 (www.hawaiiireporter.com).

2. The applicant, its successors and assigns, shall indemnify and hold the State of Hawai'i harmless from and against any loss, liability, claim or demand for property damage, personal injury or death arising out of any act or omission of the applicant, its successors, assigns, officers, employees, contractors and agents under this permit or relating to or connected with the granting of this permit;
3. The applicant shall comply with all applicable Department of Health administrative rules. Particular attention should be paid to HAR §11-60.1-33, "Fugitive Dust" and to Chapter 11-46, "Community Noise Control," and Chapter 11-54 National Pollutant Discharge Elimination System;
4. The applicant will notify the Department when work commences on the property, and will provide a brief summary of the status of the landscaping project when the bulk of the work has been completed;
5. That the project shall be initiated within one year of the approval of such use, and must be completed within three years of the approval;
6. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the applicant shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
7. The applicant will use Best Management Practices for the proposed project;
8. The applicant understands and agrees that this permit does not convey any vested rights or exclusive privilege;
9. In issuing this permit, the Department and Board have relied on the information and data that the applicant has provided in connection with this permit application. If, subsequent to the issuance of this permit, such information and data prove to be false, incomplete or inaccurate, this permit may be modified, suspended or revoked, in whole or in part, and/or the Department may, in addition, institute appropriate legal proceedings;
10. In the event that unrecorded historic remains (i.e., artifacts, or human skeletal remains) are inadvertently uncovered during construction or operations, all work shall cease in the vicinity and the applicant shall immediately contact the State Historic Preservation Division;
11. The applicant will contact OCCL for any permitting requirements should they change the scope of the project;
12. That an archaeological monitor be present during vegetation removal;
13. That the permittee consult with cultural organizations – OHA, Kona Hawaiian Civic Club, or Nā Wai Iwi Ola – regarding any protocols that would be appropriate for work near Maka`ōpio Heiau;
14. That vegetation removal not be conducted during the breeding season of `auku`u (black-crowned night heron, *Nycticorax nycticorax hoactli*);
15. That no cutting will be done during the July and August pupping season for `Ōpe`ape`a (Hawaiian hoary bat, *Lasiurus cinereus*);

16. That DLNR – Land Division be consulted to determine if a *Right of Entry* is needed for the work; and
17. That failure to comply with any of these conditions may render this Conservation District Use Permit null and void.

Respectfully submitted,

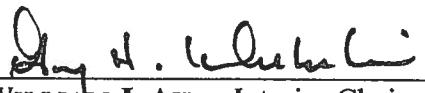

Michael Cain
Staff Planner

Under the authority of §13-5-30(a) and 13-5-33, Hawai'i Administrative Rules, this request for a Departmental Permit for CDUA OA-3567 is hereby:

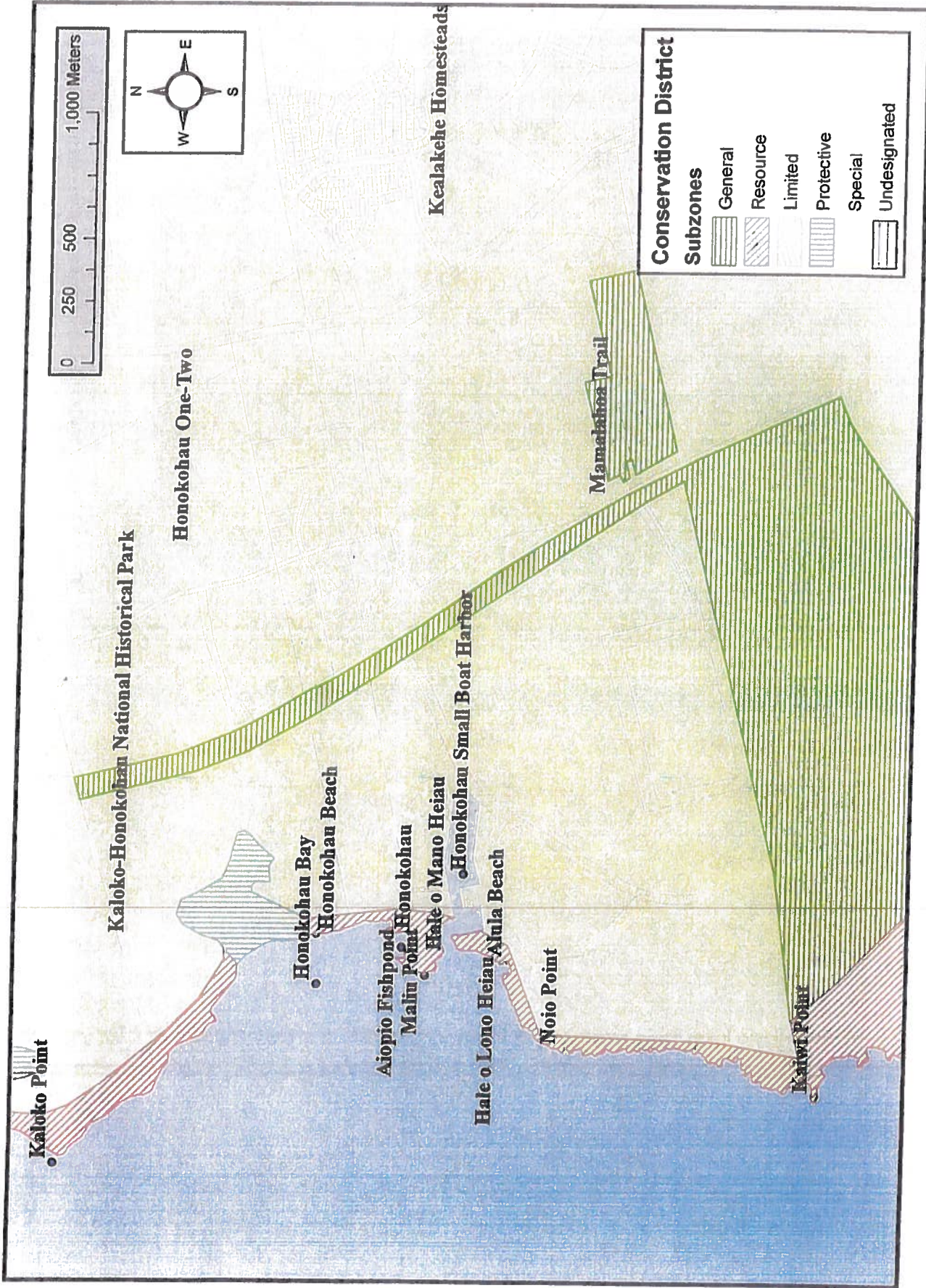
Approved

Disapproved

Dated at Honolulu, Hawai'i 1.6.12


WILLIAM J. AILA, Interim Chairperson
Board of Land and Natural Resources

Alula Bay and Region



Produced by MC @ OCCL January 4, 2012 All boundaries are approximate

Resources

Alula Bay, Honokohau Harbor, Kona Hawaii
Alien Red Mangroves



Map Created By: Rebecca Most
Biological Science Technician
Kaloko-Honokohau National Historical Park
(808-329-6881 x1219)
rebecca_most@nps.gov
Created for Malama Puna and BIISC- Mangrove Removal Project.
Printed on 11/16/09



Current view of area (above) + Mako'opio Heiau, w/ mangroves