



National Park Service
U.S. Department of the Interior

Kaloko-Honokōhau
National Historical Park

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Kaloko-Honokōhau

IN REPLY REFER TO:
L7621 (2015-8)

June 6, 2015

Duane Kanuha, Planning Director
County of Hawai'i Planning Department
101 Pauahi St., Suite 3
Hilo, Hawai'i 96720

Subject: Comments Regarding Comprehensive Review of the County of Hawai'i General Plan

Dear Mr. Kanuha:

Thank you for allowing the National Park Service (NPS) the opportunity to provide comments for the comprehensive review of the County of Hawai'i General Plan. We understand the revised County of Hawai'i General Plan will include elements from the individual Community Development Plans (CDP) for Hawai'i County. We are particularly interested in how elements of the Kona CDP will be incorporated into the General Plan.

In this letter we 1) provide some background on the founding of the Park; 2) provide specific comments related to the Kona CDP that if followed would assist with protection of cultural and natural resources in Kona; and 3) close our letter with suggestions of ways we can achieve the goals of meeting the needs of economic growth and protecting Kona's fragile cultural and natural resources. In addition, we have added to this letter a list (Appendix 1) that notes some inaccuracies in the Kona CDP related to National Park Service units in West Hawai'i.

We understand that the process of revising the General Plan will be a multi-year endeavor. The NPS welcomes the opportunity and is committed to working with the County of Hawai'i and other stakeholders in developing a General Plan that both accommodates the need for growth while protecting the cultural and natural resources that are treasured by the people of Hawai'i County, the State of Hawai'i, and the nation. My staff and I commit to participating in the development of a revised County of Hawai'i General Plan. Please feel free to contact me or my staff whenever we can be of assistance throughout the process of developing the revised Plan.

BACKGROUND

At the behest of the Native Hawaiian community, Congress established Kaloko-Honokōhau National Historical Park in 1978 to preserve, interpret, and perpetuate traditional native Hawaiian activities and culture by protecting the cultural and natural resources within and around the Park (16 U.S.C. § 396d(a)). The Park contains more than 450 known archeological and cultural sites, among which are several heiau, networks of ancient and historic trails, seawalls, more than 180 known anchialine pools, two ancient Hawaiian fishponds with associated wetlands, and a fishtrap. The park lands and waters provide habitat for 17 species that are listed or candidates for listing under the Endangered Species Act. ‘Aimakapā Fishpond and wetland is “core habitat” for the recovery of two native endangered waterbirds, the Hawaiian stilt (*Himantopus mexicanus knudseni*) and the Hawaiian coot (*Fulica americana alai*), and is an important habitat for migratory waterfowl (U.S. Fish and Wildlife Service 2011). In addition to the fishponds and pools, the Park boundary encompasses 596 acres of marine waters and coral reef habitat. Many of the Park’s water resources are dependent upon the continued flow of abundant supplies of clean groundwater to maintain the ecological integrity of these ecosystems, especially as habitat for culturally important and rare native aquatic species.

COMMENTS ON THE KONA CDP AS IT RELATES TO INCLUSION INTO THE GENERAL PLAN

As noted above, we have listed in an Appendix a number of suggested technical changes to Kona CDP elements that we hope are addressed before they are repeated in the General Plan. In addition, we have more substantive comments related to the CDP as they may be included by reference into the General Plan.

Proposed Queen Ka‘ahumanu Frontage Road

A proposed frontage road through the National Park has been included in the current version of the Kona CDP. As we noted to staff of the Planning Department in the spring of 2007, the National Park Service cannot legally allow a frontage road to be built on National Park Service lands. Therefore, we request all references to the frontage road within the National Park boundaries, Phase II – National Park Service, Section (page 4-8, and Section 5.3 Implementation Matrix) be removed from the plan.

Maps and Urban Area

There are some maps that we believe would benefit from editing for accuracy. We believe maps within Volume 1 that include the Kona Urban Area (outlined in red) should be modified to exclude National Park lands owned by the federal government. We also note that in the maps in Volume 1 and Volume 2 showing public-managed lands and federal lands (e.g., Vol 1 Figure 4-8a, Vol 2 Managed Lands), Kaloko-Honokōhau National Historical Park is not shown as a National Park, and ask that be corrected. Similarly, we ask that maps within Volume 2 that include Kaloko-Honokōhau National Historical Park within the “Kona preferred growth areas” be modified to exclude the National Park from identified potential urban growth areas.

Anchialine Pools and Groundwater

The NPS supports the proposed management measures for anchialine pools (Policy ENV-1.10, ENV 1.11.). Page 2-5 lists threats to anchialine pools. The withdrawal of fresh and brackish groundwater should also be added to this section as a threat to pools (Tribble 2008; Tillman et al. 2014; Kelly & Glenn 2015). The management of groundwater quality and quantity should also be included in Policies ENV-1.10, ENV 1.11 to protect pools. The methodology utilized by the state to determine the sustainable yield of hydrologic units such as the Keauhou Aquifer System Area, does not explicitly consider the quantity of fresh water needed to support non-consumptive public trust uses of water. A reduction in groundwater levels due to groundwater withdrawals may have a significant impact on anchialine pools because groundwater levels in the area of Kaloko-Honokōhau National Historical Park and in many other anchialine pool locations average only 1 to 2 feet above mean sea level, and many of the anchialine pools have a relatively small surface area (Oki et al. 1999). Saltwater intrusion due to drought and rising sea-level will also increase the salinity of coastal anchialine pools (e.g., University of Hawai‘i at Mānoa Sea Grant College Program 2014).

A reduction in groundwater flow to the coast may also adversely affect coastal fishponds, wetlands, and nearshore ecosystems that depend upon estuarine conditions created by the discharge of fresh groundwater (Duarte et al. 2010). Many species in the Park are dependent upon the continued flow of freshwater through the Park to complete their lifecycles, including culturally significant species such as ‘ama‘ama or striped mullet (*Mugil cephalus*) (Nishimoto et al. 2007), a candidate species for listing under the Endangered Species Act, the pinao‘ula or orange-black Hawaiian damselfly (*Megalagrion xanthomelas*) (Tango 2010), and two species of endangered waterbirds, ae‘o or Hawaiian stilt (*Himantopus mexicanus knudseni*) and ‘alae ke‘oke‘o or Hawaiian coot (*Fulica americana alai*) (U.S. Fish and Wildlife Service 2011).

Kona Mauka Watershed Program, Policy ENV-1.2

The NPS strongly supports this policy. Protecting the ecosystem services of the groundwater recharge area is critical to protecting a clean water supply for public health, fisheries, subsistence, recreation, and tourism.

Water Quality Monitoring, Policy ENV 1.12

The NPS supports the creation of a county-wide water quality monitoring program that would provide data collected under a protocol that includes standardized quality assurance/quality control methods. While monitoring alone does not protect groundwater, we do support the creation of a water quality monitoring program.

Urban Stormwater Management. Policy PUB-4.7

The NPS supports the underlying principles of Kona CDP stormwater management guidelines and agrees with the implication natural and cultural resources are at risk from polluted runoff carried by rainwater. However, the Kona CDP does not clearly recognize that the County Codes for drainage wells currently do not address protection of significant public trust resources, but rather solely consider flood control and volume of runoff. Specifically, the design specifications of drainage wells in compliance with the Hawai‘i County Public Works and State Department of Health standards do not inherently incorporate any structure or other design feature to remove petroleum, oil, or any contaminants contained in runoff. Additionally the Kona CDP does not

mention or commit to incorporate the Implementation Plan for Polluted Runoff Control or Coastal Nonpoint Pollution Control Program Management Plans for the state of Hawai'i into this proposed policy. These plans remain without final approval by the Environmental Protection Agency and the National Oceanic and Atmospheric Administration in part because County standards are only designed for flood control purposes and not for controlling nonpoint source pollution (National Oceanic and Atmospheric Administration and U.S. Environmental Protection Agency 1998). We encourage the County of Hawai'i to commit to adopting Hawai'i's Implementation Plan for Polluted Runoff Control and/or Hawai'i's Coastal Nonpoint Pollution Control Program Management Plan.

Wastewater, Sewer Priorities Policy PUB-4.4

The NPS agrees that connections to appropriate sewer systems are required to protect water quality. However, scientific research indicates placing such requirements only within 1 mile of the shoreline is not adequate protection for coastal cultural and natural public trust resources. It should be recognized that nutrient inputs from upslope wastewater effluent (existing cesspools, existing septic systems and new septic systems) flow towards the coast in the groundwater and will add to the effluent generated at the coast (Parsons et al. 2008; Johnson & Wiegner 2013). It should also be recognized that large private wastewater systems are not required to do additional nutrient-removal. Additional measures should be included in this policy to require the best technologies available to remove excess nutrients from these systems and the county wastewater treatment plants.

Cultural Landscape Definition

The Kona CDP speaks of a multi-faceted and pervasive Kona Cultural Landscape (4-74) and states that "in today's modern society, [it is] sometimes not well understood." In an attempt to make the concept of a Cultural Landscape more broadly understood, the NPS respectfully offers the following text (Excerpt from, NPS-28: Cultural Resource Management Guideline, Chapter 7: Management of Cultural Landscapes) for consideration in section 4.4.1 Existing Conditions.

Cultural landscapes can range from thousands of acres of rural tracts of land to a small homestead with a front yard of less than one acre. Like historic buildings and districts, these special places reveal aspects of our country's origins and development through their form and features and the ways they were used. Cultural landscapes also reveal much about our evolving relationship with the natural world.

A cultural landscape is defined as "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values."

Historic landscapes nationwide include residential gardens and community parks, scenic highways, rural communities, institutional grounds, cemeteries, battlefields and zoological gardens. They are composed of a number of character-defining features which, individually or collectively contribute to the landscape's physical appearance as they have evolved over time. In addition to vegetation and topography, cultural landscapes may include water features, such as ponds, streams, and fountains; circulation features, such as

roads, paths, steps, and walls; buildings; and furnishings, including fences, benches, lights and sculptural objects.

Most historic properties have a cultural landscape component that is integral to the significance of the resource. Imagine a residential district without sidewalks, lawns and trees or a plantation with buildings but no adjacent lands. A historic property consists of all its cultural resources--landscapes, buildings, archeological sites and collections. In some cultural landscapes, there may be a total absence of buildings.

Kaloko-Honokōhau National Historical Park is part of a much larger cultural landscape. In 1962 the "Honokōhau Settlement" was designated a National Historic Landmark. In 1978, Congress established Kaloko-Honokōhau National Historical Park, which included all of the natural and cultural resources within the Honokōhau Settlement National Historic Landmark as well as some additional lands and the near shore waters. At that time, it was thought that the Honokōhau Settlement included; 50 ancient house sites, four heiau (temples), three fishponds, and many burials. One of the heiau, Makaopio, is a fisherman's temple noted for two large upright stone slabs which rise above the height of the pavement of its seaward retaining wall. These slabs served as fishermen's gods. Also in the area are scattered petroglyphs and ancient bathing pools. In addition to those 50 house sites, heiau, and fishponds, the NPS has recorded more than 450 archaeological sites, to date, within the National Historic Landmark.

The founding legislation for Kaloko-Honokōhau National Historical Park describes the Park's mission to "provide a center for the preservation, interpretation, and perpetuation of traditional native Hawaiian activities and culture, and to demonstrate historic land use patterns as well as to provide a needed resource for the education, enjoyment, appreciation of such traditional native Hawaiian activities and culture by local residents and visitors . . ." Congress also realized that development and land use around the Park could impair the Park's ability to perpetuate traditional native Hawaiian activities and culture. To that end they provided the following direction to the Secretary of the Interior. "Sec. 505 (d) (4) The Secretary shall consult with and may enter into agreements with other government entities and private landowners to establish adequate controls on air and water quality and the scenic and esthetic values of the surrounding land and water areas. In consulting with and entering into any such agreements, the secretary shall to the **maximum extent feasible utilize the traditional native Ahupua'a concept of land and water management.**" [Bold type added]

Kaloko-Honokōhau National Historical Park is mandated by Congress to perpetuate the Hawaiian culture. To achieve that mandate the cultural landscape of the Honokōhau Settlement must be intact. Historically, individuals living in the coastal areas of what is now the National Park did not live in isolation. Family and friends lived mauka and natural resources and agricultural lands upslope provided staples and materials necessary for daily life. Fish and ocean resources were harvested and further enhanced the sustainability of those living in the ahupua'a. Trails connected mauka and makai resources and people and a complex social network evolved that required all to "malama aina."

One of the concepts developed in *The Spirit of Kaloko-Honokōhau*, the report that led to the establishment of the National Park, is that of a Cultural Center. This concept was further

expanded in the 1994 General Management Plan/Environmental Impact Statement and is currently in the early stages of implementation. The concept of a Cultural Center is predicated on the belief that Hawaiians should teach a new generation what it means to be Hawaiian. In order to allow the Hawaiian culture to thrive and be perpetuated, people need access to makai and mauka lands and resources and a place to practice and perpetuate their traditional and customary practices.

If development around the National Park is minimized instead of concentrated, a place and “spirit” will be preserved where Hawaiians will have a space to perpetuate their culture. They will have access to mauka and makai lands and the resources that they both provide for generations to come. The community will have a growing sense of pride. Visitors will grow to appreciate the complexity of traditional Hawaiian culture and the wisdom of the ahupua’a system of land management.

SUMMARY AND CONCLUSION

The NPS believes there are many admirable qualities to the Kona CDP; in particular we support the eight guiding principles of the Kona CDP:

1. Protect Kona’s natural resources and culture
2. Provide connectivity and transportation choices
3. Provide housing choices
4. Provide recreation opportunities
5. Direct future growth patterns toward compact villages, preserving Kona’s rural, diverse, and historical character
6. Provide infrastructure and essential facilities concurrent with growth
7. Encourage a diverse and vibrant economy emphasizing agriculture and sustainable economies
8. Promote effective governance

We believe achieving these principles would align with Article XIII, Section 13-29 of the County Charter to “conserve and protect Hawaii’s natural beauty and all natural and cultural resources” and to affirm that “all public natural and cultural resources are held in trust by the county for the benefit of the people.”

We further believe that the major planning concept for the Kona CDP – emphasizing Transit Oriented Development (TODs) over sprawl – offers the best opportunity to achieve all of these principles. With that said, however, we note that the Kona CDP proposes allowing an unlimited number of TODs, and we remain concerned that the General Plan could incorporate this concept.

We believe this idea of entitling an unlimited number of TODs anywhere in the Urban district of North Kona could be highly problematic for a number of reasons. As noted above, Kona is a cultural landscape – highly concentrated TODs without restriction could easily result in the fragmentation of cultural landscape connections. Moreover, there are certain coastal areas of Kona with high concentrations of cultural and natural resources that are highly sensitive to the impacts from development. As also noted above, these impacts can occur because of changes to

water quality and quantity. Because of the expense and difficulty in mitigating the impacts from densely populated communities on adjacent or downslope valued resources, development of these areas could be particularly problematic and may not allow the achievement of other CDP principles (such as housing choice and concurrency).

To successfully follow the spirit of the CDP and to help achieve its goals, we seek that the revised County General Plan identify specific areas within North Kona where TOD development should be encouraged, areas where it should be not allowed or discouraged, and a limit be placed on the number of potential TODs.

Thank you again for allowing us to comment in the Kona CDP and the proposed General Plan. We look forward to working with the County and other stakeholders during the General Plan development process. We would like to review drafts of the General Plan as they are made available and provide comments, and be of further assistance. If you have any questions regarding this letter, please contact Dr. Jeff Zimpfer of my staff (808-329-6881 ex 1500 or jeff_zimpfer@nps.gov).

Sincerely



Tammy Ann Duchesne
Superintendent

cc: L. Asuncion, Jr, State of Hawai'i, Coastal Zone Management Program
S. Case, Chairperson, Department of Land and Natural Resources
R. Hardy, Commission on Water Resources Management
Q. Antonio, County of Hawai'i Dept. Water Supply
N. Uehara, State of Hawai'i, Department of Health UIC program
B. Walsh, State of Hawai'i, Dept. Aquatic Resources, Kona
G. Ogin, Chairperson, Kona CDP Action Committee
D. Kanuha, Chairperson, Hawaii County Council

References

- Duarte, K., Pongkijvorasin, S., Roumasset, J., Amato, D., and K. Burnett, 2010. Optimal management of a Hawaiian Coastal aquifer with nearshore marine ecological interactions. *Water Resources Research*, 46: W11545, doi:10.1029/2010WR009094.
- Johnson, E.E., and T.N. Wiegner, 2013. Surface water metabolism potential in groundwater-fed coastal waters of Hawai‘i Island, USA. *Estuaries and Coasts*, doi:10.1007/s12237-013-9708-y.
- Kelly, J.L. and C.R. Glenn, 2015. Chlorofluorocarbon apparent ages of groundwaters from west Hawai‘i, USA. *Journal of Hydrology* (527) 355–366.
- National Oceanic and Atmospheric Administration and U.S. Environmental Protection Agency. 1998. Findings and Conditions for the Hawai‘i Coastal Nonpoint Pollution Control Program, (<http://coastalmanagement.noaa.gov/nonpoint/docs/findhi.txt>).
- Nishimoto, R. T., T. E. Shimoda, and L. K. Nishiura. 2007. Mugilids in the Muliwai: a Tale of Two Mulletts. *Bishop Museum Bulletin in Cultural and Environmental Studies* 3:143-157.
- Oki, D.S., Tribble, G.W., Souza, W.R., and E.L. Bolke, 1999. Ground-water resources in Kaloko-Honokōhau National Historical Park, Island of Hawai‘i, and numerical simulation of the effects of ground-water withdrawals. U.S. Geological Survey. *Water-Resources Investigations Report* 99-4070.
- Parsons, M.L., Walsh, W.J., Settlemier, C.J., White, D.J., Ballauer, J.M., Ayotte, P.M., Osada, K.M., and B. Carman, 2008. A multivariate assessment of the coral ecosystem health of two embayments on the lee of the island of Hawai‘i. *Marine Pollution Bulletin* (56) 1138-1149.
- Tango, L. K. K. 2010. The effect of salinity and temperature on survival of the orange-black Hawaiian damselfly, *Megalagrion xanthomelas*. University of Hawai‘i at Hilo.
- Tillman, F.D., Oki, D.S., Johnson, A.G., Barber, L.B., Beisner, K.R., 2014. Investigation of geochemical indicators to evaluate the connection between inland and coastal groundwater systems near Kaloko-Honokōhau National Historical Park, Hawai‘i. *Applied Geochemistry*, <http://dx.doi.org/10.1016/j.apgeochem.2014.10.003>.
- Tribble, G, 2008, Ground Water on Tropical Pacific Islands—Understanding a Vital Resource: U.S. Geological Survey Circular 1312, 35 p.
- U.S. Fish and Wildlife Service. 2011. Recovery Plan for Hawaiian Waterbirds, Second Revision.
- University of Hawai‘i at Mānoa Sea Grant College Program, 2014. Climate Change Impacts in Hawai‘i - A summary of climate change and its impacts to Hawai‘i’s ecosystems and communities. UNIH-SEAGRANT-TT-12-04.

APPENDIX 1

Inaccuracies in the Kona CDP Related to National Park Service Units in West Hawai‘i

1. Where the Kaloko-Honokōhau National Historical Park is mentioned in the document (Volume 1, pages 2-1, 4-75 and 4-76), the correct title of the Park should be used. “Historic Park” is incorrect.
2. In Volume 2, Table 5-1
 - a. Kaloko-Honokōhau National Historical Park is incorrectly listed as a State Park.
 - b. For “Recreational Opportunities”, “Boating” should be followed by “(no launching)”.
 - c. There are no holua in the Park.
 - d. The Ala Kahakai National Historic Trail is incorrectly listed as a State Park and is incorrectly listed as “Ala Kahakai National Park” rather than the Ala Kahakai National Historic Trail.
 - e. Two National Park Units, Kaloko-Honokōhau National Historical Park and the Ala Kahakai National Historic Trail should be moved to the “National Park Service” section of the table.
 - f. Page 5-7, the “s” should be deleted from the end of the word “Services” in the header for the National Park Service.
 - g. No information is provided on Pu’ukoholā Heiau National Historic Site (<http://www.nps.gov/puhe/index.htm>). Information on this Park should be included.
3. In Volume 2 under “Green Infrastructure Network Design For Kona Managed Lands Inventory,” Kaloko-Honokōhau National Historical Park, Pu’ukoholā Heiau National Historic Site, and Ala Kahakai National Historic Trail are not included under the “National Parks” heading.