



THE LANI-KAILUA OUTDOOR CIRCLE

**Response to the Environmental Impact Public Notice (EISPN) for the “Kawainui-Hamakua Master Plan Project”
Including an Alternative to the Plan Entitled:
The Lani-Kailua Outdoor Circle Alternative Kawainui-Hamakua Marsh Master Plan
October 24, 2016**

The Lani-Kailua Outdoor Circle (LKOC) requests to be a consulting party in the preparation of an EIS for the Kawainui-Hamakua Master Plan Project.

This project, being developed by Hawai'i's Department of Land and Natural Resources' (DLNR), Division of Forestry and Wildlife (DOFAW) in partnership with the Division of State Parks (DSP), will impact Kawainui and Hamakua wetlands and wetland watersheds.

We have prepared an alternative to the Master Plan entitled “The Lani-Kailua Outdoor Circle Alternative Kawainui-Hamakua Marsh Master Plan”, also referred to as “**LKOC's Alternative Plan**”.

Background

Stream, spring and surface waters from mauka watersheds flow into Kawainui and Hamakua marshes, and are filtered before entering the recreational waters of Kailua Bay.

A wetland inventory published by the Society of Wetland Scientists in 2013, estimated that Oahu has lost 65% of its wetlands since human settlement began (ref: <https://ase.tufts.edu/biology/labs/reed/documents/pub2014WetlandlossinHI.pdf>)

This loss has left Kawainui-Hamakua as the largest remaining wetland in Hawaii. These wetlands are the ecological link between the Kailua, Kapa'a and Ka'elepulu-Hamakua watersheds and the recreational coastal waters of Kailua Bay. They are primary habitat for migratory birds and endemic and endangered waterbirds, they are a water filtration system, and they provide serene open-space vistas that contribute to our quality of life. In addition to storing surface water, and providing flood protection for adjacent communities, Kawainui provides a migration path, from the ocean to mountain streams, for indigenous and endemic amphidromous fish and crustaceans.

Over time, these marshes have been physically altered and degraded by human development. Kawainui has been used as a landfill, an automotive junkyard, and a repository for sewage. It has taken a community of concerned citizens working with enlightened government elected officials to bring it back to its present state, and it will take time and commitment to restore it to a fully functioning, clean and productive ecosystem. This is now our mandate, and the Lani-Kailua Outdoor Circle (LKOC) takes seriously its responsibility to partner with like-minded individuals to work toward this goal.

Any Master Plan for the future of Kawainui and Hamakua must have at its center the protection of their ecological systems, including their water-related ecological resources.

The waters of Kawainui Marsh, are highly vulnerable to contamination and by law, are to remain in their natural state as nearly as possible with an absolute minimum of pollution from any human-caused source. (Class 1.a.waters under HRS Title II, Chapter 54). By law, the wilderness character of these areas shall be protected.

The Lani-Kailua Outdoor Circle Alternative Kawainui-Hamakua Marsh Master Plan Overview

The Lani-Kailua Outdoor Circle offers an Alternative to the Master Plan entitled "The Lani-Kailua Outdoor Circle Alternative Kawainui-Hamakua Marsh Master Plan", also referred to as "LKOC's Alternative Plan".

Fundamental to LKOC's Alternative Plan is the prioritization of resource management for the improvement of Kawainui and Hamakua's functional ecosystems and the preservation of the cultural and archaeological sites and uses. It is based on a review of the record that shows a progressive loss of Kawainui marsh fecundity and health over the last 70 years, a loss due primarily to water diversions and development that included an industrial quarry, landfill, city dump, green waste facility, garbage incinerator, auto-wrecking yard, industrial park, and a road cutting off the wetland from its Kailua and Kapa'a watersheds. The natural environment has been degraded and is in need of restoration.

It is LKOC's position that the natural, historic and cultural resources of Kawainui and Hamakua wetlands and watersheds entrusted to the public must be protected for the benefit of present and future generations.

The Lani-Kailua Outdoor Circle Kawainui-Hamakua Marsh Master Plan supports the Kawainui-Hamakua Master Plan Project's objectives "to sustain and enhance the natural and cultural resources associated with this area and increase public access and outdoor recreational opportunities".

LKOC's Alternative Plan prioritizes objectives and implementation on a smaller scale to avoid negative environmental impacts to the Kawainui and Hamakua wetlands, watersheds, endangered waterbird habitat, and archaeological sites.

LKOC's Alternative Plan contends that modern buildings, other than those necessary for maintenance operations, and the number of trails, pavilions, driveways and other structural additions are not needed in order to comply with the objectives identified in the "Kawainui-Hamakua Master Plan Project",

LKOC's Alternative Plan meets the mandate of Section 6(f) of the Land Water Conservation Fund (LWCF) Program to provide recreational opportunities on lands acquired with federal Land Water Conservation Funds (LWCF).

The Lani-Kailua Outdoor Circle Alternative Kawainui-Hamakua Marsh Master Plan Details

Kawainui-Hamakua

LKOC's Alternative Plan supports the removal of invasive vegetation in the wetlands, naturalization of streams, opening up surface water flows and establishing seasonal mud flats in the 60-acre Kahanaiki Wetland Zone, the Open Water/Pothole Zone and the Wai'auia Wetland Zone.

It supports the creation of additional wetland areas and the improvement of waterbird habitat in the Hamakua wetland.

LKOC's Alternative Plan agrees that "Healthy upland zones provide a protective buffer between developed areas and the wetland" (p. 2-16), and it supports: DOFAW's hybrid ecosystem model for forest restoration; the maintenance of a visual vegetative screen between the roadways and the wetland in the project areas; repair to existing culverts to mitigate storm water runoff discharging into Kawainui and Hamakua; and the creation of detention areas to slow and detain runoff before it enters the wetlands.

LKOC's Alternative Plan does not support commercial activities at these sites or commercial tour buses or vans.

Kahanaiki

Kawainui and Hamakua marshes are home to four of Hawai'i's endangered and endemic waterbirds: the Hawaiian coot ('ālae ke'oke'o), Hawaiian duck (koloa), Hawaiian Stilt (ae'o), and Hawaiian Gallinule (Morehen) ('ālae'ula). These waterbirds are classified as "conservation reliant" meaning they benefit from land protection and the active management of wetlands. Because they face extinction, special management protocols are needed to minimize human impacts on their habitat. The Kahanaiki segment of Kawainui is a designated wildlife sanctuary, and Kahanaiki Stream provides a supportive ecosystem for these endangered birds as well as a resting and foraging place for migratory fowl.

Because this area is designated a wildlife sanctuary requiring special protection, LKOC's Alternative Plan provides limited public access and recreational opportunities through non-commercial DOFAW managed stewardship opportunities, school related educational programs, and hands-on-learning field trips that are designed to be low impact and are not scheduled during waterbird breeding seasons. Once a year, coinciding with Ramsar World Wetland Day, staff led non-commercial tours with no tour buses or vans, will be open to the general public.

This Alternative Plan removes proposals for new parking lots, the maintenance bridge/causeway over or through the wetland and Kahanaiki Stream, and it retains the three existing locked maintenance entrance gates along Kapaa Quarry Road.

LKOC's Alternative Plan does not support commercial activities at this site or commercial tour buses or vans.

Na Pohaku (Cash Ranch)

The Na Pohaku planning area with structural features illustrated in Figure 2.5 is locally referred to as the Cash Ranch. It is physically separated by a gully from the Na Pohaku o Hauwahini site.

LKOC's Alternative Plan for Na Pohaku (Cash Ranch) supports DOFAW's continued upland forestation work and drainage improvements along Kapa'a Quarry Road. It also supports the building of small, low impact hale

(traditional Hawaiian pole and thatched structures) to be used by cultural practitioner groups managed under a State MOA.

LKOC's Alternative Plan supports low impact, reduced human foot print, by: replacing the proposed brick and mortar structures with open air pavilions; decreasing the 35 car parking lot to 15 cars, including a school bus only drop off area; creating a low impact wetland viewing area; and offering staff-led only-on-trail access to the Kahaniki Wildlife Sanctuary.

In LKOC's Alternative Plan, the Na Pohaku (Cash Ranch) section would be a cultural practitioner site with managed public access and recreational activities such as taking part in cultural learning activities, invasive species plant removal, planting of native species, bird watching, non-commercial wildlife photography, and staff/volunteer led non-commercial cultural, historical and ecological tours with no commercial tour buses or vans.

Na Pohaku o Hauwahine

LKOC's Alternative Plan supports public access, recreational and open-air educational and cultural practitioner opportunities at Na Pohaku o Hauwahine. This site offers low impact public access recreation for hikers, open vistas, and areas of tranquility and natural beauty. An existing trail system leads to the Na Pohaku o Hauwahine outcrop and an interpretative platform that overlooks the broad expanse of Kawainui Marsh. Small bird blinds would be added for low impact recreational bird viewing.

This LWCF 6(f) site presently supports place-based education in an outdoor classroom setting for children and adults, and the existing open-air amphitheater would be replaced with an open-sided, covered pavilion built on the same footprint. A covered platform could be incorporated into the design to provide shelter for the staging of cultural and/or educational activities.

LKOC's Alternative Plan restricts access along the wetland boundary of the Na Pohaku o Hauwahine site to designated stewardship groups for supervised restoration activities in order to avoid disturbing nesting and foraging waterbirds. This Alternative removes the proposed 10-12 foot wide trails except in areas where DOFAW maintenance vehicles require access.

LKOC's Alternative Plan supports a small, dirt and gravel, parking lot to accommodate 10 cars and one school bus (by permit or reservation only). This would be built on the existing off-street parking spot adjacent to the entry to Na Pohaku State Park trail head.

Portable and/or composting toilets would be installed at the Na Pohaku o Hauwahine site.

LKOC's Alternative Plan does not support commercial activities at this site or commercial tour buses or vans.

Hawaiian Cultural and Environmental Center

LKOC's Alternative Plan views this area as an important buffer between the wetland and the City & County Transfer Station. It is the site of a former open-burning refuse area that produced considerable ash residue.

LKOC's Alternative Plan calls for soil and water testing of this site for pollutants and contaminants, site and water cleanup, and reforestation with native vegetation.

Vegetation Processing Site

LKOC's Alternative Plan supports the existing green waste processing site, the proposed equipment shed, construction of a small office space and a 6 stall parking area but eliminates the 4,000 sq. ft. proposed facility.

Kapa'a Stream, Ditches and Culverts

The Kawainui marsh area between the Model Airplane Park and the right angle bend in Kapa'a Quarry Road is the natural drainage area of Kapa'a Stream and watershed. Water sheet flows over the road and into a ditch designed to filter water from the old mauka landfill. It then flows into Kawainui Marsh during heavy rain events, carrying with it heavy metal contaminants. The drainage channels on both sides of Kapa'a Quarry Road are not maintained, and are so overgrown that they no longer function as the water filters they were designed and required to be.

LKOC's Alternative Plan calls for regularly scheduled clearing, cleaning and maintenance of both drainage canals so that they will once again filter out contaminants before their waters flow into Kawainui marsh.

LKOC's Alternative Plan does not include development of boardwalks or trails in this area of the wetland, for public safety and ecological reasons.

The area between the right angle bend in Kapa'a Quarry Road and the intersection of Kapa'a Quarry Road and Mokapu Boulevard has been identified as a dangerous section of road. Both ends of Kapa'a Quarry Road have been evaluated in the Kapa'a Industrial Park EIS as areas of gridlock at full buildout of the Industrial Park.

Kawainui State Park Reserve

LKOCs Alternative Plan eliminates the construction of park facilities at this site, including: a modern 3,000 sq. ft. hale wa'a; the 42 vehicle parking area and additional canoe trailer parking, restrooms and showers; the 1,000+ sq. ft. interpretive shelter; and the launching of canoes into Kawainui-Oneawa Canal from the proposed reinforced grass slope. Under this Plan the area will be cleaned of trash and planted with native plants.

LKOC's Alternative Plan does not support commercial activities at this site or commercial tour buses or vans.

Levee

LKOC's Alternative Plan supports continued use of the levee for walking, jogging, sightseeing, and bird watching. In order to protect waterbirds, dogs on the levee must be leashed.

LKOC's Alternative Plan does not support commercial activities at this site or commercial tour buses or vans.

Wai'auia

This area is situated along Kailua Road near the entrance to Kailua town and is under DOFAW jurisdiction. It is bordered by the City's sewage pump station, the levee, and the boundary with Ulupo Heiau SHP. It is a significant wetland area, habitat for endangered waterbirds and historic site.

In 1987, when James L. Watson proposed building a light industrial complex with a park-and-ride theme park extolling the virtues of the marsh at Wai'auia, (ITT), he was quoted in the Sun Press as saying:

"I think a park at the periphery of the marsh would support a redevelopment of interest in teaching people about ecology, culture and history of the marsh. People could come and experience the marsh, which could tremendously further interest in the area."

Mr. Watson, purchased the property from ITT, but through the persistent community efforts of The Lani-Kailua Outdoor Circle, the Kawai Nui Heritage Foundation, Hawai'i's Thousand Friends, and concerned citizens, the City revoked the building permit even though Mr. Watson had already covered the area in fill and had begun construction of a wall. The Board of Land and Natural Resources (BLNR) condemned the nine-acre parcel and the legislature appropriated the money for its purchase.

LKOC's Alternative Plan does not support commercial activities at this site or commercial tour buses or vans.

Wai'auia Center for Hawaiian Studies

LKOC's Alternative Plan recognizes the cultural significance of this site and its view plane values to the residents of Kailua and the state. It supports the burial preserve as a re-interment site for native Hawaiian remains (iwi kupna), the construction of a hula mound, and the pedestrian path connecting Wai'auia to the levee.

The Plan supports the building of a traditional hale or open air pavilion located so as not to obstruct the view plane as seen when entering or exiting Kailua at the bridge.

LKOC's Alternative Plan supports DOFAW's existing gated maintenance road on the makai side of the levee but due to its proximity to the entrance to Kailua and to the open water remnant wetland used by endangered waterbirds, does not support any new parking lots at this site.

LKOC's Alternative Plan sees this area as a valued public resource that should be protected from hardscape and open to all.

Ulupo Heiau

LKOCs Alternative Plan does not support the 8-10 foot wide foot trail proposed to link the levee with the Ulupo Heiau SHP, nor does it support the proposed 365 feet-long boardwalk over or through the wetland.

Ulupo Heiau State Historical Park

LKOC's Alternative Plan supports: (1) the restoration of the cultural landscape around Ulupo Heiau, (2) construction of a small nursery consisting of wooden benches and sunscreens, (3) construction of a traditional pole and thatch halau for non-commercial cultural demonstrations and interpretive gatherings, (4) development of a trail through the park and connecting that trail with the path that runs along the eastern side of Kawainui (but not beyond the boundary where it reaches the northwest boundary of the Kawainui Vista residential neighborhood).

LKOC's Alternative Plan supports cultural protocol, access by cultural practitioners and the general public.

LKOC's Alternative Plan supports the construction of a traditional hale for this site, as defined in the DLNR Kawainui-Hamakua Master Plan Project.

LKOC's Alternative Plan supports the ongoing cultural landscape restoration, scheduled selective access by cultural practitioners, and the cultural educational programs, along with visitation by the public, so long as those programs are not commercial and include no commercial tour buses or vans.

This Alternative Plan offers opportunities for archaeological study and scientific support, and the establishment of protective buffers. This Alternative Plan recommends that restrictions be placed on public access to sensitive sites where artifacts may still be found at ground level.

Ulupo

LKOC's Alternative Plan does not support access to the site from the existing gated driveway connecting Ulupo to Kailua Road or the granting of permits for tour buses or vans to unload visitors along Kailua Road.

LKOC's Alternative Plan restricts public access to locations where there are extant artifacts that could shed light on the pre-contact history of the fishpond and settlement area. This Alternative Plan will identify, evaluate and require restricted access to protect sensitive sites.

LKOC's Alternative Plan provides for a staging area, an internal trail, and the Interpretive Viewing Pavilion identified in Figure 2.9, all of which provide public recreation, educational and stewardship opportunities, and through managed access meet LWCF 6(f) requirements.

DOFAW Kawainui Management and Research Station

The DOFAW Management and Research Station overlooks the Army Corps of Engineers Ponds and is conveniently located next to the area known as Knot's Ranch.

This location, adjacent to Maunawili Stream, the Ponds and DOFAW's Management and Research Station, is ideal for hands-on learning and stewardship opportunities for school and community groups, under the management of DOFAW and DSP staff.

Under LKOC's Alternative Plan this site will support restoration work on the Ponds, the maintenance and management of the waterbird habitat, flood control capacity management, efforts to improve water quality in the wetlands, and educational and research programs to improve understanding of native wildlife resources.

LKOC's Alternative Plan supports replacement of temporary structures with permanent facilities, the removal the temporary office trailers and shipping containers, and the funding of a main line sewer connection.

LKOC's Alternative Plan supports the 1.5 acre area situated at the west end of DOFAW's station that is planned for passive outdoor recreation by the public but does not support commercial activities at this site. This Alternative Plan provides open spaces for bird watching, a small wooden shade pavilion, and parking for no more than 15 vehicles, including handicapped parking but does not support parking or drop off for commercial tour buses or vans.

LKOC's Alternative Plan recommends an interpretive pavilion with temporary portable or composting toilets for use until a sewer line is connected. This pavilion would be used for interpretive displays, educational and stewardship instruction, and to provide shelter from the elements.

LKOC's Alternative Plan supports construction of wooden decks at this location and their connection to a foot trail to access the Ponds.

Mokulana Peninsula

LKOC's Alternative Plan recommends that the two DOFAW entry driveways be divided into separate functions with the one at the intersection of Kailua Road and Auloa Road designated as public access, and the makai entry limited to DOFAW maintenance staff and access for school and cultural groups interested in reserving the program staging area for activities under the management of DOFAW-DSP. A gate would separate the internal driveway between the public viewing area and the programming area. Both sites would be closed and locked at night. LKOC's Alternative Plan does not support commercial activities or commercial buses or vans at either of these sites.

Public access at the Auloa light would bring visitors into a viewing area surrounded by a small trail. Visitors could also access the site from the nearby bus stop. LKOC's Alternative Plan supports the proposed creation of a low wetland vegetative buffer, a small parking lot with handicap access, a small interpretive pavilion overlooking the wetland and a protective fence separating people and dogs from the wetland.

In LKOC's Alternative Plan neither site will be opened at night, so lighting will not disturb migratory or endangered waterbirds.

In LKOC's Alternative Plan DOFAW equipment parking would be moved to the existing maintenance area off Kailua Road that leads to the lower Army Corps of Engineers Ponds. Educational restoration and management activities will be provided through managed supervised access through this maintenance driveway.

LKOC's Alternative Plan does not support the construction of the proposed maintenance causeway/path between Mokulana Peninsula and the DOFAW Management Research Station.

LKOC's Alternative Plan does not support the construction of the proposed maintenance causeway/path over the wetlands and Kahanaiki Stream to connect Mokulana Peninsula to the Kahanaiki wildlife sanctuary.

Hamakua Marsh Wildlife Sanctuary

LKOC's Alternative Plan continues DOFAW's current wetland management and recovery efforts for endangered birds and plant species at this site and habitat improvement for migratory shorebirds.

This Alternative Plan supports the proposed one-acre expansion on the south side of the wetland to increase suitable habitat, the removal of trees and vegetation from the mauka boundary to increase the wetland boundary, and the proposed two acre wetland enhancement along the remaining mauka boundary.

LKOC's Alternative Plan limits the human footprint and man-made disturbances at this site. The Army Corps of Engineers Ponds, Na Pohaku o Hauwahine, Ulupo State Park, and the former Knot's Ranch areas provide opportunities for service learning projects and other place-based educational programming with schools and non-profit organizations, and should be considered alternative locations for human access activities proposed in the Hamakua Marsh Wildlife Sanctuary. An exception can be made for students attending schools within walking distance of the wetland who are working on a supervised project.

Expansion of the existing unpaved parking area to create a program staging area may not be needed if most placed based educational programming with schools and non-profit organizations are relocated to less sensitive sites that serve the same educational purpose.

LKOC's Alternative does not support commercial activities or commercial tour buses or vans at this site.

Pu'uoehu Hillside

LKOC's Alternative Plan supports alien plant species removal and replacement with native plants in limited increments to prevent erosion and sediment loading into Hamakua wetland.

LKOC's Alternative needs clarification of the Master Plan comment that proposed trails are not for general public use. The EISPN provides many examples of public access for educational and stewardship opportunities and we ask that the DEIS provide information on the number of individuals per day that would be allowed access to these trails for educational and stewardship activities, as well as how this access will be regulated.

LKOC's Alternative Plan does not support commercial activities or commercial tour buses or vans at this site.

APPENDIX A: Information that Needs to be Provided in the DEIS

1. The DEIS should provide information on Kawainui Marsh's eligibility for listing on the National Historic Register of Historic Places, and definitions of "historic property" and "archaeological site".
2. The DEIS should identify the specific areas in Kawainui-Hamakua that are "state wildlife sanctuaries" and list a variety of controls that can be used to manage access, the number of people using a site, and the types of use allowed.
3. The DEIS should address the types of motorized vehicles that are allowed within the designated state wildlife sanctuary areas and state whether these "vehicles" could include ADA mobility devices such as wheelchairs, segways and motorized scooters.
4. The Plan states that within Kawainui, access to the wildlife sanctuary areas is restricted to the perimeter marked trails and roads, or other marked trails or roads. The DEIS should identify how DOFAW will enforce this restriction.
5. The DEIS should clarify whether non-profit or for-profit contractors could be granted permits for management and maintenance operations in Kawainui-Hamakua; whether limits can be placed on the size of these groups; and what type of oversight, if any, DOFAW/DSP staff would have on their work.
6. The DEIS should identify the types of commercial permits allowed in Kawainui-Hamakua, the number of permits per day per site allowed, and the number of commercial buses or vans that could be included in the permit.
7. The DEIS should provide a limnology study to explain Kawainui marsh's ecological systems interaction with the wetland and watershed drainage basins and environment.
8. The DEIS should provide information on existing structures (amphitheater, storage huts, etc.) at the Na Pohaku o Hauwahine site, the parking lot, the concrete block overlook with interpretive signs, interior trails and roadways, and the Na Pohaku o Hauwahine outcrop and cultural rock formations. These features should be added to Figure 2.5 Conceptual Plan Sub Area B - Na Pohaku Section...".
9. The DEIS should explain why restoration and protection of the marsh cannot be accomplished by DLNR - DOFAW/DSP without building modern structures and complexes along the perimeter of the wetland.
10. The DEIS should provide information on past uses of the Cash Ranch Na Pohaku site and clarify that it is not specifically the location of Na Pohaku o Hauwahine rock but rather an area adjacent to, and physically separated from, the rock by a gully.
11. The DEIS should clarify what is meant by traditional cultural practices and how these practices can be addressed in Kawainui-Hamakua without the construction of modern walled buildings that use modern materials.
12. The DEIS should explain how it determines which cultural practitioner groups or individuals will have access to Kawainui-Hamakua for traditional practices.
13. The DEIS should explain how endangered species habitat is defined and where it is located in Kawainui-Hamakua, and discuss the concept of connectivity of habitat and the migratory patterns of Oahu's endangered waterbirds and aquatic life.

14. The DEIS should provide information on:

- a) the size of the reforestation efforts for the lowland mauka boundary of the Hamakua wetland, including the type of vegetation to be removed and the BMPs proposed for removing vegetation to avoid silt runoff after the area is cleared and before new vegetation becomes mature enough to mitigate erosion
- b) the amount of land already available for DOFAW staging areas and the combined size of the staging areas after the proposed increase,
- c) the length of the proposed trail on the Pu'uoehu hillside; how wide it would be, what materials would be added to the trail, and the anticipated number of people using the trail, including staff, stewardship, educational groups, cultural groups and visitors.
- d) how much ground cover would be lost from the hillside watershed by reforestation vegetation removal and trail clearing and what impact this could have wetland water quality during heavy rain events
- e) the types of vehicles, including bicycles, that would be allowed to use the trail, and the management plan to control their numbers and prevent illegal after-hour use.

15. The DEIS should have a Figure that shows the wetland designation boundary and a comparison/explanation of how its size and location have changed over time.

16. The DEIS should change the name of Figure 2.2 from DOFAW Management Area to DOFAW Wetland Management Area since DOFAW also manages the riparian/upland forested areas. If this figure is intended to identify all area of DOFAW management then it need more clarification.

17. The DEIS should clarify the use of the term "pedestrian" in Figure 2.3, since non-DOFAW staff will be using the trail and paths on the Pu'uoehu Hillside and lowland area in the proposed plan. If pedestrian path is used in the Figure to mean an unimproved sidewalk that should stated.

18. The DEIS should provide the size of the vegetative processing area identified in Figure 2.6; the percentage of the area (or square footage) that will be used for composting; information on any reforestation proposals for unused segments of the area, especially the lower buffer zone separating it from the wetland, and how much if any of the area will be covered with grass or left bare.

19. The DEIS should include data related to water testing and/or disease records associated with the Army Corps of Engineer Ponds.

20. The DEIS should identify instances when water from Maunawili Stream or sources outside of the pond boundaries has entered the Army Corps of Engineers Pond system, and what management efforts have or will be implemented to prevent the interchange of water between the natural and engineered wetlands.

21. The DEIS should provide an accurate estimate of the amount of vegetation (by acre or square feet) that will be removed from Kawainui-Hamakua area in order to implement the construction of buildings, pavilions, viewing platforms, overlooks, staging areas, lawns, open areas, parking lots, and road, trail or foots paths proposed in the Master Plan.

22 The DEIS should address the potential for environmental impact on land and aquatic habitat, especially changes in water quality that could result from the removal of vegetation during construction of the physical structures, roads, trails, pathways, lawns and open areas proposed in the plan.

23. The DEIS should address the quality of water entering Kawainui Marsh from ditches and culverts that transport water originating in Kapa'a Stream, and/or propose plans to gather this information, and recommend remediation measures.

24. The DEIS should provide more information related to Figure 2.6 and describe:

- a) the small canal or waterway separating the two segments of the proposed Hawaiian Cultural Complex
- b) the type of trail, bridge or foot path proposed to connect the two sites of the Complex
- c) the amount of existing vegetation and forested area on the 10 acre-site that will be cleared in order to build and operate the Complex
- d) the proximity (in feet) of the proposed buildings to the wetland boundary
- e) the proximity (in feet) of the proposed human access to the wetland boundary
- f) the location of endangered water bird nesting habitat on the sites
- g) the barriers, if any, that would be built to keep people and pets from the wetland and/or prevent disturbance to nesting birds

25. The DEIS should include a traffic impact study. This study should include an assessment of traffic impact from the addition of 3 or more new driveway entrances at Kapa'a Quarry Road, and the cumulative impact of traffic from Le Jardin Academy, the City Transfer Station, HC&D/Ameron quarry operations, Kapa'a Industrial Park and its proposed expansion, and other commercial operations that use Kapa'a Quarry Road.

26. The DEIS should identify how many new offices are being proposed by DOFAW and State Parks and where they would be located within the marsh.

27. The DEIS should provide information on:

- a) the proposed ownership and management of each of the modern buildings proposed for Kawainui-Hamakua
- b) the size, function and staffing of the proposed caretaker residence in Figure 2.6.

28. The DEIS should identify the location and length all new interior roads (or 10-12 foot paths) proposed in the plan and the type and number of vehicles and/or machinery that will be used on these roads or pathways.

29. The DEIS should add detailed Figures:

- a) identifying the location of the ditches and culverts along Kapa'a Quarry Road, the past and present location of Kapa'a Stream, and where Kapa'a interfaces with Kapa'a Quarry Road and Kawainui Marsh
- b) showing the present ownership of the various sections of Kapa'a Quarry Road that make up its totality.

30. The DEIS should clarify the structural and use differences between the interpretive center and the interpretive shelter proposed in Subarea C: Kapa'a Kalaheo.

31. The DEIS should provide a base count of endangered and migratory birds that rest, nest or forage in Kawainui-Hamakua marshes.

32. The DEIS should provide information related to the Army Corps of Engineers Ponds on:

- a) water quality monitoring
- b) the occurrence of bird or aquatic species disease and mortality rates
- c) population increase data for specific endangered water birds, migratory birds and aquatic species
- d) an update on the status of the management plan presently in place including water quality studies, measurement of seasonal water quantity and levels in the ponds
- e) the number, condition and effectiveness of the solar water pumps
- f) the number of ponds with water and those that have functionally healthy habits

33. The DEIS should identify the types and amount of herbicides proposed to remove vegetation and the peat mat in the wetlands.
34. The DEIS should provide information on potential off-site educational programming, alternatives to cars and tour buses for accessing Kawainui and Hamakua marshes, and strategies on how to manage access so as to minimize harm to the resources. The DEIS should base these on community recommendations in the state supported community report "Interpreting Kawainui-Hamakua Recommendations for the Kawainui Master Plan Update" July 2012
35. The DEIS should identify the type of fencing being proposed to separate people and predators from endangered waterbirds and their habitats, how many such areas would be fenced, and the cost of fencing.
36. The DEIS should identify the type of vehicles that can use the shared use paths, whether or not mobility devices such as segways, golf carts, and electric scooters (under the Americans with Disabilities Act ADA) are allowed, and what vehicle use enforcement regulations are proposed.
37. The DEIS should identify the types and numbers of canoes that would be allowed to launch at the Kawainui State Park Reserve - Kapa'a and Kalaheo Section and what agency, organization or individual is to decide who may launch and/or use the facilities.
38. The DEIS should identify the types of "commercial" and "non-commercial" watercraft besides canoes that could be permitted to launch at the Kawainui State Park Reserve - Kapa'a and Kalaheo Section, the number that could be allowed to launch, and what agency or organization would make those decisions.
39. The DEIS should define "primary habitat" in the plan.
40. The DEIS should define the term "visitor" and specify whether or not, under what circumstances, and to what extent visitors would be allowed/permitted in the primary habitat. If visitor access to primary habitat is regulated, what kind of regulations would be established and who would enforce the regulations?
41. The DEIS should define "permanent cultural presence" in the plan.
42. If members of the public are restricted from using areas identified in the plan as areas providing for a permanent cultural presence, the DEIS should identify the criteria used to select the permanent cultural group or groups and identify in the plan the areas they would use.
43. The DEIS should identify who will pay for the proposed modern buildings at the Wai'auia and the Kapa'a cultural sites or other marsh sites, the nature and duration of the lease(s) given to private entities, and the circumstances under which the public would have access to these areas.
44. The DEIS should explain who or what agency or organization would own a building paid for by a non-government person or organization and what, if any, limitations would be placed on DOFAW/DSP's management of these structures, buildings and/or complexes.
45. The DEIS should list the number of modern buildings being proposed in the plan, what each building will be used for, the size of each building, and the materials to be used to build it.
46. The Figure identifying LWCF areas has two shades of blue. The DEIS should clarify which of the areas associated with Ulupo, Ulupo Heiau and Ulupo Heiau State Historical Park were purchased using federal LWCF funds. It should also (a) explain the difference between LWCF acquisition and development projects, (b) identify which of the LWCF sites is an acquisition or a development site, and (c) what the requirements are for each of these types of sites.

47. The DEIS should provide information on who will pay for maintenance, trash collection, and security at each proposed development site.

48. The DEIS should identify the number of parking lots there will be in Kawainui-Hamakua, which of those parking lots will be locked/closed at night, and the number of personnel needed to monitor the opening and closing of the parking lots.

49. The DEIS should address which if any areas, facilities or trails will be monitored at night and what management plans will be implemented to prevent these from becoming temporary homeless shelters or used for other purposes.

50. The DEIS should identify management plans to prevent shearwaters or other birds from being attracted to lights in Kawainui-Hamakua, and identify impacts to endangered bird populations attracted to these lights.