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CONSERVATION AND RESOURCES ENFORCEMENT
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LAND
STATE PARKS

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

ref:OCCL:MC

File No: Loko Iʻa: HA-19-02

JUL 26 2019

Konrad Mosman
Ka ʻOhana o Honuʻapo
PO Box 903
Naʻalehu, HI 96772

Dear Mr. Mosman,

SUBJECT: **LOKO IʻA PERMIT HA-19-02: HONUʻAPO**
Hiʻonaʻā-Honuʻapo, Kaʻu, Hawaiʻi
TMK (3) 9-5-14:007

The Office of Conservation and Coastal Lands (OCCL) has reviewed the information you sent regarding restoration work on the fishpond at Honuʻapo near the above subject parcel. The pond is on submerged lands in the Resource Subzone of the State Land Use Conservation District.

The pond lies in the ahupuaʻa of Honuʻapo in Kaʻū, Hawaiʻi. It is a loko iʻa kuapā which is fed by punawai (freshwater springs). The interior of the pond is bounded by the kuapā, which slow the flow of the freshwater into the ocean. This helps create an environment conducive to phytoplankton blooms, which in turn attract herbivorous fish such as ʻamaʻama (flathead grey mullet, *Mugil cephalus*) and āholehole (strange-tailed flagtail, *Kuhlia xenura*). Many species of ʻoʻopu and ʻōpae are also found in the pond. As there is no mākaha predators also enter the pond, including kākū (barracuda, *Sphyraena barracuda*), ʻomilu (bluefin trevally, *Caranx melampygus*), papio (giant trevally, *Caranx ignobilis*), toʻau (blacktail snapper, *Lutjanus fulvus*), and various species of puhi (eel).

The substrate consists of basalt and accumulated silt. Some indigenous tree species are found on the edge of the pond, including milo (*Thespeci papulnea*) and makaloa (*Cyperus laevigatus*). Invasive species have encroached on the pond itself due to the high sedimentation rates, including kiawe (*Prosopis pallida*), California grass (*Urochloa mutica*), and seashore paspalum (*Paspalum vaginatum*).

The fishpond is currently functional, but much of the kuapā has been damaged by tidal currents, storm surges, and trade swells. The foundation to the kuapā is in place, though some sections of the wall are missing. Invasive plants are encroaching on the pond, which in turns leads to an increase in sedimentation and a lowering of the pond's pH levels due to the breakdown of the increased organic matter.

The proposed restoration work will be overseen by Ka ʻOhana o Honuʻapo, a non-profit hui with a formal Memorandum of Agreement with the County of Hawaiʻi to assist with stewardship of the coastal area of Honuʻapo, Kaʻu.

The proposed restoration work includes the manual removal of overgrowth, the planting of native plant species, water quality monitoring, the repair and reconstruction of the kuapā, and the manual removal of invasive fish species with nets.

Ka ʻOhana o Honuʻapo staff and board members will carry out the majority of the work. Any work done by community and volunteer groups will be overseen by staff team members.

Ka ʻOhana o Honuʻapo has developed the following Best Management Practices that will be followed:

- Any sediment removal will be done by hand and water quality will be monitored to ensure no negative impacts of sediment plumes.
- Invasive species removal will not affect the health of the surrounding environment and will only be done when a negative effect is observed on the pond.
- Rocks from the wall will be used first to make repairs to damaged sections of the wall. If additional rocks are needed, they will be harvested from the surrounding waters and resemble the original rocks used in wall construction. No mechanized equipment will be used to harvest rock from surrounding waters.
- The improvement of conditions for native species and intentionally-raised species will be the cause for work done on the pond.
- The stocking of intentionally-raised species will rely heavily on natural recruitment. Harvesting will be done when there is an abundance of harvestable sized target species and will be done so with extreme care so as not to impact the natural ecoystem of the estuary.
- The fish will not be sold but rather provided to the community such as kūpuna housing and cultural events and gatherings. The fish will be allowed to live natural lives within the pond ecosystem and in no way shall the fishpond be deemed as an aquacultural venture.
- The management of the loko i'a / estuary will serve as an example of how best community based management practices of cultural resource and natural resource co-exist.

As the pond is on state-owned submerge lands, OCCL consulted with the Division of Forestry and Wildlife (DOFAW) and with Hawaiʻi Land Division. Neither had any objections to the proposed work.

After reviewing the application, the Department finds that

1. The plan to manually repair the rock walls, manually remove sediment, and remove invasive species is consistent with Conservation District Use Permit (CDUP) ST-3703 for the Hoʻāla Loko Iʻa program, as approved by the Board of Land and Natural Resources on June 27, 2014;
2. That the activities described were covered in the Final Environmental Assessment (FEA) and Finding of No Significant Impact (FONSI) for the Hoʻāla Loko Iʻa program, which was published on October 23, 2013;
3. That the proposal requires the need for a Tier 1 Loko Iʻa permit signed by OCCL;
4. That the standard conditions found in Hawaiʻi Administrative Rules (HAR) §13-5-42 apply.

After careful review of the proposed project, the Department authorizes a Tier 1 Loko Iʻa permit for the work at Honuʻapo Loko Iʻa in Hiʻonaʻā-Honuʻapo, Kaʻu, Hawaiʻi, TMK (3) 9-5-14:007, subject to the following standard conditions:

1. The permittee shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, state, and county governments, and applicable parts of this chapter;
2. The permittee, its successors and assigns, shall indemnify and hold the State of Hawaiʻi harmless from and against any loss, liability, claim, or demand for property damage, personal injury, and 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 permittee shall obtain appropriate authorization from the department for the occupancy of state lands, if applicable;
4. The permittee shall comply with all applicable department of health administrative rules;
5. All representations relative to mitigation set forth in the application are incorporated as conditions of the permit;
6. The permittee understands and agrees that the permit does not convey any vested right(s) or exclusive privilege;
7. In issuing the permit, the department and board have relied on the information and data that the permittee has provided in connection with the permit application. If, subsequent to the issuance of the 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 the department may, in addition, institute appropriate legal proceedings;
8. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the permittee shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
9. The permittee acknowledges that the approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native Hawaiians in the immediate area, to the extent the practices are provided for by the Constitution of the State of Hawaiʻi, and by Hawaiʻi statutory and case law;
10. Should historic remains such as artifacts, burials or concentration of charcoal be encountered, work shall cease immediately in the vicinity of the find, and the find shall be protected from further damage. The contractor shall immediately contact HPD (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary;
11. The permittee will continue to follow the Best Management Practices as described in the current application;
12. Other terms and conditions as prescribed by the chairperson;
13. Failure to comply with any of these conditions shall render a permit void under the chapter, as determined by the chairperson or board.

Please acknowledge receipt of this approval, with the above noted conditions, in the space provided below. Please sign two copies. Retain one and return the other within thirty days. Should you have any questions feel free to contact Michael Cain at 587-0048.

Sincerely,

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

Receipt acknowledged:

_____
Permittee's Signature

_____
Date

copy: BLNR Chair, Hawaiʻi Land Division, DOFAW, Engineering; Hawaiʻi County Planning;

HO'ALA LOKO I'A APPLICATION

FISHPOND NAME: **Honu'apo**

APPLICANT NAME: **Ka 'Ohana o Honu'apo**

Pond location: Whittington Beach Park, Honu'apo, HI

Nearest Tax Map Key(s): 3-9-5-14-007

Ahupua`a: Honu'apo

District: Ka'ū

Island: Hawai'i

Commencement Date: 08/2019

Completion Date: Ongoing Management

Wall length: 200 ft

Pond surface area: 10 acres

WORK SUMMARY

☒ Operations only

☐ Construction of accessory structures

☒ Minor repair and restoration of pond walls, 'auwai, mākāhā, etc.

☒ Moderate repair and restoration (10% to 50% damage)

☐ Major repair and restoration (greater than 50% damage)

Linear feet of wall to be repaired (rocks on site):

Linear feet of wall to be restored (new rock):

Source of new rock:

Amount of "fill" (expansion beyond original footprint):

☐ Dredging using mechanized equipment

Estimated volume of dredging:

☒ Vegetation removal using mechanized equipment

Estimated acreage: 10

☐ Emergency repair

REQUIRED SIGNATURES

Applicant

Name / Hui: Ka ʻOhana o Honuʻapo (KOOH)
Street Address: P.O. Box 903
Naʻalehu, HI 96772
Contact Person & Title: Konrad Mosman, Vice President
Phone: 808-961-5242
Email: kala@edithkanakaolefoundation.org
Interest in Property: Licensee

Signature: **Date: 5/25/19**
Signed by an authorized officer if for a Corporation, Partnership, Agency or Organization

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Landowner (if different than the applicant)

Name:
Title; Agency: DLNR
Mailing Address:

Phone:
Email:

Signature: **Date:**
For State-owned ponds, the government entity with management control over the parcel shall sign as landowner.

Agent

Agency:
Contact Person & Title:
Mailing Address:

Phone:
Email:

Signature: **Date:**

For DLNR Managed Lands

State of Hawai`i
Chairperson, Board of Land and Natural Resources
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809-0621

Signature: **Date:**

DESCRIPTION OF THE LOKO I'A

Please discuss the current physical and environmental conditions of the loko i'a. Please also note if any endangered or threatened species are found in the pond.

Honu'apo is a loko i'a kuapā. Honu'apo is fed by punawai (fresh water springs) that constantly flow into the pond. The flow of freshwater to the ocean is slowed by the kuapā (wall), creating an ideal environment for phytoplankton blooms. These phytoplankton blooms, mainly diatoms, attract fish from the surrounding waters of Honu'apo into the loko i'a (fishpond) and provide an ideal environment for the growth of herbivorous fish such as 'Ama'ama (Mugil cephalus) and Āholehole (Kuhlia xenura). Many species of 'O'opu and 'Ōpae are found in the pond including 'O'opu Naniha (Stenogobius hawaiiensis), 'O'opu 'Akupa (Eleotris sandwicensis) and 'Ōpae huna (Palaemon debilis). Predatory fish that have made their way into the pond are mainly Kākū (Sphyraena barracuda), 'Omilu (Caranx melampygus), Papio (Caranx ignobilis), To'au (Lutjanus fulvus), and a number of different species of Puhi. Survey of the area in 2009 found the area to be dominated by turf algae, with some patches of sand and coral. The survey recorded 119 fish species utilizing the nearshore habitat adjacent to this open estuary, with most species either indignous (68%) or endemic 29%, and only a few introduced species (3%). There are a variety of gastropod species including flatworms and nudibranchs that are found within the kuapā. There are a many waterfowl species that frequent the area like the Kōlea (Pluvialis fluva) and the 'Ulili (Tringa incana).

The substrate of Honu'apo mainly consists of basalt and silt both commonly covered by algal growth. Some native and indigenous species, such as Milo (Thespeci papulnea) and Makaloa (Cyperus laevigatus), are found near the edges of the pond, but often encroach on the water and increase sedimentation rates. Invasive plants that also encroach on the pond are Kiawe (Prosopis Pallida), California grass (Urochloa mutica), and seashore paspalum (Paspalum vaginatum) in the brackish intertidal zone.

HISTORY OF THE LOKO I'A

Honu'apo loko i'a lies within the ahupua'a of Honu'apo on the southeast portion of the island of Hawai'i in an area known as Ka'ū. The estuarine environment of Honu'apo serves as a safe place for many 'ōhua (young fish) to grow with minimal predation.

Honu'apo was an extensive coastal settlement that dates back to at least the 1400-1500s. The first western accounts of the Honu'apo vicinity document the presence of a substantial settlement, coconut grove, canoe landing and heiau around the fishpond. The slopes above the coastal settlement were intensively cultivated with sweet potato, dryland taro, wauke, bananas, arrowroot and plantains.

After the traditional use of Honu'apo fishpond, Ioba Lilikalani claimed in LCA number 9955B three apana in Honu'apo including two fishponds which he stated he built in 1846-1847. Lilikalani's claim to the fishponds was rejected but he received two apana totaling 5.07 acres; one

parcel adjoining the fishpond and the other inland for taro and sweet potato. In 1870 Honu'apo by was deepened and later in 1881 a sugar plantaion was started. In 1910 the wharf was built and Honu'apo became the means of exporting the majority of Ka'ū's sugar cane. The plantation continued managing the pond creating camping areas for community groups. The pond was stocked with samoan crab and tilapia and was called Abe's pond after Abe Akamu who ran the warehouse for the plantation. The plantation closed in 1973 but the area continued to be planted in sugar cane up unil the closing of Pahala mill in 1996. Following the closure of the plantation the area was used for cattle grazing.

PROPOSED WORK PLAN

Please provide a summary of the work that is being proposed under this permit. Please note any use of mechanized equipment.

Honu'apo fishpond is currently functional, but the kuapā (wall) is in need of repair due to the forces of tidal currents, storm surges, and trade swells. There is no mākāhā (sluice gate) so predator fish can enter freely. Sections of the kuapā are completely missing, although the foundation is clear. The area is exposed to easterly trade swells, which constantly damage the kuapā, that become more damaging during storms and winter swells. Invasive and troublesome plants are also encroaching on the pond causing increased sedimentation rates and lower pH levels through the breakdown of organic matter. Restoration efforts include the removal of overgrowth, planting native plants, water-quality monitoring, repair and construction of the pond kuapā, and removal of invasive fish species with nets as possible.

The need for repair and continued maintenance is evident and should be done in a matter that has the least negative impact on the pond and surrounding ecosystems. Ka 'Ohana O Honu'apo staff and Board members will carry out the majority of the work that needs to be done. Any work done by volunteer groups or community members will be done under the supervision of a KOOH team member. On workdays, the amount of suspended sediment will be monitored and work will be stopped if effects on the fish are observed. Removal of invasive and troublesome species will be done using hand tools and by hand when possible. The gathering of rocks for the kuapā will be done in surrounding areas of the loko i'a, most of which were washed off of the wall by high surf. Mākāhā and 'auwai will be constructed when needed and surrounding rocks will be used for this as well.

As we increase efforts to remove invasive plant life (trees, brush) around the pond, we will outplant native coastal plasnt species that can replace them and help control erosion into the pond after the removal of the invasive plants. We will continue to monitor the amount of invasive plants cleared, the health of the introduced native plants planted around the pond, and the health and water quality of the pond as a result of the restoration.

Effectiveness of restoration and management will be measured by:

- Length, height, and width of rockwall restored and maintained. (Must also monitor effects of rising levels on newly repaired walls)

- Amount of invasive plants removed.

- Amount of native plants planted, native plant health.

- Water quality stability.

- Health of marine life through periodic marine quadrant survey.

PROPOSED OPERATIONS PLAN

Please discuss what species you intend to raise in the pond, and your proposed methods of stocking, raising, and harvesting these species.

As in most traditional loko i'a, the intended species to be raised are 'Ama'ama (Mugil cephalus) and Āholehole (Kuhlia xenura). These fish will mainly be obtained through natural recruitment from the surrounding waters of Honu'apo Bay. We intend to remove invasive marine species, such as tilapia, poecillids (livebearers including guppies, mosquitofish and mollys) and Samoan crabs using species appropriate sized nets and traps (as guided by the DLNR Division of Aquatic Resources rules and regulations). Harvesting of target species will take place using short soak lay nets. We will use fishing pole and lures to remove predators to minimize their numbers within the pond.

CONSISTENCY WITH HO'ALA LOKO I'A PROGRAM

Please discuss how this proposal is consistent with Conservation District Use Permit (CDUP) ST-3703 (available online at dlnr.hawaii.gov/special-projects) **and which tier-level the project falls under.**

The Ka 'Ohana O Honu'apo Board is seeking a tier one permit for the the manual repair of the fishpond walls, manual removal of sediment, and invasive species removal. The base of the kuapā is intact and there will be no expansion of the original wall's footprint.

BEST MANAGEMENT PRACTICES

Please discuss the BMPs that will be followed to protect both the environment and the integrity of the pond (users' guide forthcoming).

- Any sediment removal will be done by hand and water quality will be monitored to ensure no negative impacts of sediment plumes.

- Invasive species removal will not affect the health of the surrounding environment and will only be done when a negative effect is observed on the pond.

- Rocks from the wall will be used first to make repairs to damaged sections of the wall. If additional rocks are needed, they will be harvested from the surrounding waters and resemble the original rocks used in wall construction. No mechanized equipment will be used to harvest rock from surrounding waters.

- The improvement of conditions for native species and intentionally-raised species will be the cause for work done on the pond.

- The stocking of intentionally-raised species will rely heavily on natural recruitment. Harvesting will be done when there is an abundance of harvestable sized target species and will be done so with extreme care so as not to impact the natural ecoystem of the estuary.

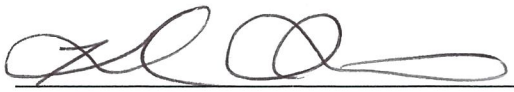
- The fish will not be sold but rather provided to the community such as Kūpuna housing and cultural events and gatherings. The fish will be allowed to live natural lives within the pond ecosystem and in no way shall the fishpond be deemed as an aquacultural venture.

- The management of the Loko i'a/estuary will serve as an example of how best community-based management practices of cultural resource and natural resource co-exist.

CERTIFICATION

I hereby certify that I have read this completed application and that, to the best of my knowledge, the information in this application and all attachments and exhibits is complete and correct. I understand that the failure to provide any requested information or misstatements submitted in support of the application shall be grounds for either refusing to accept this application, for denying the permit, or for suspending or revoking a permit issued on the basis of such misrepresentations, or for seeking of such further relief as may seem proper to the Land Board.

I hereby authorize representatives of the Department of Land and Natural Resources to conduct site inspections on my property. Unless arranged otherwise, these site inspections shall take place between the hours of 8:00 a.m. and 4:30 p.m.



Signature of authorized agent(s) or if no agent, signature of applicant

AUTHORIZATION OF AGENT

I hereby authorize _____ to act as my representative and to bind me in all matters concerning this application.

_____

_____

Signature of applicant(s)