

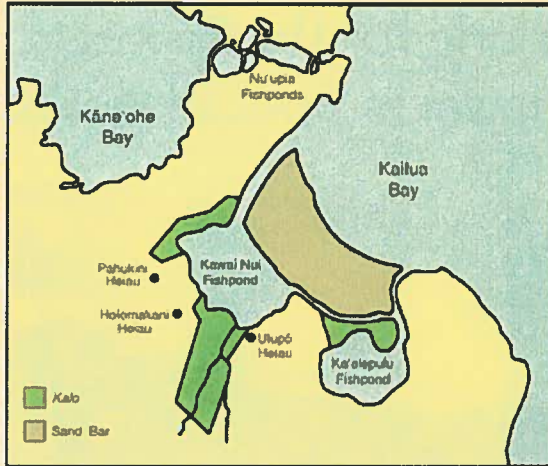
## CREATING A WETLAND

Did you know that Kawainui Marsh is the volcanic throat of the Ko'olau volcano that is now filled with water over 60 feet deep and covered with a floating grass mat?

The eruption of the Ko'olau volcano about 2.5 million years ago was followed by a long period of erosion. During this erosional phase, a massive landslide

resulted in the windward side of the caldera sliding into the ocean. Remnants of the caldera include Nā Pōhaku, Mt. Olomana, and Ulumawao.

The waters of Kailua Bay extended much further inland in the past. Around 3,000 years ago, a sand bar began forming across the bay and by 200 B.C., freshwater lagoons were created at Kawainui and Ka'elepulu.



## KAWAINUI THE GREAT FRESHWATER

Hawaiians converted the lagoons into huge fishponds. As the land was cleared for agriculture, sediments began to fill in the ponds. With abandonment of the fishpond, the pond gradually became covered with a floating mat of vegetation. As trees become established, the marsh is evolving towards a swamp.

The Kawainui-Hāmākua wetland is home to endangered waterbirds. Today, Kawainui also serves as a flood control basin that protects urban Kailua from flooding and maintains the water quality of Kailua Bay.

*Wawā ka menehune i Pu'ukapele ma Kaua'i, puo ho ka manu o ka loko o Kawainui ma O'ahu.*

The shouts of the menehune on Pu'ukapele on Kaua'i startled the birds of Kawainui Pond on O'ahu.



## AHUPUA'A O KAILUA ĀINA MOMONA (RICH LAND)

From the Ko'olau Mountain to Kailua Bay, the Kailua *ahupua'a* is the largest on windward O'ahu. Central to the *ahupua'a* is the 850-acre Kawainui Marsh.

Did you know that Hawaiians converted Kawainui into the largest inland fishpond in Hawai'i prior to Western Contact?

Sailing into Kailua Bay around 1,500 years ago, early Hawaiians landed on the sands of Kailua Beach. Behind the beach, they found the large brackish water pond lined by forests of *loulu* palms. They cleared the *loulu* to plant their *lo'i kalo* (taro fields) and stocked the

massive 450-acre pond with fish. Cultivation soon expanded into Maunawili and Kapa'a valleys.

Kailua was a very rich *ahupua'a* with the marine resources of Kailua Bay, the fish from Kawainui, the abundant freshwater, and the *kalo* harvested from the fertile lands around the pond and streams. These resources supported a large population along the coast and made Kailua a favorite residence for *ali'i*.

As a political and religious center, Ulupō Heiau, Pahukini Heiau, and Holomakani Heiau were constructed around the edge of Kawainui. From these *heiau*, the *ali'i* had commanding views of the *ahupua'a*. Today, only the stone foundations and walls of these large *heiau* remain.



## LIFE IN THE KAWAINUI- HĀMĀKUA MARSH

The Kawainui-Hāmākua Marsh provides open water and nesting areas for several migratory birds and endangered waterbirds. New wildlife sanctuaries and open water areas will improve the habitat for these birds.

Did you know that Kawainui Marsh is the largest existing wetland in Hawai'i?



**Ae'o (Hawaiian Stilt).** Black and white with long pink legs, the Ae'o frequents the shallow waters. It feeds on fish, worms, crabs, and water insects. The Ae'o makes a distinctive "keek" sound in flight and when disturbed.

**'Alae 'Ula (Hawaiian Gallinule or Moorhen).** This waterbird is recognized by its red beak that is said to have been burnt when it brought fire to the people. This bird walks across floating vegetation on large unwebbed feet.



**'Alae Ke'oke'o (Hawaiian Coot).** Distinguished by its white bill and frontal shield, this bird prefers the open water areas.



**Koloa (Hawaiian Duck).** Dark in color with orange feet, Koloa are often seen in the water and near the water's edge. Their quack is similar to that of the Mallard ducks.



**'Auku'u (Black-Crowned Night Heron).** This large bird feeds at the marsh and is often seen in nearby trees. 'Auku'u are known for taking fish from the fishponds.

## A VISIT TO KAWAINUI

There are several sites around the marsh where you can learn more about the natural and cultural resources of Kawainui.



**ULUPŌ HEIAU**  
Located next to the Windward YMCA, Ulupō Heiau is the largest platform *heiau* on O'ahu. Said to have been built by the *menehune* over 1,000 years ago, it was probably a *māpele* (agricultural) *heiau* that was later enlarged and converted to a *luakini heiau*.



**PAHUKINI HEIAU**  
Located in the Kapa'a Landfill, this rock walled enclosure *heiau* was built by Chief 'Olopana around A.D.

1300. As a *luakini heiau*, this site was dedicated for success in war.



**HĀMĀKUA MARSH WILDLIFE SANCTUARY**  
Along the canal that parallels Hāmākua Drive in Kailua is the Hāmākua Marsh.

From the roadside, the *ae'o*, *'alae 'ula*, *'alae ke'oke'o*, and *'auku'u* may be viewed.



**KAWAINUI PARK**  
Located at the end of Kaha Road and along the Oneawa Canal, this park offers panoramic views of the marsh and native plant garden.

Alien ducks dominate this site, but may sometimes observe the native waterbirds.



**NĀ PŌHAKU Ō HAUWAHINE**  
This site along Kapa'a Quarry Road and the western edge of the marsh is being restored with native plants, such as the *kōkī'o*. From the rocky outcrop, you have a sweeping view of Kawainui Marsh and Kailua *ahupua'a*.

## PLANNING FOR THE FUTURE OF KAWAINUI

A master plan was prepared for Kawainui Marsh in 1994. This plan recognized the need for an interpretive visitor center to orient visitors to the marsh. This facility would also serve as an education center to teach residents and visitors about the natural, cultural, scenic and recreational resources of Kawainui. It is these resources that make Kawainui such a unique and special place.

For the past 5 years, a community group known as Ho'olaulima Ia Kawainui has met to initiate the planning for this interpretive visitor center. Members have compiled background on the resources and interpretive themes of the Kawainui-Hāmākua Marsh. Based on an initial assessment of resources, scenic views, audience, and access, eleven (11) locations for interpretive programs and possible sites for an interpretive center have been identified:

1. **Hāmākua Marsh.** Along the canal paralleling Hāmākua Drive.
2. **Wai'auia.** Entry to Kailua Town.
3. **Ulupō Heiau State Historical Park.** Adjacent to Windward YMCA.
4. **Ulukahiki.** Behind Castle Hospital.
5. **Mokulana.** Kalaniana'ole Hwy. at intersection with Auloa Road.
6. **Kapa'a Quarry Road at Kalaniana'ole Highway.**
7. **Nā Pōhaku O Hauwahine.** Along Kapa'a Quarry Road and edge of marsh.
8. **Pahukini Heiau.** Within Kapa'a Transfer Station.
9. **Kapa'a.** Along Kapa'a Quarry Road by the Quarry entrance (Airplane Park).
10. **Kawainui (Kaha) Park.**
11. **Gateway Park.** Across from Kalāheo High School on Mōkapu Blvd.

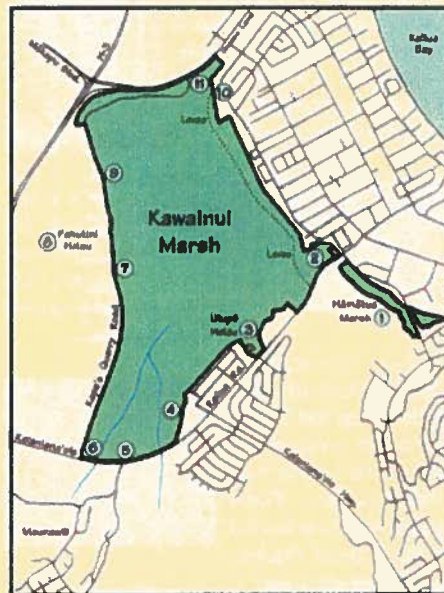
Did you know that Kawainui-Hāmākua is the first wetland in Hawai'i to earn the title as a Ramsar wetland and only the 22nd in the U.S.? In 2005, the Kawainui-Hāmākua Marsh gained recognition from U.S. Fish & Wildlife Service International Conservation Division as a wetland of international importance under the Ramsar Convention. Established in 1971, the Convention is dedicated to protecting wetland ecosystems worldwide.

### STEWARDSHIP IS KEY!

What can you do to help protect and preserve the Kawainui-Hāmākua Marsh?

- Attend a tour on most 1st Saturdays to learn about the resources of the marsh.
- Volunteer to assist with the care of Ulupō Heiau on the 2nd Saturday of the month.
- Volunteer at Nā Pōhaku O Hauwahine on the 3rd Saturday of the month.

Contact: email@ahahui.net / 593-0112



# THE FUTURE OF KAWAINUI - HĀMĀKUA MARSH

Working for the Protection of Hawai'i's Special Wetland



Aia ka mo'olelo i ka 'āina  
The story is in the land

## PARTNERS IN PROTECTING KAWAINUI MARSH

### HO'OLAULIMA IA KAWAINUI

- Kawai Nui Heritage Foundation
- Ameron Hawai'i
- Kailua Historical Society
- 'Ahaui Mālama I Ka Lōkahi
- Hawaii Audubon Society
- Dept. of Land & Natural Resources
- Kailua Hawaiian Civic Club
- Hawaii's Thousand Friends (Forestry & Wildlife; State Parks)