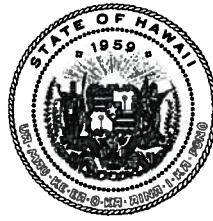


DAVID Y. IGE
GOVERNOR OF HAWAII



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

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

ROBERT K. MASUDA
FIRST DEPUTY

JEFFREY T. PEARSON, P.E.
DEPUTY DIRECTOR - WATER

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

ref:OCCL:MC

File No: Loko I'a: HA-18-01

Luke Kanaka'ole
Edith Kanaka'ole Foundation
1500 Kalaniana'ole Ave.
Hilo, HI 96720

FEB 14 2018

Dear Mr. Kanaka'ole

SUBJECT: LOKO I'A PERMIT HA-18-01: HALEOLONO FISHPOND
Waiākea, South Hilo, Hawai'i
TMK (3) 2-1-015:042

The Office of Conservation and Coastal Lands (OCCL) has reviewed the information you sent regarding repair and maintenance of Haleolono fishpond on the above subject parcel. The pond is in the Resource Subzone of the State Land Use Conservation District.

Haleolono is a loko i'a kuapā which is fed by punawai (freshwater springs) that flow continually into the pond. It was originally connected to the adjacent Waiāhole fishpond; however, that connection was broken during the modern period by the construction of Keaukaha Road and Kalaniana'ole Avenue. There are a number of smaller inner ponds that act as nurseries within the main pond. An intact kuapā separates the pond from the nearshore waters.

The combination of the freshwater input with waters from the offshore estuarine environment create an ideal environment for phytoplankton blooms, which allows the pond to support herbivorous fish such as 'ama'ama and āholehole. At eight feet the pond is also deeper than many ponds, and so a variety of reef fish can also be found, such as Manini, mamo, pu'alu, palani, o'ama (weke'a), and 'ala'ihī. Various species of 'o'opu and 'ōpae are also present. Predatory fish occasionally enter the pond, including kākū, 'omilu, papio, to'ahu, and various puihi species.

Bordering vegetation includes native hau and hala, as well as the invasive ironweed, California grass, and laua'e haole. The substrate is a mix of basalt and silt, both of which are frequently covered by algae.

Haleolono is currently intact and functional; however, tidal currents, storm surges, and trade swells create the need for constant maintenance and repair. Recent extreme tides have topped the walls and allowed an increased number of predators to enter the pond. Larger storms and larger tidal changes are causing increased stress on the integrity of the kuapā. The invasive laua'e

haole (rabbit's-foot fern, *Phlebodium aureum*) are growing on the walls, separating the rocks with their roots as they grow. Other invasive species are encroaching along the pond's perimeter, increasing sedimentation and lowering the pond's pH levels through the breakdown of organic matter.

The Edith Kanaka'ole Foundation (EKF), which has acted as caretakers for Haleolono since 1996, has developed a work plan for the on-going maintenance of the pond in the changing environmental conditions. This involves:

- Clearing invasive plants from the pond's perimeter, and replanting the area with native coastal vegetation,
- Continue to repair the kuapā using rocks from the immediate area;
- Use volunteers to manually remove accumulated sediment, and
- Constructing mākāhā and 'auwai as needed to maintain a healthy balance of freshwater and seawater inputs.

Work done by volunteer groups will be monitored by EKF staff. Sediment levels will be visually monitored, and work will stop if any effect on fish is observed,

The target species will be 'ama'ama and aholehole, which will be maintained through natural recruitment. Farm-raised pua'ama ('ama'ama fingerlings) will be brought in from Oceanic Institute to study the growth rate in different fish pond environments. The fingerlings will be raised in the inner ponds to protect them from predators.

The fish will primarily feed on the naturally occurring diatoms and limu in the pond. EKF also proposes to occasionally supplement this with locally-sourced feed.

Harvesting will be done with lay nets once or twice a year. Smaller harvests will be done with spear or throw net.

After reviewing the application, the Department finds that

1. The plan to maintain the kuapā, remove invasive species, and to raise and harvest indigenous fish species at Haleolono is consistent with Conservation District Use Permit (CDUP) ST-3703 for the Ho'āla Loko I'a 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 Ho'āla Loko I'a program, which was published on October 23, 2013;
3. That the proposal requires the need for a Tier 1 Loko I'a permit signed by OCCL;
4. That the standard conditions found in Hawai'i Administrative Rules (HAR) §13-5-42 apply.

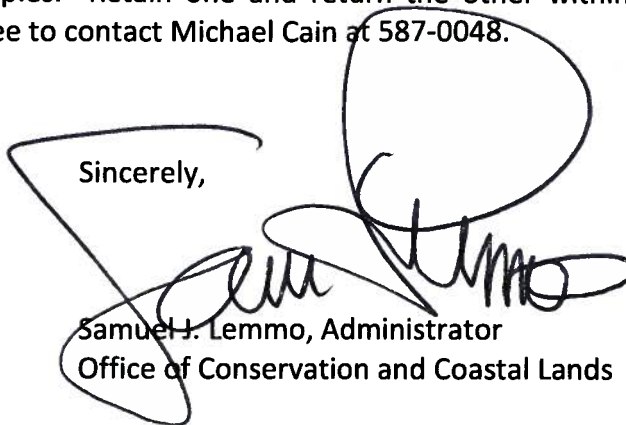
After careful review of the proposed project, the Department authorizes a Tier 1 Loko I'a permit for the work at Haleolono in Waiākea, South Hilo, Hawai'i, TMK (3) 2-1-015:042, subject to the following standard conditions:

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 Hawai'i 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 Hawai'i, and by Hawai'i 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; Hawai'i County Planning



HO'ALA LOKO I'A APPLICATION

FISHPOND NAME: Haleolono

APPLICANT NAME: Edith Kanaka'ole Foundation

Pond location: Keaukaha Road, Hilo, HI

Nearest Tax Map Key(s): 3-2-1-015-042

Ahupua`a: Waiākea

District: Hawai'i

Island: Hawai'i

Commencement Date: 12/2017

Completion Date: Ongoing Management

Wall length: 425 ft

Pond surface area: 3 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: .5
 - Emergency repair
-

REQUIRED SIGNATURES

Applicant

Name / Hui: Edith Kanaka'ole Foundation

Street Address: 1500 Kalaniana'ole Ave
Hilo, HI 96720

Contact Person & Title: Luka Kanaka'ole, Communications Officer

Phone: 808-961-5242

Email: luka@edithkanakaolefoundation.org

Interest in Property: Licensee

Signature: 

Date: 1/20/2018

Signed by an authorized officer if for a Corporation, Partnership, Agency or Organization

Landowner (if different than the applicant)

Name: B P Bishop Estate Trustees

Title; Agency: DLNR

Mailing Address: Kamehameha Schools, PO Box 3466
Honolulu, HI 96801-3466

Phone: 808-982-0839, Leanne Okamoto, Land Asset Manager

Email: leokamot@ksbe.edu

Signature: 

Date: 1/18/18

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

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.

Haleolono is a loko i‘a kuapā. Haleolono 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 Honohononui 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*). Since Haleolono has a greater depth than many other loko i‘a, about 8 feet at the deepest point, there are also a variety of species of reef fish that are frequently seen. These species include: Manini (*Acanthurus triostegus*), Mamo (*Abudefduf abdominalis*), Pu‘alu (*Acanthurus xanthopterus*), Palani (*Acanthurus dussumieri*), ‘Oama/Weke ‘Ā (*Mulloidichthys martinicus*), and ‘Ala‘ihi (*Holocentrus adscensionis*). Many species of ‘O‘opu and ‘Ōpae are found in the fresher ponds including ‘O‘opu Naniha (*Stenogobius hawaiiensis*) and ‘O‘opu ‘Akupa (*Eleotris sandwicensis*) and ‘Ōpae ‘Oeha‘a (*Macrobranchium grandimanus*). Both illegal harvesting by humans and predators that make their way into the pond controls the populations of intentionally raised fish, as well as predatory fish that have made their way into the pond. These predators are mainly Kākū (*Sphyræna barracuda*), ‘Omilu (*Caranx melampygus*), Papiro (*Caranx ignobilis*), To‘au (*Lutjanus fulvus*), and a number of different species of Puhi. There are a variety of gastropod species such as Hapawai (*Neritina vespertina*), as well as many other flatworms and nudibranchs that are found within the kuapā. There are a few water fowl species that frequent the area like the Auku‘u (*Nycticorax Nycticorax*) and the ‘Ulili (*Tringa incana*).

The substrate of Haleolono mainly consists of basalt and silt both commonly covered by algal growth. Some native species, such as Hau (*Hibiscus tiliaceus*) and Hala (*Pandanus tectorius*), 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 Ironwood (*Casuarinia equisetifolia*), California grass (*Urochloa mutica*), and Laua‘e Haole (*Phymatosorus grossus*). Many non-native species that are not considered problem species are found at this loko i‘a as well, such as Niu (*Cocos nucifera*) and False Kamani (*Terminalia catappa*).

HISTORY OF THE LOKO I‘A

Haleolono lies within the ahupua‘a of Waiākea on the island of Hawai‘i in an area known as Keaukaha. It is a part of Honohononui, an ‘ili kūpono, which is a land division within an ahupua‘a that paid tribute to the ruling chief of the island instead of the chief of the ahupua‘a. Honohononui consists of the stretch of coastline starting from Kamokuna, to Laehala and Kaupō Point, and ending at Haleolono. The estuarine environment of Kamokuna serves as a safe place for many ‘ōhua (young fish) to grow before getting caught in the current off of Laehala and finally reaching the waters outside of this loko i‘a.

Haleolono is the birthplace of the chief Kalaninui‘iāmamao, who is also the namesake of the

fishpond. Observations made in this area led to the composition of the first lines of the Kumulipo (Hawaiian Creation Chant) where the beginning of life is discussed in the form of limu (algae), sponges, and sea urchins. Traditionally, this area was also used as a canoe landing, serving as the main connection from the Pumaile (King's Landing) and Leleiwi areas to the rest of Hilo before Kalaniana'ole Avenue was constructed. Haleolono was once connected to Waiāhole fishpond before this road was made.

After the traditional use of Haleolono, the pond was obtained by the Nakagawa family and became home to the Seaside Club. The restaurant sat on the wall where there are now only the remnants of a display pond. After the original restaurant was destroyed by the 1946 tsunami that struck Hilo it was relocated across the street by Carlsmith Beach Park. The new location is now known as the Seaside Restaurant and Aqua Farm. After the creation of the new restaurant, the land became an unofficial rubbish dump for most of the Keaukaha area. In 1996, Kamehameha Schools allowed the Edith Kanaka'ole Foundation (EKF) to become the caretakers of Haleolono. Initial restoration consisted of removing debris that had been dumped there throughout the dormant period and digging out the sediment that had filled the pond. The base layers of the kuapā were still present and the outline of the loko i'a could be followed in restoration of the walls. Later restoration efforts included the removal of overgrowth, water quality monitoring, and the construction of the inner pond kuapā.

PROPOSED WORK PLAN

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

Haleolono is currently functional, but the kuapā (wall) is in need of constant repair due to the forces of tidal currents, storm surges, and trade swells. Sections of the outermost kuapā are completely under water at high tides, allowing predators to enter the pond and the fish being raised to escape. As of recent, there have been extremely high flood tides that submerge sections of the wall up to one foot in depth. The area is exposed to easterly trade swells, which constantly damage the kuapā, that become more damaging during storms and winter swells. The kuapā surrounding the inner ponds are mainly damaged by a non-native species of Laua'e Haole (*Phymatosorus grossus*), which separate the rocks while growing. These walls are also damaged by the huge tidal changes that have been occurring recently. Invasive and troublesome plants are also encroaching on the pond causing increased sedimentation rates and lower pH levels through the breakdown of organic matter.

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. EKF staff 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 the EKF staff. 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 plant native coastal plants that can replace the 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 that is 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 the Honohononui coastline. Farm raised 'Ama'ama fingerlings (Pua'ama) from Oceanic Institute (OI) will also be brought in for research purposes for detailed data of growth rates of mullet in different fishpond environments. Smaller individuals of these species will mainly be contained within the inner ponds (Loko 'Ukele, Loko Hapawai, Loko 'Auwai, and Loko Waena) to protect them from predators that are found in the outer pond (Loko Nui). These species will mainly be fed through the naturally abundant diatoms and other limu that are found in these ponds. When needed, they will be fed other sources of fish food. When these species get larger, they will be allowed into the main pond (Loko Nui) to grow to a harvestable size. We will also be experimenting with locally sourced feed to compliment their natural feed that occurs in the pond. Harvesting of these species will be done using a lay net for a short soak once or twice per year, or through thrownet or spear for smaller harvest numbers.

We will use fishing pole and lures to remove predators to minimize their numbers in 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 Edith Kanaka‘ole Foundation 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 dredging 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. Additional stocking of intentionally raised species will be brought in from O‘ahu for research purposes to analyze the growth rates of fish in different fishponds. These species will be raised without being fed, unless natural food supply is limited by changing environmental conditions. Harvesting will be done when there is an abundance of harvestable sized target species.

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)
